

**DOMINANCE, NON-DOMINANCE AND THE
PUBLIC INTEREST IN
TELECOMMUNICATIONS REGULATION**

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I. INTRODUCTION

The distinction between dominant and non-dominant firms is a theoretically valid distinction. In theory, dominant firms possess the unilateral power to raise prices and restrict market output, whereas non-dominant firms can raise prices and restrict market output successfully only by acting in effective consort with their rivals. To argue that this distinction should be "removed" would be equivalent to arguing that the distinction between the theories of supply and demand or between Newtonian and nuclear physics should be removed.

We thus interpret the question of whether the dominant/non-dominant distinction should be removed to refer to the legitimacy of its application in any particular industry setting and to the nature of the differences in regulatory burdens that should properly flow from drawing the distinction where applicable, in particular, to the efficacy of asymmetrical regulation of competing carriers.

Haring and Levitz (1989) have argued that the long-distance market is now more accurately and usefully modelled utilizing the tools of oligopoly theory rather than the dominant-firm model of industrial organization economics.¹ On this view, strategic interaction among long-distance competitors is the real name of the game, not discretionary, unilateral behavior by one supplier. Not everyone agrees with this view, but at least one benefit of the discussion that the Haring-Levitz paper has prompted is that it has focused attention on the right question for determining dominance, in particular, whether supply is sufficiently elastic to prevent AT&T or the exchange companies from unilaterally raising market prices in particular markets. This subject has been the topic of recent debate² and the docket in the FCC's current long-distance rulemaking proceeding contains much evidence on the issue.³ Rather than repeat that debate or simply summarize the various submissions in the FCC's docket, the focus of this paper is on the second set of issues to which we alluded above.

The only proscription of dominant-firm behavior that can be defended on economic grounds as unambiguously capable of improving economic welfare is prevention of monopolistic price increases.⁴ This, by the way, was the policy prescription Haring and Levitz claimed would be potentially justifiable if the dominant-firm model were a valid characterization of actual circumstances.⁵ For purposes of this discussion, let us assume that, regardless of whether the dominant-firm model or an oligopoly model more accurately captures relevant reality, monopolistic price increases are effectively proscribed by (actual or potential) regulation. The policy debates about appropriate regulation of leading incumbent carriers do not, in any event, focus on the freedom to raise prices; they focus instead on the freedom to cut prices and compete.

This paper thus analyzes the economic consequences of three alternative rules or tests for "just and reasonable" rate-setting by leading incumbent firms confronted with actual or potential competition. Its application to the telecommunications industry, where interexchange competition is now a familiar reality and where exchange competition is increasingly manifest, is clear and what principally motivates our discussion. Similar issues, of course, arise in a variety of other industry contexts.⁶

The rules of the competitive game matter a lot. They affect the magnitude and nature of the benefits consumers can expect to derive from the operation of a competitive process as well as the efficiency of the dynamic transition from one market structure to another. Our analysis, for example, suggests that the rules relied upon to govern competition in the long-distance business have probably failed to maximize consumer welfare and have possibly been wasteful and counterproductive in promoting effective competition in both this and other markets.

Indeed, the rules of the long-distance game at this late date -- eight years after divestiture and more than a quarter of a century since the competitive experiment was begun -- remain unsettled and have not yet been completely specified. This, in part, reflects the natural desire of government decisionmakers to have it all ways as manifested in their frequent reluctance to live with the economic consequences of competition and to relinquish control (and attendant political power) over market outcomes. It also reflects a sometimes related desire to promote the interests of industry infants to insure their survival. In a very real sense, the so-called "competitive revolution" in telecommunications has often consisted less in the substitution of market for governmental processes of resource allocation than it has the simple addition of a new factional interest (viz., the entrants) to be mollified via the operation of conventional regulatory and political processes.

Since the rules that have governed the long-distance experiment have involved significant handicapping of the competitive process, it is by no means clear what lessons about the long-term viability and efficacy of that process can be prudently drawn. Now competition at the local exchange level is at hand and it poses virtually the same issues and potential conceptual difficulties. Our analysis is thus at least timely.

II. COMPETITOR NECESSITY

The first regime we consider is the one that has actually governed and, to a significant extent, continues to govern the unfolding saga of competition in telecommunications. We refer to this regime as one of "competitor necessity" since the operative principle is one which focuses on the welfare of competitors, rather competition per se, and arguably one which may be necessary for the viability of at least some

competitors. Instead of competition supplying a means to an end, on this view competition -- by which is meant the existence of competitors -- is an end in itself and the success of the competitive experiment is measured by the success of particular competitors rather than the efficiency with which resources are allocated. Normally, attempts by private enterprises to cloak themselves in the public interest are viewed with skepticism, but, in telecommunications, the view is that what's good for particular businesses is good for America is rarely challenged. There is, of course, no necessary connection between the welfare of consumers or the effectiveness of competition and the welfare of particular telecommunications competitors. The survival of any given enterprise may suggest that competition is working or it may suggest that competition is failing as it would if, for example, an enterprise were competitively unfit. Under a "competitor necessity" test, the incumbent firm's freedom to compete is significantly constrained. These constraints usually take two forms: (1) limitations on the incumbent's ability to reprice its services and to offer new services; and (2) asymmetrical regulation which subjects the incumbent's, but not the entrants' tariffs to monitoring, review and a complaint process and which may also effectively subsidize entry. Under the FCC's asymmetrical regime, only leading incumbents are typically compelled to file tariffs. In addition to these regulatory controls, incumbents are usually also required to serve as the carrier of last resort, supplying service when or where others will not.

To evaluate the consequences of this type of regulation, we consider the effects in three stylized markets: markets for "transport," "access" and "innovation." Let us assume that, at the outset, the regulated price of transport exceeds the variable costs of providing transport for some customers (see Table 1), perhaps due to some form of rate averaging or failure to react to changes in technology which should be reflected in the structure of

rates.⁷ This excess contributes to coverage of overhead and the common costs of providing transport and access service and may also involve an explicit subsidy to the provision of access (viz., an access price below relevant cost).

Table 1

Entrant's Choice of Investment Under Asymmetrical Regulation

	Transport		Access		Innovation	
	Price	Cost	Price	Cost	Price	Cost
Incumbent	10	4	25	30	P R E C L U D E D ?	
Entrant	9	5	?	?	8	5

Under a "competitor necessity" regime, this set of prices is essentially fixed by regulation. It may be subject to small changes, but only as a result of tariff filings and success in running the regulatory gauntlet which affords abundant opportunities for delay and exploitation of complexity. While commentators frequently stress the role of technology in explaining the competitive revolution in telecommunications, technology is, in fact, merely a necessary condition for competition. It provides a supply capability, but not necessarily a profitable supply opportunity. The latter is, in our example, provided by the price/cost margin assumed (fixed) in the transport market. A high margin in the transport market provides an incentive for competitive entry, but it simultaneously reduces incentives for entry into the access market. To succeed in the transport market, an entrant must beat a relatively easy mark -- the incumbent's high fixed price, which is, by assumption, significantly in excess of variable costs. To succeed in the access market, on the other hand, an entrant must beat a relatively difficult mark -- the incumbent's low fixed price, which may, by assumption, lie below actual costs of production. This implies

that a high-cost competitor in the transport market may succeed, while a low-cost competitor in the access market might fail.⁸ It suggests that one adverse consequence of this type of regulation is potentially to bias investment decisions (in this case as between the transport and access markets), a point to which we return presently.

The effects of entry are to reduce the price paid for transport with the inevitable consequence that, regardless of the rules governing incumbent response, (either) access customers pay higher prices (or stockholders suffer equity losses).⁹ That is because contribution to common cost recovery and to any subsidy is reduced. It is sometimes suggested that affording incumbents pricing flexibility to respond to competitive entry will hurt so-called "captive" customers, who will be compelled to fund any discounts. Our point is that (either) these customers (or the incumbent firm's stockholders) will pay for any discounts regardless of who offers them. In fact, rate increases (or equity losses) may be even greater if the incumbent is not allowed to respond. As long as the incumbent's discounted rates cover variable costs, any excess can contribute to overall cost recovery and permit access to be priced closer to the socially desired level. Frequently, incumbents are required to price to favor particular customer classes, including their own competitors. For example, under the FCC's unequal access pricing regime, AT&T's competitors were charged noncompensatory, discounted prices which failed to cover the incremental costs of providing technically inferior access to them including a compensatory contribution to fixed-cost recovery. These shortfalls were made up in higher charges for superior access by AT&T. Similarly, exchange telephone companies have historically often relied upon usage-sensitive pricing schemes while the majority of their costs are incurred to provide for the option of use rather than actual usage. Large corporate customers with private networks

may thus pay charges which fail to cover the costs their use of the public network, though occasional, nevertheless causes to be incurred.¹⁰

In these situations, failure to allow the leading incumbents to respond to competition by altering their prices may make things even worse for other access customers (or stockholders). That is because in each case the overhead burden itself rises as business is lost. We have seen how loss of contribution can put upward pressure on access prices (or downward pressure on stock prices) with a fixed overhead burden. That pressure will be increased when what causes loss of contribution also causes the fixed burden itself to grow given noncompensatory regulatory pricing schemes. To the extent access rates are capped, losses to competition flow directly to shareholder equity, an unsustainable result. Moreover rate caps serve to insulate regulators from the adverse consequences of regulation policies gone awry. Ultimately, this will be reflected in the regulated firm's cost of capital.

The implications of a "competitor necessity" regime for efficient resource allocation are ambiguous. In our example, entry into transport lowers the price of that service for some customers producing a welfare improvement, but whether aggregate economic welfare will be expanded depends on the level of the entrant's costs. If the incumbent is not allowed to respond to entry or is allowed only those responses which are ineffective or self-defeating, new firms may be able to enter and compete effectively even though their costs are greater than those of the incumbent. Thus, economic welfare may be reduced if the gains from a lower price are more than offset by the losses from less efficient production.¹¹ If regulatory pricing constraints encourage use of inefficient technology, the economy's overall productive capabilities will be reduced precluding maximization of society's aggregate economic welfare.

A price umbrella may not only encourage excessive investment and lead to higher costs than necessary;¹² it may also discourage investment in economically desirable alternatives such as the provision of new innovative services. Note that, in our example, a rational competitor would choose to enter the transport market rather than the market for innovation because the payoff there is greater given "competitor necessity" regulation. This result could easily occur even though transport entry may involve higher costs and fail to improve economic welfare overall. Under "competitor necessity" regulation, investment signals are distorted and this may lead to inefficient, and perhaps irreversible, investments. This represents a hidden welfare loss to society because consumers remain largely unaware of innovation forgone.

"Competitor necessity" regulation attempts to promote competition by promoting a competitive industry structure (as embodied in, say, an aesthetic distribution of market shares) rather than effectively competitive performance. This type of regulation is fraught with both difficulties and risks. The optimal industry structure is generally unknown and can be discovered only through the operation of a competitive process.¹³ The government's ability to create an optimal industry structure is questionable even if one assumes the government knows what the optimal structure is, which, in fact, it does not.¹⁴ If the government succeeds in creating an artificial industry structure, how can it then sustain that structure without continuing intervention? If entry and the viability of additional suppliers are driven by inefficient regulatory pricing, must the government maintain or create even greater pricing distortions to sustain competitors? What can the government legitimately conclude about the genuine viability of a self-policing industry structure on the basis of experience with an artificial industry structure?

Government promotion of competitors also poses serious problems of moral hazard (as the U.S. savings and loan debacle amply demonstrates). Protection from competition reduces pressure to operate prudently and efficiently. How does the government protect itself from becoming a hostage to the incompetence or opportunistic behavior of its wards? If the government is going to protect competitors from failure, how does it insure against sloth, dishonesty and recklessness? If competitors are shielded from the consequences of their failures, what incentives do they possess to avoid error and improve their performance?

Against these difficulties and risks must be weighed any competitive benefits. But the existence of benefits under "competitor necessity" regulation is problematical. Entry and investment decisions are skewed. Entry into markets for new innovative services may be discouraged and the entry which is encouraged may not actually improve economic welfare if the entrant's costs are higher than the incumbent's. If the incumbent firm is not permitted to respond and structure its prices efficiently, the effect may simply be to substitute high-cost competition for low-cost monopoly.¹⁵ A self-policing industry structure may allow deregulation and, thus, free up scarce regulatory resources to perform other tasks. But how can the authorities conclude that an industry is sufficiently competitive to police itself when all it has to go on is experience with an artificial industry structure, the result of regulatory handicapping? That is not to argue against competition and competitive entry; it is to argue against "competitor necessity" regulation.

Competition is a discovery process. It cannot discover the best mix of products and services or the identity of the most efficient suppliers if it is not permitted to operate effectively. "Competitor necessity" takes the status quo ante and tries to turn it into an immutable given. By so doing, it guarantees the unsustainability of the status quo ante,

but offers no guarantee that resources will actually be allocated more efficiently. Indeed, there are a variety of reasons to expect that they will tend not to be. Thus, this particular leap from the frying pan may perhaps land us in a comfortable bed of roses or, as seems as or more likely, the fire.

III. COMPETITIVE NECESSITY

An alternative to a "competitor necessity" regime is one of "competitive necessity." The doctrine of "competitive necessity" is the rule governing permissible responses to competition under antitrust law. It basically holds that what might otherwise be deemed an unduly discriminatory price may nevertheless be justifiable if the price is narrowly tailored to "meet" (but not beat) the actual offering of a competitor in the marketplace.

If "competitive necessity" were the prevailing standard, the incumbent in our example would be permitted to match the price set by the entrant in the transport market with several beneficial economic consequences. If the incumbent is the low-cost provider, allowing the incumbent to meet the entrant's price may permit the incumbent to limit its loss of business and, by so doing, prevent the inefficient substitution of higher for lower-cost means of production.

Purchasers of transport service, who are the target of discounts, are as well off as under a competitor necessity regime. They get the same deal. Access purchasers (and the incumbent firm's stockholders) are better off compared to the situation under "competitor necessity" rules because, while the contribution to common and access cost coverage is reduced, it is not reduced by as much when the incumbent is afforded some flexibility to respond. When allowed to respond, the incumbent can keep some of the traffic that otherwise might have been lost. Since the market price continues to exceed

the incumbent's variable costs, there is an excess which can contribute to fixed cost burdens.

Investment incentives may also be beneficially altered under a "competitive necessity" regime. Entry into transport will appear less attractive compared to alternative investments. Scarce investment resources may thus be allocated to production of alternative goods and services which generate greater actual improvements in economic welfare. In our example, an investment in innovation may be more attractive if the prospective payoff to investments in transport is reduced.

While we believe a "competitive necessity" regime is preferable to a "competitor necessity" regime, it is not without its own difficulties and demerits. Under "competitive necessity," the incumbent is permitted to meet, but not beat the entrant's price. Thus "competitive necessity" would not permit an incumbent to price so as to exclude less efficient competitors. It is well within the realm of possibility for such pricing to be capable of actually maximizing contribution to burden coverage. A lower price sacrifices some contribution, but it may simultaneously increase contribution, mutatis mutandi, if business that otherwise might be lost is retained. Lower contribution per customer may be more than offset by increases in the number of customers contributing. Moreover, as long as pricing to exclude less efficient competitors is impermissible, investment incentives continue to be skewed.

As we have noted, under a "competitive necessity" test, incumbents are permitted to respond to competition by meeting, but not beating a rival's offering. This standard disadvantages incumbents in at least two ways. First, incumbents are permitted to respond, but not to initiate. In the contest for consumers' favor, a "responder" is likely to play at a disadvantage compared to an "initiator," ceteris paribus. The ability to respond by

matching, but not exceeding a rival's offering may thus fail to constitute a competitively effective response. To the extent that it does not, the adverse consequences we have enumerated remain a possibility, albeit to a somewhat attenuated degree assuming the incumbent has at least some success in retaining customers.

Second, to avail itself of the freedom to respond under a "competitive necessity" test, an incumbent must be able to fashion a competitive response that merely meets a rival's offering. In practice that is liable to be difficult to do and the terms of any proposed response would undoubtedly supply the grist for administrative complaint processes and attendant delays.

Perhaps the most serious disability of "managed" competition is that it provides powerful incentives for "rent-creation" and "rent-seeking" behavior by market participants through exploitation of the government's administrative processes. Resources that might otherwise be employed to expand aggregate economic welfare in the marketplace are instead deployed in a fundamentally unproductive attempt to gain artificial advantage through governmental favoritism. Regulatory challenges that hinder a rival's ability to compete may be privately beneficial to some competitors, but they limit the benefits consumers reap from the free-play of competitive forces in the marketplace. The tougher the mark any individual competitor has to beat, the greater the potential gains to consumers.

The problems of fashioning an acceptable, yet effective, response are likely to be particularly thorny in cases where competing services are not in direct competition with one another, but exist in an economically complementary relation. For example, many businesses operate their own private networks because they can exercise a high degree of control and save money. One reason they can save money is that, as noted previously,

use of the public switched-network is frequently priced on a usage-sensitive basis while costs are typically incurred to provide for the option of use. A business may thus be able to route overflow traffic through the public-switched network and pay rates which fail to cover the costs this occasional use causes to be incurred. A usage-sensitive pricing scheme may thus actually subsidize competition via private networking.¹⁶ Could an exchange company justify an economically rational two-part tariff for transporting overflow traffic in this situation as (part of) a legitimate "competitive response" to private network alternatives? Perhaps it could do so, but, in our view, only with great difficulty and little chance of immediate success.

The doctrine of "competitive necessity" thus supplies an imperfect rule, which would limit competition and continue to provide a protected haven for inefficient entry with attendant skewing of investment incentives. Compared to a "competitor necessity" test, it would nevertheless constitute an improvement.

IV. CUSTOMER NECESSITY

Competition is a means to an end. It supplies a method for promoting consumer sovereignty through a dynamically evolutionary process of discovery and selection in the economic marketplace.¹⁷ The proper measure of the effectiveness of that process is how good a job it does meeting consumer requirements. Satisfaction of consumer tastes and preferences is the most basic and compelling measure of economic performance. Thus, the question that should be relevant for public policymaking is not how well competitors make out in the competitive struggle, but how well consumers fare.

"Competitor necessity" regulation and "competitive necessity" regulation may induce economically inefficient marketplace transactions, provide encouragement and a protected

haven for inefficient competitors, skew investment decisions, and fail to minimize costs of production. They also threaten achievement of social objectives and rob the competitive process of the vigorous competitive rivalry, service innovation and product diversity that are the hallmarks of genuine competition. Instead of regimes that promote the interests of competitors through asymmetrical restrictions on the freedom of some competitors to compete, we think the public interest would be better served by a regime of "customer necessity" regulation that promotes the interests of customers through symmetrical removal of restraints on any competitor's ability to compete.

Effective competition compels adoption of an efficient structure of prices. That implies that customers who are cheaper to serve will pay prices that are lower than customers who are more expensive to serve. It implies that customers who have alternatives will tend to bear a smaller fixed-cost burden than those who do not. It implies that any subsidies to achieve social objectives will have to be targeted specifically toward those in need and be funded collectively. It implies that investment decisions will be taken on the basis of real economic rewards rather than an artificial set of gerrymongered payoffs that depend on expansive regulatory protection and promotion. It implies that economic ability to compete effectively in the marketplace will count for more than legal ability to wage war in the regulatory arena. In its Competitive Carrier rulemaking, the FCC recognized that, to respond to customer requirements, non-dominant carriers would need to employ unique pricing arrangements which would sometimes result in differences in rates to apparently similarly situated customers. The Commission found these differences "a normal response to competitive forces in the marketplace in which these carriers operate."¹⁸ Thus it held individual customer offerings presumptively lawful at least when made by carriers that lack market power.

While all carriers are subject to the behavioral proscriptions contained in the Communications Act of 1934, including the proscriptions against unreasonable discrimination, the FCC does not, in fact, subject non-dominant carriers to any systematic regulatory scrutiny. Clearly, the question of whether an offering is unreasonably discriminatory does not turn on the identity or status of the carrier offering it. Equally clearly, carriers that can more easily offer customer-specific deals are competitively advantaged relative to those that cannot. They thus have a plain interest in maintenance of asymmetrical regulatory treatment that affords them more effective freedom to do so until such time as the leading incumbent is no longer the leading incumbent.

In our view, the government has basically two alternative courses of action: (1) it can afford all carriers the same opportunities to compete and rely on competition to prevent undue discrimination or (2) it can limit the freedom of all carriers to compete and rely on regulatory monitoring to insure against undue discrimination. We believe the first course of action is highly preferable. The second option would require that all carriers be regulated. That would impose administrative burdens symmetrically on all carriers and subject all carriers to strategic abuse of the regulatory process by rivals. It could also turn the Federal Communications Commission into a Federal Communications Cartel, with the government serving as a clearinghouse for competitively sensitive information and a cartel manager. Under oligopolistic industry organization, this is presumably just what the government should not do to promote vigorous competitive rivalry.

V. CONCLUSION

The Competitive experiment in U.S. telecommunications markets has been characterized by asymmetric regulation, by which is meant a non-uniformity in the rules

that apply to competitive entrants *vis a vis* the market incumbent. Two distinct stages of asymmetric regulation can be identified historically: "competitor necessity" regulation and "competitive necessity" regulation. While the latter is somewhat less stringent on the incumbent than the former, both forms of regulation induce inefficient marketplace transactions, provide encouragement and a protected haven for inefficient competitors, skew investment decisions, and fail to minimize the costs of production. They also impede the attainment of social objectives and thwart the process of "creative destruction" inherent in genuine competition. In essence, both "competitor" and "competitive necessity" regulation implicitly adopt the position that maximizing societal welfare is synonymous with maximizing the number of competitors in the marketplace.

We have argued that it is time to adopt a new standard or philosophy of economic regulation in U.S. telecommunications, one which we refer to as "customer necessity" regulation. Here, the objective is one of maximizing societal welfare rather than the welfare of competitors. Survival in the marketplace depends critically on relative efficiency, product diversity and innovation. Not everyone will agree that this is the way to proceed. Those with "better mousetraps" will relish the opportunity to do battle in the marketplace, while those who merely practice arbitrage of asymmetric regulation will be forced either to build "better mousetraps" themselves or quickly perish. In either case, competition serves the desired end, one of maximizing social welfare!

ENDNOTES

1. Haring, John R. and Kathy Levitz, "What Makes the Dominant Firm Dominant?" FCC Office of Plans and Policy Working Paper Series , No. 25 (April 1989).
2. See "Economic Perspectives," presented at CompTel Conference, "The AT&T Dominance Debate," Washington, D.C. (September 14, 1990).
3. See In the Matter of Competition in the Interstate Interexchange Marketplace, FCC CC Docket No. 90-132.
4. See Richard Schmalensee, "Standards for Dominant Firm Conduct" in D. Hay and J. Vickers (eds.), The Economics of Market Dominance (1987).
5. See op. cit., p. 5.
6. Electric power and natural gas distribution are notable examples.
7. For example, the historical evolution of switching technology from cross-bar to electromechanical to electronic to digital implies a diminishing ratio of variable to fixed costs and the desirability of a rate structure with higher fixed and lower variable components.
8. Given the historical subsidy to local service, the lack of entry there and the occurrence of entry into long-distance service is thus easily explained in these terms. Moreover, the divestiture of AT&T could well be interpreted as a mass exit out of the local service market on the part of AT&T.
9. If access rates are effectively capped or raised only slowly and with great difficulty, stockholders are left holding the bag. No firm can sustain equity losses perpetually.
10. See Dennis Weisman, "Default Capacity Tariffs: Smoothing the Regulatory Asymmetries in the Telecommunications Market." *Yale Journal on Regulation*, Vol. 5, No. 1 (Winter, 1988).
11. On the nature of the economic tradeoffs between allocative and technical efficiency, see Oliver Williamson, "Economies as an Antitrust Defense: The Welfare Tradeoff," American Economic Review, Vol. 58 (1968). John Wenders, The Economics of Telecommunications: Theory and Policy, Ballinger (1987) has argued forcefully and persuasively that there really is no such thing as uneconomic bypass and that consumers should always be permitted to contract freely to improve their position even if this entails technical inefficiency and resource waste. Our position is not that bypass should be prevented via fiat but that it should not be encouraged via artificial restraints on any competitor's freedom to price efficiently. Pricing freedom will minimize technical inefficiency and maximize gains in consumer welfare.

12. Consider, in this regard, the huge overhang of excess capacity asymmetrical regulation has produced in the long-distance business. Robert Crandall, "Telecommunications Policy in the Reagan Era," Regulation (1988) No. 3, has analogized the frantic investment in fiber-optic networks to the rush to build railroad lines in the last century. He remarks that "Given the history of transportation regulation, we know that continued rate regulation and liberalized entry are a potentially lethal combination. Regulators inevitably find themselves hostage to inefficient competitors. It now appears that investment in interstate telephone transmission has been excessive."
13. See John R. Haring, "Implications of Asymmetric Regulation for Competition Policy Analysis," FCC Office of Plans and Policy Working Paper Series, No. 14 (December 1984).
14. Government attempts to modify industry structure in other industries have often failed. See John Meyer, et al., The Economics of Competition in the Telecommunications Industry (1980). The economic revolution currently underway in Eastern Europe certainly represents a thorough rejection of the efficacy of industrial planning by government.
15. See Richard Schmalensee, "Standards for Dominant Firm Conduct" in D. Hay and J. Vickers (eds.), The Economics of Market Dominance, (1987).
16. See Dennis Weisman, "Optimal Re-Contracting, Market Risk and the Regulated Firm in Competitive Transition," Research In Law and Economics, Vol. 12 (1989).
17. See Joseph Schumpeter, "Capitalism, Socialism and Democracy", Harper and Row (1950) and Freidrich Hayek, "Competition as a Discovery Procedure," a New Studies (1978).
18. See Rates for Competitive Common Carrier Services, 77 FCC 2d 308 (1979).