Comments on

"ACCESS CHARGES, COSTS, AND SUBSIDIES: THE EFFECT OF LONG DISTANCE COMPETITION ON LOCAL RATES"

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Monopoly power is essential for maintenance of cross-subsidy. The introduction of competition into telecommunications markets thus threatens existing telephone pricing patterns in which local billings (especially for basic residential service) are priced below cost while intercity services are overcharged. Two general strategies are available in response to the competitive threat for intercity-local cross-subsidies: attempted preservation of existing pricing schemes through substantial charges against intercity carriers for access to local networks, with proceeds used to offset local costs; or radical repricing of local telephone service. Cornell and Pelcovits argue strongly in favor of the latter approach.

The fundamental reason for advancement by the authors of radical repricing is the expected "unsustainable" nature of the current system of telephone charges. Access charges that are far in excess of

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actual access costs will provide strong incentive for intercity carriers to bypass the local network and connect directly with long distance callers. Extensive users of intercity services will find it in their self-interest to engage in bypass, depriving the local service company of expected access charge revenues while leaving all of its under-priced, unprofitable services intact.[1] The authors thus argue that radical repricing is inevitable, since the preservation of existing prices is simply unfeasible. In the second half of their article, the authors propose a specific scheme for local repricing, based on Fully Distributed Costs (FDC). The comments offered here will support their FDC proposal.

There are two basic reasons for sharing the Cornell-Pelcovits concern over unsustainability of existing local prices. The first reason arises from the extensive skewness of telephone demands whereby a small percentage of customers accounts for a majority of intercity revenues. As Trebing notes elsewhere in this volume, 8 percent of business users account for 75 percent of business intercity telecommunications, while 10 percent of residential users make 50 percent of residential intercity calls. Thus the potential exists for an even minor differential of access charges above access costs to cause major movements of market share out of local networks (for the local components of intercity calls). Because the customers who elect to bypass the local network are precisely those who currently provide the windfall profits necessary to offset windfall losses on other local services, their exit would indeed make existing prices unsustainable.[2]

Local bypass becomes even more likely in light of a second fact or, as cited by Cornell and Pelcovits: overstatement of the local rate base. Artificial accounting practices such as capitalization of installation expenses and overly prolonged depreciation schedules (adopted in the name of universal service) have caused the current book value of local service assets to exceed their actual market worth. The true economic cost of use of these assets is thus less than the amount necessary to allow a "fair return" on book value. Yet existing prices are based on this fair return.

If the existing pricing scheme, with its intercity-to-local cross-subsidy, is to be altered, then what should take its place? Cornell and Pelcovits advocate a scheme of fully distributed cost pricing comprised of three major elements:

1. the supply of terminal equipment and inside wiring should be removed from the regulated activities of telephone companies,
2. local service rates should reflect frequency, duration, and distance (hence marginal cost) of calls, and
3. charges for both local service and local access should be identical for all users.

While it is difficult to quarrel with the first two of these proposals, the last suggestion of nondiscrimination explicitly repudiates two decades of work by economists on optimal pricing for natural monopoly. Contrast this third goal, for example, with the pricing scheme offered by Ordover and Willig elsewhere in this volume. In essence, Cornell and Pelcovits propose wholly ignoring demand-side information in order to set prices entirely on the basis of cost-side data. For three reasons, throwing away demand-side information when setting rates is undesirable.

In the first place, the principal justification for any of the above proposals is greater efficiency in use of resources. For analytical convenience, the efficiency question may be split, in turn, into three parts: cost minimization for production of a given output mix (cost-side efficiency); value maximization for distribution of a given output mix (demand-side efficiency); and determination of the output mix itself (the demand-cost interface).

It is simply illogical to become fixated on purely cost-side efficiency gains while ignoring improvements in social welfare obtainable either through more efficient distributions or through selection of more efficient output mixes. The principal technique proposed by economists to achieve these general efficiency gains for natural monopoly has been price discrimination (or charging different prices based on the nature of different customer demands), and the potential efficiency gains are in no way trivial. For example, using realistic circumstances of cost and demand for residential electricity purchases, Koenker and Sibley estimated that switching from uniform (nondiscriminatory) to nonlinear (stair-stepped, hence discriminatory) prices could imply a 60 percent improvement in economic welfare (measured as social surplus).[3] While the Koenker-Sibley simulation is clearly sensitive to changes in basic parameters, the general point remains that price discrimination is a potentially pow-

erful tool for promotion of efficiency in the case of unsubsidized natural monopoly.

A second problem with FDC prices is that they are by no means sustainable, as is well known. Indeed, as the Interstate Commerce Commission has demonstrated for years, FDC prices can be used to hamstring a dominant firm (railroads) while entrants using new technology (trucking firms) undercut prices and increase their market share, even when the established firm is actually the least-cost provider of service.[4] The very rigidity and simplicity of FDC prices inevitably serves to encourage such entry. Concern over the sustainability of local service prices should, in fact, lead inevitably to discriminatory prices that enable the local monopoly to cut prices for exit-prone customers down toward (but not below) social marginal cost.

A third problem with FDC prices as they are traditionally practiced is that they ignore externalities of telephone access and related general equilibrium effects, both of which derive from the extent to which subscribers will drop out of the local telephone network in response to higher local prices for connection. Telephone network externalities occur because new subscribers to local service increase the value of connection for existing subscribers. Cornell and Pelcovits rather glibly dismiss the significance of these externalities by arguing, in effect, that the poor call only among themselves and thus there is little cost to those who remain on the network if the poor drop out. Their view ignores the non-trivial proportion of calls made between residences and commercial establishments, for both consumer purchases and functionings of the unskilled labor market. Additionally, other "markets" in society are built around the presumed widespread availability of telephones, especially as regards provision of public goods such as police, fire, and ambulance service. If a significant proportion of current customers dropped out of the local network, less decentralized and more costly methods for providing these public goods would need to be adopted. For both of these reasons, the demand for local access as a function of access prices remains a valid concern for regulation in setting local prices.

By way of summary, Cornell and Pelcovits admirably address the dangers that lie ahead as we move from existing pricing structures for local telephone service to those compatible with new technological opportunities. New forms of telecommunications competition

have eroded and will continue to erode the possibility and desirability of price discrimination in these markets; in the future, this process will attain its end as natural monopoly is eliminated and opportunities for price discrimination disappear. The basic issue, then, for pricing is how to manage this transition to an increasingly more competitive environment. An essential element of this transition must indeed be the establishment of a cost-basis for pricing, as outlined in part by the authors, but not to the exclusion of demand-bases. In particular, the rigidity of fully distributed cost pricing would make a purely cost-based strategy counterproductive.

FOOTNOTES

1. Bypass will entail a non-trivial fixed cost, and those customers that make extensive use of intercity services will be most likely to have savings from bypass sufficient to justify uncurving the fixed cost.

2. Cornell and Pelcovits argue that existing intercity-local transfers may not be large and might in fact be less than the true costs of access for intercity carriers. This argument is at variance with standard evidence on the breakdown of telephone costs, and the authors present no counterevidence of their own. Further, a cross-subsidy of intercity by local services would run counter to rational behavior by an AT&T constrained by binding rate-of-return regulation (with its expected Averch-Johnson effects) and by local regulatory authorities interested in minimal local charges. Such irrational behavior is improbable. Finally, it is difficult to reconcile the remainder of the Cornell-Pelcovits article, especially the concerns over sustainability of local prices, with the argument that intercity to local cross-subsidies are minimal, much less negative. As a consequence, their section "The Role of Separations" will be wholly ignored in the following.

3. Koenker, R., and Sibley, D., "Nonuniform Pricing Structures in Electricity: Illustrative Examples," Bell Laboratories Economics Discussion Paper #118, January 1978.

4. For a brief introduction to ICC pricing issues see Owen, B., and Braeutigam, R., *The Regulation Game*, Cambridge: Ballinger, 1978, pp. 159-177.