

existence of current plant, a sunk cost, which can be used to provide functions for a PCS network.

III. POLICY IMPLICATIONS

15. The Telmarc paper moves on to consider "policy implications due to lack of scope." Since the paper has in no way demonstrated that economies of scope do not exist (and to some extent admitted they do exist), I will respond to only some of its bigger mistakes. Its use of terms such as "predatory prices" (p. 13), "Pareto efficiency" (p. 14) and so on are not used in relation to any correct economic analysis but instead are almost randomly inserted into the argument.

16. The Telmarc paper's discussion of a possible CDMA-based PCS states that "the use of CDMA dramatically reduces the needs from a LEC environment...Thus the access fee should be reduced." (p. 15) Again, this analysis is incorrect for reasons which I discussed above. While the capital per subscriber to a LEC landline service may be higher, it is a sunk cost. The correct economic analysis focusses on the incremental cost to provide PCS over the existing network. The CDMA-based PCS which minimizes the use of the LEC network will require more new investment. Such a system may be economically viable, but it does forgo economies of scope. But to the extent that the CDMA system uses the public network for access the incremental costs it imposes may well be as great as those currently created by cellular networks. Thus, the CDMA PCS discussed by the paper should not be given a special break with lower access fees as the argument seems to imply.

17. The Telmarc paper claims that the LECs "must disaggregate to allow regulators to ascribe fair and reasonable costs to the total base of residual services." (p. 19) While this statement is somewhat difficult to interpret, "fair costs" are not costs in any recognizable economic sense. Incremental

costs provide the correct basis for economic analysis and policy. The paper never addresses the calculation of incremental costs and the further problem of how the joint and common costs of the public network will be funded.

18. The Telmarc paper then discusses "bottlenecks and barriers to entry". (p. 19) It claims that bottlenecks arise from the "intensive practice of [an entity's] own business". This claim is incorrect. A bottleneck arises when a given investment cannot be reproduced by competitors at all or except at an astronomical economical cost. Access fees do not create a bottleneck so long as public network access is open to competition. This principle is established in both federal and state regulation. The issues of access fees is a question of a regulator established price. So long as the imputation principle, which I discussed below is followed, no "bottleneck" problem occurs.

19. The Telmarc paper's claim that "Clearly, there is no cellular competition" (p. 20) because many cellular companies are owned by an RBOC, GTE, and now "AT&T owning McCaw" (p. 20) is wrong. The RBOC cellular companies typically have non RBOC partners and no claim has been made that any lack of competition has occurred because the companies are partly owned by RBOCs. The claim that AT&T/McCaw will not compete with the RBOC cellular companies is ludicrous. AT&T and the RBOCs have competed in the provision of intraLATA long distance service, 800 service, and the provision of customer premises equipment. AT&T and the RBOCs will similarly compete in the provision of cellular service.

IV. APPENDIX: REGULATION OF LEC PRICES

20. Telmarc's paper does not understand the structure of local telephone charges. It claims on page 2 that a user has an "imputed access fee of \$0.05 [per minute] from New Jersey Bell". In actuality, New Jersey Bell's

flat rate monthly access charge is about \$11.50 per month, not the \$25 per month quoted by the paper. The analysis in the Telmarc paper seems to be confused about local and intralATA services users purchase. Furthermore, a user is paying a zero per minute imputed access fee for local calls. The \$11.50 (including the SLC) monthly charge of New Jersey Bell is for the incremental cost of connecting a user's house to the public network (PSTN). As in most states, the monthly charge is below the incremental cost of the service so residential subscribers are receiving a cross subsidy on the monthly access charge for their home phones. The access fees paid by the interexchange carriers (IXCs), such as AT&T, help to fund the cross-subsidy received by users who enjoy below (incremental) cost local phone service.

21. The Telmarc paper also misunderstands how interstate access prices are determined. It says incorrectly: "All of these expenses and their associated capital are put into the rate base and charged against the access fee. The fees are further determined on the basis of the rate of return formula." (p. 4) Of course, since January 1, 1991 interstate access prices have been subject by the FCC to price cap regulation, not rate of return regulation. Prices for access (net of inflation) are reduced each year by a productivity factor without regard to expenses incurred by the regulated Local Exchange Company (LEC).⁷ Thus, the discussion on rate of return (ROR) regulation (pp. 4-6) is completely incorrect. Even within its discussion of ROR regulation, the paper misunderstands some basic economic principles. On p. 5 it states that in a competitive market that profit equals revenue minus expenses. But, of course, in a competitive market all of this "profit" is a return to capital since the profit is used for dividends and interest payments which represent the cost of capital. Thus, economic profit and the return to capital are the same as has been realized for well over 50 years in economics

⁷ Telmarc's paper's conclusion (p. 5) that "the greater the asset base the greater the profit" is just the opposite of price caps where (other things equal) the lower the asset base the greater the profit (after the cost of capital is taken into account). The paper fails to realize that capital has a cost as well as a return.

and regulation. The "critical fact" (p. 5) which the Telmarc paper refers to is merely based on its misunderstanding of the relationship between accounting profits and the return to capital.⁸

22. The Telmarc paper's discussion of access pricing is wrong. It assumes incorrectly on p. 6 that some average cost on an "aggregated basis" is the basis for access prices. Furthermore, its assumption that LECs can charge competitors more for access than is implicit in their own tariffs is contrary to actual regulatory practice. For instance, the California PUC (CPUC) ruled in 1989:

"...the local exchange carriers should be required to impute the tariffed rate of any function deemed to be a monopoly building block in the rates for any bundled tariffed service which includes that monopoly function. However, because of economic efficiency considerations, the local exchange carriers should be allowed to propose that tariffed rates reflect any cost differences between provision of the monopoly function as part of a bundled utility service and provision of that function on an unbundled basis." (CPUC Decision, I.87-11-033, p. 141, October 17, 1989)

This "imputation rule" has been widely adopted by PUCs throughout the U.S. It implies that apart from cost savings from efficiency, the LEC must charge itself the same price it charges competitors for non-competitively supplied services. Thus the Telmarc paper's conclusion that the "alternative carrier can never compete on costs" (p. 6) is just wrong.⁹ Under its reasoning an IXC would never be able to compete with a LEC (or BOC) for intraLATA toll traffic because the LEC would set its access charge above its own tariff price for the long distance service. However, IXCs have competed successfully for

⁸ For instance see P.A. Samuelson and W.D. Nordhaus: "Generally, when companies own capital, the return is included in profits... For large corporations that own their own capital, profits are the observed stream of returns to corporate capital." (Economics, 12th ed., 1985, McGraw-Hill, pp. 652-653)

⁹ The paper's further claim of possible predatory pricing is also incorrect since regulators typically set price floors well above incremental cost plus the contribution from access charges, which is typically above marginal cost. (Incidentally, predation violates the Sherman Act, not the Robinson Patman Act as the paper claims on pp. 7-8. Furthermore, despite numerous suits, AT&T was never found guilty of predation.)

intraLATA toll traffic with LECs.¹⁰ For instance, during 1991 in the Eastern Massachusetts LATA IXCs carried over 30% of the intraLATA business toll traffic.

23. The Telmarc paper's various access proposals (p. 8) are not analyzed correctly:

(i) CoCarrier Status: the claim two that carriers charging each other the same amount is "economically the most efficient" is incorrect because no analysis is made of cost. Suppose that the cost for one provider is \$0.005 per minute and that for the other provider the cost is \$0.03. The 6 times difference in cost should be reflected in the price or the more expensive access service will be used too much in relation to the lower cost access service and economic efficiency will be reduced accordingly.

(ii) Disaggregation with marginal cost pricing for access fees: This arrangement would lead to economic efficiency, although the Telmarc paper appears to think it cannot happen. Of course, if price is set equal to marginal cost, the joint and common costs of the network and the cross subsidy to local service which are currently partly funded from above cost access prices will need to be covered from an alternative source, e.g. an increase in the SLC.

(iii) Bypass via an IXC Class 4 Access Point: to the extent that an alternative provider does not use the public network, no service charges would apply as is the situation with access provided by CAPs today. However, for terminating access it is likely that many calls would terminate on the public network to which access prices would apply.

The economics principles of access are well understood. However, the Telmarc

¹⁰ Thus, the paper's claim that "Wireless local loop access will provide the first significant competitor to the LEC" (p. 8) is false. LECs have faced significant competition from IXCs for intraLATA long distance traffic and from Competitive Access Providers (CAPs) for non-switched access in major metropolitan areas.

paper fails to analyze how access prices, along with the SLC, are currently used to help cover the cost of capital for the public network.

24. The Telmarc paper's preferred solution of co-carrier status (p. 20) based on equal access fees for all common carriers is bad economic policy for the reasons I discussed above. It take no account of the different costs of providing access. Cost based prices are the correct basis to ensure economic efficiency. Arbitrary proposals such as the same access prices for all carriers have no basis in economic efficiency.¹¹

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¹¹ The paper bases its proposal on the notion that it is the "least disruptive" solution. (p. 20) This claim, even if correct, seems a decidedly strange way to set prices in a regulated environment.