Policy Analysis

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Introduction

The Telecommunications Act of 1996 is not perfect. An elaborate compromise of the diametrically conflicting interests of such major warring parties as the long-distance and local telephone companies (local exchange companies or LECs) and cable operators--an attempt at one and the same time to free the Bell Operating Companies to enter the long-distance business while curbing their power to exclude competitors from fair access to their ubiquitous wired local networks--it is a forbiddingly complex if not schizophrenic document. But its central goal is exactly right: to establish "a pro-competitive deregulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies . . . by opening all telecommunications markets to competition." In other words, by removing regulatory obstacles to competition while also using regulation to pry open monopoly bottlenecks, the Act frees local and long-distance phone and cable television companies to enter one another's markets and compete with one another. Any telecommunications company will be free to offer a full range of telecommunications services. Cable and wireless companies may offer phone; phone companies and wireless companies may offer video programming; all of them may offer all sorts of information services; and consumers will reap the benefits of that competition.

In preparation for this new era of competition, phone companies are making or contemplating making huge investments in new facilities to provide both video programming and phone services. As the rates consumers will pay for video programming services will be unregulated, while telephone rates will continue to be regulated, construction of the multipurpose facilities raises a familiar regulatory problem: what portion of the costs should be recovered in the regulated telephone rates, what portion left to be recovered (or not recovered) by the companies through sales of unregulated services?

The increasingly pervasive introduction of competition has added a second purpose of the cost allocation exercise to the historical one of shielding purchasers of regulated services from the costs of telephone company entry into the offer of competitive services, namely to protect competitors in the latter markets from unfair competition by the telephone companies. The perceived danger is cross-subsidization. The fear is that the telephone companies would price the competitive services below cost, shifting those costs to the regulated services and recovering them from their monopoly customers.

True, telephone services are today regulated in most states and at the federal level not on the historical cost-plus basis but under *price caps*. That is, the phone companies may not increase their prices above a certain level (typically indexed to inflation but with a downward annual adjustment for reasonably achievable improvements in productivity). But those rates are designed to give the companies a fair opportunity to recover their costs, if they are assiduous, and so the Federal Communications Commission (FCC) now has to decide whether to adjust its price caps to account for these huge new multipurpose investments. It has therefore instituted a proceeding, *In the Matter of Allocation of Costs Associated with Local Exchange Carrier Provision of Video Programming Services*, Docket No. 96-112, in which it issued a Notice of Proposed Rulemaking on May 10th of this year.

Unfortunately, the cost allocation exercise on which the Commission has embarked (perfectly understandably, in light of traditional regulatory practice) is not only *unnecessary* to fulfill its responsibility to protect purchasers of existing services, as it puts it, from "bear[ing] more costs than they would had the shared-use facilities not been built." [1] It is also almost certain to conflict with the fundamental purpose of the Telecommunications Act:

> to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services . . . by opening all telecommunications markets to competition. [2]

These twin goals will be achieved only if the Commission abandons the effort it has undertaken in this proceeding and simply leaves its price caps for regulated services unchanged. Contrary to its underlying assumption, any attempt on its part to allocate the costs in question--by whatever method, on whatever basis--will almost certainly be unnecessary, at best, and frustrate the achievement of the Act's goals, at worst. It will also flatly contravene the central intention of the Act to rely on competitive market forces, rather than regulation, to determine the future course of the telecommunications industries. Because this conclusion would seem, on superficial consideration, to flout the continuing responsibility of the Commission to protect purchasers of regulated services from exploitation (and competitors from cross-subsidized competition), it will take a fair amount of explaining.

In explanation, I will set forth and support the following propositions:

- The essence of the superiority of open competition over regulated monopoly in encouraging innovation is that it imposes on private investors the entire cost and risk, and, correspondingly, promises them the full benefit, of such ventures.
- The way to encourage efficient investment in new facilities by the incumbent LECs and to ensure that they are not inefficiently (and from the standpoint of competitors unfairly) cross-subsidized at the expense of purchasers of regulated services is therefore to impose on the companies the full additional costs and permit them to retain the full benefits flowing from such investments.

- An alternative way of describing this requirement is that the *prices* of the existing regulated services be *neither increased nor decreased* because of the entry of the LECs into the unregulated markets, [3]although purchasers of those services and consumers generally would of course benefit from the availability of new services and from the additional competition of the telephone companies in the unregulated markets.
- The competition between the LECs and other suppliers of the unregulated services would under the rule I have enunciated be both fair and efficient.
- Cost allocations, as distinguished from assignments of costs incrementally on the basis of causation, are both unnecessary and certain to frustrate the goal of efficient investment.
- The Commission's expression of belief, in its NPRM on cost allocation,

that telephone ratepayers are entitled to at least some of the benefit of the economy of scope between telephony and competitive services [4]

reflects a clear intention to use the cost allocation process to violate these principles, in direct conflict with the central purpose of the Telecommunications Act.

∑ In sum, the incremental cost rule I propose (whether administered by the Commission or the natural consequence of its abandoning the cost allocation effort) would be the only one consistent with the statutory goal of encouraging the efficient deployment of new technology, as determined by the competitive market; and not only does achievement of that goal require no allocation or assignment of the costs of common facilities: any such effort by the Commission would conflict with the competitive process for achieving it contemplated by the Act.

Prerequisites of Efficient Innovation under the 1996 Telecommunications Act

In some ways regulated monopoly facilitates innovation. Precisely because of its historical monopoly, AT&T was able to finance a program of research and development that was the envy of the entire world, in effect taxing its captive customers to pay for it. And the cost-plus, rate-of-return regulation to which it was subjected gave AT&T the comparative security of being able to recover in regulated rates the costs of its investments in innovation, whether or not they were successful.

But the historical combination of franchised monopoly and rate-of-return regulation also discouraged innovation in two important ways. First, it precluded the two vital contributions of competition, dispersion of the potential sources of new ideas, and the goad on incumbent firms to innovate or be displaced.

Second, regulation had and has the inherent tendency to narrow the range of profits (and losses) that the franchised monopolist may expect to obtain from new ventures. As part of the same process, it has, to keep rates down, tended to stretch out the recovery of investments, via depreciation, for longer than the economic life of the equipment, particularly in industries such as telecommunications, which are subject to very rapid technological change. This tendency, combined with the reluctance of regulators to permit utility companies to recover the costs of plant that is no longer used or useful, has tended to discourage the utilities from replacing economically obsolete assets before they were fully written off on the books. [5]

This dampening effect of regulation on innovation is further accentuated by the understandable reluctance of regulators to fully pass on to ratepayers the sometimes very large costs of ventures that turn out unsuccessfully. Regulation therefore has a tendency not merely to narrow the range of expected profit outcomes but to do so asymme-trically. It gives rise to an expectation that risk-taking companies may be denied the opportunity to recover the costs of unsuccessful ventures while being denied also the ability fully to retain the offsetting large profits of successful ones.

The competitive ideal, which it was the clear intention of the 1996 Act to approximate, is that risks of such ventures be borne not by captive ratepayers but by investors. In this model, ratepayers are not required to bear the losses stemming from unsuccessful investments; by the same token, neither are they permitted to appropriate any of the benefits flowing from successful ones.

The way to achieve the complete transfer of risk from purchasers of existing telephone services to the companies themselves is by a rule that completely removes from the costs on the basis of which the rates for those services are set all the costs additionally imposed on the company by its undertaking to put itself in a position to offer new services, regulated or unregulated.

The rule might appear equivocal, as I have stated it: does it not require a regulatory determination of what *portion* of the cost of joint facilities was "additionally imposed" by the desire to offer the new services, what portion is properly attributable to the existing regulated services? The answer is twofold: first, it is possible, conceptually, to identify the incremental cost respon-sibility of the new services; but, second, the same efficiency purpose will be achieved--and much more

reliably--merely by holding the prices of regulated services unaffected by the investments, as I will proceed to explain. The symmetrical requirement that investors retain the full benefits of such ventures is achieved by not requiring them to share with purchasers of existing regulated services the revenues from those new offerings or, as I will explain presently, any cost savings achieved by the new facilities.

Application of the Incremental Cost Rule and the Prices of Regulated Services

As the NPRM in this proceeding recognizes, some costs of the ventures by LECs into offering unregulated services are unequivocally identifiable as causally attributable to those services: an obvious case would be the cost of television programming. Others--the most obvious and important example would be the costs of constructing and maintaining fiber-optic transmission facilities--clearly have to be apportioned in some way between the regulated and unregulated services. The *only* objective basis for doing so that both makes economic sense and complies with the central purpose of the statute is *incremental causal responsibility:* What *additional* costs are incurred to supply each of them? (An entirely separate question, to which I will turn after exposition of the pertinent economic principles, is, What agency should do that "apportioning"? The answer is that the only agency competent to do so efficiently, and the agency clearly contemplated by the Telecommunications Act, is the competitive market, constrained only by continuing regulation of services the supply of which is inadequately disciplined by competition.)

There is a threshold question to be gotten out of the way at this point: Can these separate incremental costs have any objective reality when the services (in this case, the two groups of services, regulated and unregulated) are produced from the same facilities? The answer depends on whether the services are, strictly speaking, joint or common. If, for example, the only way it is possible to produce cotton is jointly with cotton seeds, in fixed proportions (i.e., they are true joint products), there is no such thing as a separate cost of producing one or the other. The several services that would be producible by the joint facilities in question here, in contrast, are, strictly speaking, "common," not "joint," because their relative quantities can vary infinitely in proportion to one another.

Thus, for example, it is possible to design a system to offer only telephone services or only video services. In these circumstances, each has its own separate, objective incremental cost, which can be ascertained by the simple process of varying the output of each along the entire range from zero to whatever amount the market will absorb, while holding the output of all the others constant. [6] (In some cases, it may be possible to increase the output of one of the common products in the short run only at the expense of *reduced* output of the other, as when petroleum refiners produce more gasoline at the expense of heating oil in the spring and summer and do the reverse in the fall and winter; in those cases, a major component of the separate, identifiable incremental cost of each product is the value of the other that its additional production causes to be forgone.)

Just as we can, in principle, readily identify the marginal costs of toll calls that employ the same switches and transport facilities as local calls, on either a marginal or incremental (whether for a small increment or an entire service) basis, so in principle we can readily define the incremental costs of adding video capability, for example, to a network intended or that would have been intended to supply telephone service only. The fact that those costs may have to be estimated (whether by company managements or by regulators) in no way demonstrates that they lack objective reality. In contrast, there is no such thing as the incremental cost of producing such joint products as cotton and cotton seeds.

I interrupt this exposition to anticipate, and promise to respond to at a later point, the likely reaction that such a method of determining the cost of video services somehow assumes that telephone services come "first" and the video only "second," and by so doing would (1) unfairly burden the purchasers of the former by imposing on purchasers of the latter only the costs of adding video capability to an existing telephone system and (2) expose competitive providers of the video services to unfair competition from (telephone company) rivals faced with the necessity of recovering from their competitive offerings only those incremental costs.

The question to be answered, then, in ascertaining the separate total incremental cost of any service produced in common with others, is simply, what are the costs that the supplier would have continued to incur but for the addition of that service? and (the other side of the coin), what additional cost of the common facilities has been incurred or would be incurred in order to make possible its offer?

The Relationship of Incremental to Stand-Alone Costs

As the foregoing recipe demonstrates, the generally accepted way of ascertaining the total long-run incremental cost of a particular service produced in common with others is to determine the difference between the total cost of a system optimally designed to produce only the latter on a stand-alone basis, and the total costs of a system designed also to produce the service under consideration. Manifestly, if the revenues from the latter service recover the total costs that adding it to the mix adds to the company total, it is in the interest of private companies to offer it and of society for it to be offered; and a company's undertaking to supply it can impose no burden on purchasers of the other services: *there is no way in which its provision can logically be said to be subsidized by them.*

As I understand it, this is the calculation that Leland Johnson has set out to make in his Affidavit submitted on behalf of the National Cable Television Association. [7] In making it, however, it appears that he has employed estimates of only the respective capital or investment costs of the two alternative hypothetical systems being compared. The total incremental cost measure or subsidy test clearly requires consideration under both scenarios of the respective *total* costs of the two systems--the stand-alone and the common one.

This omission on his part biases his results in the direction of exaggerating the costs of adding video capability to the stand-alone telephone network. When telephone companies invest in fiber-optic transmission facilities, for example, they do so in expectation of at least three kinds of benefits. The first of these is expansion of capacity to handle growing demand for telephone services, at dramatically reduced capital costs per channel; the second, the savings in operating cost of providing telephone services alone that those new facilities make possible, taking the form of savings in maintenance costs thenceforward (as compared with the maintenance costs that would have been associated with copper cable); and, third, the ability to offer new services, such as video. [8] By confining his attention to the comparative investment costs of the two alternative transport facilities, it appears Johnson has exaggerated, perhaps grossly, the incremental costs of the new (video) services.

Assume, to take an extreme example, that in some situations the existing copper network is economically obsolete, because the investment costs of converting it to fiber would be fully justified by the savings in maintenance costs alone. In those circumstances, clearly, addition of the video capacity is, technically, a free good: it imposes no additional costs on the system and its offer, even at rates that recover none of the investment costs of the new multipurpose facilities, could not be a burden on purchasers of the regulated services. Assume, next, that the savings in the maintenance costs that would otherwise have had to be incurred to supply the regulated telephone services amount, in present value terms, to, say, 40 percent of the investment costs of the conversion. In that event, the incremental costs of the video capacity would amount to only 60 percent of those common costs; and so long as no portion of that 60 percent was recovered in any way from purchasers of existing regulated services, the offer of the new services could in no way be cross-subsidized by them. [9]

On the basis of his stand-alone cost exercise, Johnson proposes an *allocation* of common costs between regulated and new services, in the name of preventing any such cross-subsidization. [10] But achieving that result, as I have already demonstrated, does not involve or require any allocation of the common investment costs between the two categories of service. It would be produced by the very kind of exercise in which Johnson has set out to engage, provided he compared not just the investment costs but the total costs of the stand-alone telephone network and the dual-purpose network.

In that proper comparison, the calculated incremental costs of the second, dual-purpose system would be decreased by the saving in maintenance or variable costs (in present value terms) achieved by the common, fiber-optic facilities, and the *total* additional costs causally attributable to adding the capability of providing video services would be reduced correspondingly. It would be decreased, similarly, to the extent that the new facilities improved the quality of existing regulated services or made possible the offer of new ones--in each case by the net value of those improvements or offerings. [11]

And that would be the economically proper measure of the incremental cost of the video (and other new, unregulated) services--the net amount by which adding capacity capable of offering them increases the estimated *total costs* of a system designed to provide only regulated telephone services on a stand-alone basis. Johnson's proposed allocation, to "share the benefits," is the tip-off that his purpose goes beyond that of preventing cross-subsidization.

Distributing the Benefit of Economies of Scope

These considerations return us, necessarily, to the question, why should the video services enjoy the entire benefit of the economies achieved by providing both them and phone services in common? If the calculations were reversed and the incremental costs of telephone service were to be measured by adding telephone capacity to a hypothetical system already designed to provide video service, the incremental costs of the former might turn out to be very low, as well. And the total of the incremental costs of the two services, each estimated in this way, would be less than the total cost of the combined system. That is the nature and consequence of economies of scope. Somehow a choice has to be made of how the benefit of those economies is to be distributed between the regulated and unregulated services.

In making that choice, and deciding by what mechanism it is to be made, it is necessary to recognize that the cost apportioning for which the Commission seeks guidance will have two consequences. Its only possible direct, explicit purpose would be to determine the costs to be recovered in the rates of the services *regulated* by both the Commission and (because the states generally follow the federal allocation rules) the state regulatory agencies. The allocation would be meaningless except on the assumption that assigning more or fewer costs to those services would--either directly, under a cost-plus system, or indirectly, when price cap formulas are being considered or reevaluated--be reflected in higher or lower regulated rates.

The other consequence of the allocation would be indirect but nevertheless extremely important: although it would have no direct effect on the prices of the unregulated services, it would have a substantial direct effect on (incremental) *investment* in the capability of offering them. The greater the assignment of the benefits of economies of scope to the regulated telephone services--the greater, in other words, the assignment of common costs to be recovered from the unregulated ones--the larger the prospective net revenues from the latter services would have to be to justify any investment in such common facilities.

> The explicit goals of the Telecommunications Act, to accelerate rapidly private sector deployment of advanced telecommunications and information technologies . . . by opening all telecommunications markets to competition, [12]

unequivocally dictate the choice. As I have already pointed out, the competitive ideal and the promotion of efficient investment both require that all such investments bear the total *incremental* costs that they entail and be rewarded with the sum total of the benefits that they generate--cost-savings in the provision of regulated services plus the net value of any and all new or enhanced services (regulated and unregulated) whose supply they make possible. This condition, which dictates that the low net additional cost of adding unregulated to regulated services (rather than the reverse) be the one that prevails, also satisfies the proviso that purchasers of the still-regulated services not be burdened by that deployment.

Achievement of the optimal level of investment in new facilities thus requires not only that purchasers of the regulated services not be burdened by those investments. It requires also that they not be benefited in their role as purchasers of the regulated services (as distinguished from the benefit they would receive from the availability of new services and the intensified competition their offer by local exchange companies might provide). The NPRM does not seem to recognize the conflict between that rule, necessary to encourage all economically justified investments in facilities upgrading, and the Commission's declared intention to see to it that telephone ratepayers "[receive] at least some of the benefits of the economy of scope between telephony and competitive services." [13]

Suppose instead regulated rates were reduced in reflection of the savings in variable costs made possible by the new facilities, because purchasers of those services were not charged with the corresponding portion of the investment cost that would have been justified by those savings. That would mean that the companies investing in the new facilities would have to recover the entire additional investment costs in the revenues from unregulated services alone. That clearly would discourage economically efficient investments in advanced technologies, because investors, while bearing all the investment costs and risks, would have to share the benefits with existing customers.

The principle I advocate would, instead, leave purchasers of the regulated services bearing no net burden of the hypothesized additional costs of investing in the dual-purpose loop network. That is, they would, explicitly or implicitly, bear part of the common investment costs of the new facilities only to the extent that they would benefit from the savings in variable costs (or improvement in quality) that it made possible. And it would put the risk of the net incremental costs clearly attributable to the offer of the video services entirely on the company and its shareholders, to be recovered (or not recovered) in the revenues from video and any other regulated or unregulated services made possible by upgrading the facilities.

Various non-LEC witnesses, testifying on behalf of either potential competitors, such as cable companies, or consumers of telephone services have contended that the steps the telephone companies have taken to upgrade their facilities to be able to offer video and other new services have imposed special and additional costs on the companies. They cite, for example, the costs associated with a greater margin of excess capacity than would have been justified for the provision of telephone service alone and of accelerated depreciation, obsolescence, or premature scrapping of existing facilities. To the extent that their factual contentions are valid, the rule I have proposed would fully satisfy them: those incremental costs would indeed be properly borne by shareholders, to be recovered (or not recovered) in the revenues from the unregulated services.

This observation applies equally to the contention that the telephone companies' plans have resulted in premature scrapping of existing facilities. By that same logic, to the extent that the scrapping or replacement was not premature--that is to say, to the extent the investment in new facilities was justified by the savings in the operating costs that would have been incurred if the facilities had not been replaced--that portion of the investment costs would properly be chargeable against the regulated services. In either event, no net additional burden would fall on them.

The Fairness and Efficiency of Competition under the Proposed Assignment of Investment Costs

A central function (and virtue) of competition, as contemplated by both economists and, evidently, the FCC in its interpretation of the intent of the Telecommunications Act, [14] is to ensure that the products or services in question are provided with the minimum expenditure of society's scarce resources. It achieves that purpose by distributing responsibility for supply among rivals in such a way as to minimize total social costs. Maximizing economic efficiency, thus defined, means minimizing the *additional*--marginal or incremental--costs of supply: the only pertinent comparisons are of the relative marginal or incremental costs that would be entailed by the various alternatives, [15] because it is only costs that have not yet been incurred that can be minimized and economized. [16]

The relevance of only marginal or incremental costs is especially obvious when the question is one of the conditions under which a would-be new entrant proposes to offer its services in competition with an existing supplier: the aspiring competitor should prevail only to the extent that the incremental costs of its supplying the service in question are lower than those of the incumbent. My incremental cost rule achieves precisely that purpose.

These considerations show why there is nothing unfair about permitting a company offering both telephone and video services to compete with cable companies with prices that cover "only" its marginal or incremental costs, while the challenged video suppliers may have to recover their total costs from the competitive operation. Government regulators have had to confront the intuitive but economically incorrect belief that that kind of competition would be unfair prototypically in cases involving competition between railroads, on the one side, and trucks or barges, on the other.

In the historic *Ingot Molds* case, [17] for example, it was agreed by all adversaries that the long-run incremental costs of the railroads for handling the contested traffic would be substantially below those of the competing barges; but whereas for the barges incremental and average costs were roughly equal, for the railroads the average or fully distributed costs--including a proportionate share of contribution to the coverage of sunk costs and overhead--were markedly higher than those of the barges. The Supreme Court overturned a decision by the Interstate Commerce Commission that would have permitted a railroad to reduce its rate down toward its long-run incremental costs sufficiently to get the business: a majority of the Court felt it would be unfair to permit one competitor to take business away from another "merely" because its marginal or incremental costs were lower.

That decision was economically nonsensical. If the railroads could handle the contested traffic with the use of a smaller additional amount of society's scarce resources--in both the short and long run--than the barges, then it was grossly inefficient not to have permitted them to reflect that marginal cost advantage in their rates and take over the business. [18] The statute subsequently deregulating the railroads, in 1980, explicitly authorized them to reduce their rates down to direct variable (that is, even below long-run incremental) costs. [19]

This is the simple answer to the complaint that assigning to the unregulated services "only" the incremental cost entailed in making their offer possible would enable the LECs to compete unfairly with such incumbent suppliers as cable companies. In exactly the same way, efficient competition in *telephone* markets requires that such challengers of the LECs as the *cable* companies be free to enter so long as the (incremental) costs of altering their networks to provide voice service are no greater than those of the incumbents.

If we were instead to require the new video service of telephone companies to bear costs as if they were a stand-alone operation, it would flatly prevent those companies from bringing to competitive markets the advantages of economies of scope. This would violate the fundamental principle that efficiency is best served when responsibility for production is distributed among rivals on the basis of their incremental costs. It is thus no accident that witnesses for competitors of the telephone companies such as the NCTA have contended that both fairness and the encouragement of competition require that the benefits of economies of scope be assigned to the utility services, with the competitive operations required to compete on a stand-alone basis.

Witnesses seeking to handicap telephone company competitors in this way imply, where they do not say so flatly, that the economies of scope available to the former companies are so overwhelming as in effect to make them natural monopolies--because their incremental costs invariably would be lower than those of all potential challengers. But if that were the case, protection of existing competitors (such as cable companies) from the entry of LECs because of the latter's low incremental costs, or denying the LECs the right to reflect those low costs in their competitive prices, would be inefficient and in flat violation of the central purpose and philosophy of the Telecommunications Act.

Moreover, the implicit "natural monopoly" assumption that only the incumbent telephone companies enjoy economies of scope is wildly unrealistic. The competition that is developing in telecommunications is being conducted and will continue to be conducted among rivals on all sides, each exploiting its own particular economies of scope and consequent low incremental costs of providing potentially competitive services, arising out of its own particular pattern of operations. Cable companies are providing and planning to provide telephone service because and to the extent they can add the capacity to do so to their existing cable networks at relatively low cost. Toll carriers are moving into the provision of local telephone service and local exchange companies into interLATA toll (long distance calls between the Local Access and Transport Areas created by the 1984 consent decree that broke up AT&T) because the ability to offer bundled local and toll services involves fuller use of existing contacts with customers, brand names, marketing and billing facilities, switches and transport capacities, and satisfies the widespread preference of customers for one-stop shopping. [20]

Given the nature of this competition, no provider should be either helped or hindered by regulatory interventions designed to distribute the benefits of scope economies in some way other than the way in which market competition would distribute them--provided only that purchasers of regulated services not be forced to subsidize that competition.

The Conflict between Recourse to Cost "Allocations" and the Telecommunications Act

The LEC Cost Allocation NPRM appears to reflect a previous decision by the Commission that the proper procedure, in confronting the costs of a joint network constructed to provide both regulated telephone and new services is, first, to assign to each of those two categories the costs for which it is causally responsible and, second, to allocate the residual or common costs on some plausible or "reasonable" basis. The second step of this process conflicts not just with abstract, economic efficiency principles but with (what I have taken to be) the central purpose of the Telecommunications Act--to encourage the fullest deployment of a modern telecommunications infrastructure consistent with economic efficiency.

The concept of "cost" has no meaning in either economics or logic except in terms of *causation*. When we say that drunk driving "costs" us so many lives per year or so many dollars in property damage, we can mean only that the practice of drunk driving *causes* us, individually and/or collectively, to suffer those consequences.

In framing my central recommendation, I have employed the term "cost" only in that causal sense--speaking of ascertaining the incremental costs *occasioned by* the offer or prospective offer of nonregulated services and of *assigning* to the several services the costs for which they are (causally) responsible.

In so doing, I have studiously avoided characterizing the process as one of *allocating* costs, which term I employ, in the interest of clarity, to characterize distributions of costs among various services on some basis other than cost-causation. I spell out the terminological distinctions to emphasize my conviction that only the former kinds of costs need be ascertained to achieve the two essential economic purposes of this exercise. More important, any attempt to go beyond ascertainment and assignment to unregulated services of the full net [21] incremental costs for which they are causally responsible and allocate to them something more not only would be unnecessary to achieve those two purposes but would frustrate their achievement. As the NPRM itself recognizes:

> An over-allocation of common cost to nonregulated activities could dissuade companies from entering nonregulated competitive markets. [22]

The same distorted result would flow, by precisely the same process and for the same reason, from the Commission's declared intention to go beyond merely protecting purchasers of regulated services from any burden arising from the joint facilities and confer on them, by allocation, "at least some of the benefit of the economy of scope between telephony and competitive services." [23] The Commission could achieve this last goal, most simply, by attributing to the unregulated services the full incremental costs of the new investments while failing to credit those investments with the savings in maintenance costs or other benefits that they make possible, as Johnson has evidently done. It could do so equally by appropriating for the benefit of the rates for regulated services some share of the revenues from the unregulated services, which some state utility commissions have demanded in the past, as a kind of "royalty" payment to the monopoly customers for the use of the product of past, ratepayer-financed research and development or of the company name, goodwill, and subscriber lists and contacts. It could do so instead by *allocating* to the new services a share of the investment costs of the common facilities greater than their (total) incremental costs and--as it explicitly suggests--treat

> all such reallocations to nonregulated activities . . . [as exogenous cost changes such as could] trigger decreases in related price cap indices. [24]

These cost allocation ventures are inevitably political, once they go beyond determining and separating out the costs that are causally attributable to the separate services. The reason for this is that they are inescapably circular or tautological: instead of basing prices on objective costs, they distribute costs on the basis of some conception of what sharing of them, *in prices*, would be "fair" or "reasonable." In short, they distribute costs on the basis of some desired *pricing outcome* and then purport to set prices on the basis of those costs. [25] The principal use of such allocations historically has been to transfer to long-distance rates and to business customers in central cities a large portion of the costs of providing basic telephone service to residential customers, particularly in rural areas--at the cost of an

[26]

enormous sacrifice of economic efficiency.

That the Commission is still tempted to continue to play this kind of role is clearly suggested by its intention to pass on to telephone subscribers some of the benefits of those joint facilities. It will not lack for pressures to do so, from potential competitors and from consumer advocate intervenors, who tend to think the only interest consumers have is in holding down the price of regulated telephone services, regardless of whether the result is to discourage long-distance usage or the offer of unregulated ones, such as cable TV, in competition with incumbent cable companies. And of course the telephone companies will be arguing for only a "reasonable" or no allocation to the new services. In these circumstances, all history tells us, the Commission will feel obliged to strike a "fair balance" among the conflicting demands.

By exactly the same token, any attempt to confer on purchasers of regulated services some of the benefits of the economies of scope achieved by these multipurpose investments would protect competitors such as cable companies from efficient competition by requiring net additional investments undertaken to provide services competitive with theirs to pass a more rigorous test than merely the test of net incremental revenues exceeding net incremental costs.

The Commission's Only Correct Course Is to Abandon Its Cost Allocation Proceeding

Any attempt on the part of the Commission, then, to allocate the costs of these common purpose facilities, on any basis other than incremental causal responsibility, will inevitably involve the introduction of political considerations and goals--"equitable" sharing of benefits, a compromise among the demands of the several competitors--into what the new Law laudably dictates be a competitive market process. The NCTA's advice to the Commission, to

> follow clear cost allocation rules, using a fixed allocation factor for common costs, to minimize the administrative burdens while increasing administrative effectiveness in the face of telecommunications competition, [27]

makes not even a pretense of complying with the requirements of economic efficiency or simulating the competitive market outcome or achieving the explicit purpose of the Act to set in motion market forces that would promote the fullest efficient exploitation of modern telecommunications technology.

In a competitive market, a successful product or service innovation is one the revenues and other benefits from which together exceed the full additional costs entailed in offering them. Clearly, any regulatory arrangement that either required the innovators to use some portion of the revenues to reduce rates of existing, regulated services or to recover from those revenues costs that the suppliers would in any event have incurred to provide the regulated services would inefficiently discourage the undertaking of such innovations.

Moreover, if instead the FCC were to attempt to apply the simple, incremental cost principles I have enunciated, undertaking itself to estimate or measure the relevant incremental cost or such benefits as savings in operating and maintenance costs, it would inevitably find itself mired in endless bickering about the proper measures of these essential variables. To offer just a single example:

> some LECs have sought to defend the notion that the integrated network would enable substantial reductions in operating and maintenance costs for telephony. . . . However, no detailed basis for this assertion has appeared in the record, to my knowledge, nor is it at all clear that such reductions would occur in comparison with upgrades to existing networks or with new digital loop carriers. [28]

It takes no imagination to envision the conflicting testimony with which the Commission would be confronted on such issues (anticipated in notes 8 and 9) as the proportion of the investment costs that would have represented the most efficient way of providing additional capacity for regulated telephone services, both existing and new, or improving the quality or increasing the variety of those services--none of which is properly part of the incremental costs of the new, unregulated services. The process would be a field day for competing engineering, financial, and economic witnesses. The temptation would be irresistible for the Commission, as NCTA recommends, "to minimize the administrative burdens" and "increase administrative effectiveness" by adopting some compromise "fixed allocation factor" that would be, measured against the competitive market norm envisioned by the Act, both arbitrary and wrong.

The ultimate irony is that all this governmental micromanaging, with the irresistible temptation it creates for biasing the results of the free market, is unnecessary. The market knows how to encourage efficient investments and discourage inefficient ones. It does so by establishing the two conditions I have already expounded: investors bear the entire additional costs and reap the full benefits; and purchasers of the regulated services bear none of those additional costs and receive none of the benefit. All this requires is that regulatory agencies leave the rates for regulated services, however set, *unchanged by the new ventures*. [29]

How do we establish the necessary conditions? The simple answer is by the Commission *getting out of the way*; leaving the decisions to investors, on the one side, and purchasers of the new services, on the other. This means the Commission should *stop allocating* the costs of the multipurpose facilities and *not change the prices of regulated services*--up or down--in response to them. That is the way to see that purchasers of the regulated services are neither burdened nor benefited by them--which, as we have seen, is another way of saying that it is the way to put on the companies the entire burden of the additional costs to weigh against all the anticipated benefits. [30]

Neither of these rules leaves any room for cost allocation, and it is high time the Commission gave that practice the indecent burial it deserves. The ultimate message to the Commission is: call off the cost allocation rulemaking and let the market do the job, as the law clearly instructs it to do.

Notes

[1]. In the Matter of Allocation of Costs Associated with Local Exchange Carrier Provision of Video Programming Services, CC Docket No. 96-112, Notice of Proposed Rulemaking, ∂ 20(May 10, 1996) (NPRM). See also Ibid., at ∂ 24

[2]. Telecommunications Act of 1996 Conference Report, S. Rep. 104-230 at 113 (Feb. 1, 1996) (Conference Report); Ibid., at ∂ 1.

3 This constraint should be qualified to recognize that the investment might induce regulators to redefine one or another protected service--for example, by incorporating Touchtone in the definition of basic service--in ways that justify an increase in price. See note 8 below.

[4]. NPRM, at ∂ 23.

[5]. See Alfred E. Kahn, "Depreciation Policy and Technological Progress," in The Economics of Regulation (reprinted, Cambridge: The MIT Press, 1988) 1:117-22, and 2:146-47, 149-50.

[6]. I have explained this distinction in Kahn, The Economics of Regulation, at 1:77-83.

[7]. Comments of the National Cable Television Association, Inc., Attachment 1, May 31, 1996.

[8]. These three do not exhaust the list of expected benefits. The new multipurpose investments also will provide improved quality of existing regulated services. That benefit, along with the savings in operating costs made possible by the new facilities, can readily be subsumed in the ensuing analysis as involving either costs that it would in any event have been efficient for the company to incur in supplying those services and therefore causally attributable to them, or costs incrementally attributable to (and properly recovered in the prices of) a newly improved or totally new regulated service or services.

[9]. The example could logically be expanded to embrace the possibility mentioned in the preceding note that the investment might be justified also as the more economical way of providing additional capacity for supplying existing regulated services. By the same reasoning, the addition of more capacity than required efficiently for the regulated telephone services would be causally attributable entirely to the video (and other new) services.

It is probably desirable for me to insert a warning at this point that I would not wish these elaborations of the relevant incremental cost and benefit principles to be interpreted as advising the Commission to make these factual determinations. On the contrary, as I have already signaled, my ultimate firm recommendation below is that the assessments, unbiased by regulatory cost allocations, be left to investors.

[10]. See his Reply Comments: Allocating Common Costs to Avoid Cross-Subsidy and Enable the Sharing of Benefits, Attachment to Reply Comments of the NCTA, June 12, 1996; see, e.g., pp. 11-12.

[11]. See notes 8 and 9 above. I turn in my concluding sections to the question of the administrative feasibility of the FCC's making such determinations, which considerations reinforce my conviction that it should not try.

[12]. NPRM, ∂ 1.

[13]. Ibid., at ∂ 23.

[14]. In its In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Notice of Proposed Rulemaking, CC Docket No. 96-98 (April 19, 1996), the Commission explicitly disavows any intention to encourage entry by competitors less efficient than the incumbent telephone companies. Its goal, it says,

> is not to ensure that entry shall take place irrespective of costs, but to reduce barriers . . . that inefficiently retard entry, and to allow entry to take place where it can occur efficiently.

Ibid., at ∂ 12.

[15]. In view of the fact that the Commission is simultaneously engaged in proceedings with the purpose of effectuating the local competition provisions of the Telecommunications Act (Docket No. 96-98), I emphasize the consistency between these assertions and my defense of markups above incremental cost in the LECs' charges to competitors for essential network elements or facilities, in a Declaration I submitted in that proceeding in collaboration with Dr. Timothy J. Tardiff on May 30, 1996. As we pointed out there, incorporation of such markups, under proper imputation rules, is not only consistent with efficient competition between LECs and competitors, it is necessary to ensure that the competition not be distorted by differential burdens imposed by regulation on the former companies--handicaps having nothing to do with their relative efficiency.

[16]. For example, a publisher who considers the cost of printing an additional 500 copies of a book does not add in the cost of presses already paid for or proofing and editing services already paid for in connection with the first run of the book. The publisher considers only the additional expenses that will be occasioned by printing the next 500 copies. If consumers are willing to pay enough for the additional printing to cover the additional costs, the value of the additional resources it uses, then it is economically efficient for the production to take place.

[17]. *American Commercial Lines, Inc., et al. v. Louisville & Nashville Railroad Co*., 392 U.S. 571 (1968).

[18]. See my fuller discussion in Kahn, *The Economics of Regulation*, 1:162-63.

[19]. (c)(1) A rate for transportation or other service provided by a rail carrier subject to the jurisdiction of the Commission under subchapter I of chapter 105 of this title may not be established below a reasonable minimum. Any rate for transportation by such a rail carrier that does not contribute to the going concern value of such carrier is presumed to be not reasonable. A rate that contributes to the going concern value of such carrier is conclusively presumed not to be below a reasonable minimum.

> (2) A rate for transportation by a rail carrier that equals or exceeds the variable cost of providing the transportation is conclusively presumed to contribute to the going concern value of such rail carrier....
>
> > (B) In the determination of variable costs for purposes of minimum rate regulation, the Commission shall, on application of the rail carrier proposing the rate, determine only the costs of such carrier and only those costs of the specific service in question unless the specific

information is not available. The Commission may not include in such variable costs an expense that does not vary directly with the level of transportation provided under the proposed rate.

Staggers Rail Act of 1980, Public Law 96-448, 96th Congress, Title II, ∂ 10701a,October 14, 1980.

[20]. In a recent J.D. Power study, two-thirds of all consumers surveyed said they would prefer to buy all their telephone services from their interexchange service company. *Communications Daily*, September 5, 1996, p. 4. Both the FCC and the Court of Appeals have found that the bundling of a variety of products and services and the one-stop shopping it makes possible are competitive, efficient, and potentially beneficial to consumers. Application of Craig O. McCaw, Transferor, and AT&T, Transferee, for Consent to the Transfer of Control of McCaw Cellular Communications, Inc. and Its Subsidiaries, 9 FCC Rcd. 5836, 857 (September 19, 1994); *SBC Communications v. FCC*, 56 F. 3d 1484 (D.C. Cir. 1995).

[21]. My attachment of the qualifier "net" to the "full incremental costs" causally attributable to the new unregulated services is intended to take into account the fact, to which I have alluded, that some portion of the gross capital costs of the multipurpose facilities will be offset by savings in maintenance and other variable costs; and that if efficient investments are not to be discouraged, investors must be permitted to retain all the benefits (including the benefit of such cost reductions as they make possible), while also bearing all the incremental capital costs.

[22]. NPRM, at ∂ 20.

[23]. Ibid., at ∂ 23.

[24]. Ibid., at ∂ 60.

[25]. I have expounded this argument at greater length in Alfred E. Kahn, "The Uneasy Marriage of Regulation and Competition," *Telematics* 1, no. 5 (September 1984): p. 12.

[26]. See the latest, definitive documentation of this phenomenon in Robert W. Crandall and Leonard Waverman, *Talk Is Cheap, the Promise of Regulatory Reform in North American Telecommunications* (Washington: Brookings Institution, 1996), Chapter 3.

[27]. Reply Comments, p. 9.

[28]. Johnson, Reply, p. 4.

[29]. How would this rule apply to facilities that telephone companies are constructing today with the definite intention for the time being of offering only voice services but with the possibility one day of offering video or other services? The operative regulatory answer is the one I have provided: leave the prices of regulated services or the indexed course of their price caps unchanged. To the extent the costs of the new investments were justified in terms of offering those services at minimum cost, the companies would receive their compensation in the regulated prices of the services. Any additional costs of the investments (justified, in the calculations of the companies, by the possibility of offering new services) would, properly, be part of the incremental costs of the services and be wholly borne by the companies, to be recovered, if the investments prove successful, from the net revenues they eventually generate. See also William J. Baumol, Michael F. Koehn, and Robert D. Willig, "How Arbitrary is 'Arbitrary'--Or, Toward the Deserved Demise of Full Cost Allocation," *Public Utilities Fortnightly* (September 3, 1987): pp. 16-21.

[30]. To the extent that those benefits include improvement in the quality of existing regulated services or the possibility of offering new ones, investors should be offered a prospect of reasonable compensation for them, when and as they appear. Any attempt by the Commission to go beyond merely offering such an assurance, at this time, and engage in the comprehensive cost allocation signaled in its NPRM would almost certainly do more to discourage efficient investments than to encourage them.