REGULATION UNDER INCREASING COMPETITION

edited by
Michael A. Crew
Center for Research in Regulated Industries
Graduate School of Management
Rutgers University
Newark, New Jersey, U.S.A.

REGULATORY GOVERNANCE AND COMPETITIVE ENTRY

Michael A. Crew
Paul R. Kleindorfer

Regulation of network industries, notably, telecommunications, electricity, gas and postal service, has changed significantly in recent years and has become increasingly complex. Although 1984, with the divestiture by AT&T of its operating companies, was seen as a landmark event, the process had begun several years earlier when competition in the long-distance market was first allowed on a small scale. The entry by MCI into long distance was initially minuscule. However, the camel's nose was under the tent, and, despite valiant efforts by an exceedingly accomplished and regulatory-oriented AT&T management, the battle and the war were lost. AT&T and regulation would never be the same again. Not only was AT&T affected, but the impact was also felt on other industries formerly subject to traditional cost-of-service regulation. Allowing entry into regulated monopolies undermines the traditional structure of these industries and of regulation itself. The problem is that regulators and companies, to say nothing of regulatory economists, were flying blind. Once entry was allowed, the consequences were not clearly foreseen. The contradictions created are still to be resolved.

In this paper, we will argue that traditional and current regulation are inefficient governance structures for the regulation of natural monopoly under the conditions of competitive entry faced today. Existing institutions face internal conflict, making it unlikely that they will be able to reconcile a number of conflicting objectives that they face. This paper will examine the nature of regulatory governance structures under entry. The approach will draw on the approach of comparative institutional analysis pioneered by Oliver Williamson (1980) and employed by Crew and Kleindorfer (1987). As we will demonstrate, the approach to regulatory governance is not as clear and transparent as it was in the days of a traditionally regulated monopolist. Similarly, the objectives of regulation are less transparent.

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1 We would like to thank Mark Beyer, Janie Chernoz, Andrew Geeman, Jing Gong, Jonathan Lesser, Steve Levinson, Roger Sherman, and Anton van der Lands for helpful comments.
Thus, regulation has become more complex and less focused. To make the process more transparent, we will argue that regulation needs to be directed at the residual natural monopoly or that part of the industry that should remain subject to regulation. In electric power, for example, the residual monopoly consists of the wires used in transmission and distribution. In gas, it would be the distribution pipes and ancillary equipment. In postal service, there is a powerful case for considering local delivery as the residual monopoly. Our approach will throw light on current examples of where regulation may not be achieving its objectives or may be inefficient. Areas of concern include the regulatory changes taking place as a consequence of the Telecommunications Act of 1996 and the Energy Policy Act of 1992.

The paper is divided into four sections. Section 1 provides some of the origins, a statement of the problem, and an outline of the proposed solution. Section 2 provides a detailed examination of the changes in regulatory governance and the industry structure needed to address the problem in sunk or fixed network industries.

Section 3 discusses the application to postal service. We consider that this warrants separate treatment because postal service has some significantly different characteristics from traditional public utilities. Section 4 is by way of summary, conclusions, and implications.

1. Origins, Statement of the Problem, and Proposed Solution

Traditionally regulated monopoly was exactly what it appeared to be. It consisted of a single firm supplying the entire market. The regulator made adjustments from time to time, but these were generally predictable. As Goldberg (1976, 427) argued “Regulation can be viewed as an implicit administered contract...” He argued further that such administered contracts are likely to be efficient relative to some alternatives in situations where assets are long-lived and specific. Indeed, it is these elements that place a burden on the monopoly regulator. He has to act as a neutral referee. He has to balance the interests of consumers and the regulated firm. The consumer would always like to see lower prices. In view of the high level of asset specificity, it would always be possible for the regulator to under-price the services of the regulated firm with little likelihood of dire consequences at least for some time. Unlike the competitive firm, the regulated firm could not just take his marbles and leave, as most of his assets had only their existing use. Wires, poles, conduits, trenches, pipes, and manholes have little value and sometimes a negative value outside their existing uses. For many years, regulation functioned by maintaining the current supplier’s monopoly with entry barred and the consumer paying a price that was determined to be reasonable by the regulatory commission. Goldberg’s characterization of the regulator administering an on-going and complex contract describes in a few words the nature of regulation. Indeed, because regulation is an administered contract, it had the primary virtue of being flexible. This flexibility inherent in the administered contract worked well as long as the shocks to the system were not too great. The rapid increase in fuel prices were a major shock in the 1970s to the energy industries, but regulators were mostly able to make adjustments for this in the form of fuel adjustment clauses. However, permitting competitive entry was probably too big an event for the system to handle, as it undermined one of the fundamental tenets of regulation. The effects were also insidious in that entry did not occur instantaneously and its effects were gradual. Just because an independent generator set up shop did not mean that the lights went out. This lulled regulators and companies into a sense that nothing bad would happen if they operated in a business as usual mode. Some accommodations to the new situation were made, including allowing the regulated firm more pricing flexibility. Under traditional regulation, prices were set based upon the cost of service and the firm could not change prices without permission of the regulator. Similarly, if it made profits in excess of the amount allowed, it was subject to a rate case and adjustment in rates. Under current regulation, at least where the firm is regulated by price-cap regulation, it is allowed some freedom in setting prices within the constraints of a price-cap formula. The regulator still administers a contract between it and the regulated firm, but the contract is less transparent. The regulator exercises less control over prices but may have to become more concerned over such issues as service quality and the terms and conditions under which entry takes place, including the price paid by competitors for inputs supplied by the regulated firm. Probably the biggest change, as a result of allowing entry, is that the regulator now has to deal with not only the regulated firm but also a number of competitors. Frequently, these competitors are unregulated, but they may stand to gain considerable financial advantages by influencing the regulator’s treatment of the regulated firm.

The problem regulators and the industry face is perhaps nowhere better illustrated than in the case of telecommunications. Until the 1970s, telecommunications had been a highly successful and stable industry. It was regulated based upon the traditional argument for regulated monopoly, namely, natural monopoly. Because of overwhelming scale economies there were some markets where one firm was the natural result of allowing unfettered market forces. Traditional regulation attempted to retain the benefits arising from the scale economies, while at the same time preventing monopoly exploitation. For many years, with few detractors, notably Posner (1969; 1975), it was argued that regulation was indispensable in such situations. With a gradual change in this perception, firms selectively entered the business of the regulated firm. For example, MCI only entered the long-distance part of the business of the former AT&T. This immediately raised issues on the terms under which access to AT&T’s local companies should be provided. Amid claims of discrimination and other antitrust violations AT&T settled its suit...
with the Justice Department by divesting itself of its local companies, the Regional Bell Operating Companies (RBOCs). This structure of AT&T providing long-distance service and RBOCs providing local service continued for several years. However, the RBOCs resisted entering long-distance markets and the long-distance carriers wished to get into local service. The Telecommunications Act of 1996 aimed at opening up local service to allow long-distance companies to provide local service and allowing the RBOCs into long distance. Prima facie, this seemed to be a clear quid pro quo. However, it did not work out quite as intended because of asymmetries in the situation faced by the sides. It would be relatively easy for the RBOCs to supply long-distance service. They could lease facilities from a choice of long-distance carriers, build their own facilities, or much more likely employ a combination of both strategies. However, allowing long-distance carriers in local service was much more complicated because, at least in the case of residential wireline service, there is little scope for more than one supplier. The RBOCs were monopoly suppliers of the inputs required if the long-distance companies were to enter the local market. Thus, the price and the terms of entry by long-distance companies were subject to arbitration by state regulators. The process turned out to be expensive and very little entry has currently taken place into local service. Indeed, the two largest long-distance carriers have shelved, or at least significantly curtailed, their efforts at entry into local service by these means.

This situation in telecommunications illustrates, not surprisingly, that the path to competition in network industries is a rocky one. This is largely because the existing regulatory governance structures, while flexible and evolving, may be failing to address critical aspects of the current situation. In particular, they may not be coming to terms with the role of competitive entry and the notion that regulation may have a different role under competitive entry. In addition to the traditional role of consumer protection, regulation may have to be concerned with enforcing, for example, universal service obligations and with protecting competition from the power of the incumbent, while avoiding severely disadvantageous treatment of the incumbent. The regulator, thus, faces a number of conflicting objectives not the least troubling of which is the continued desire by politicians to maintain some of the cross subsidies that were part of traditional regulation and perhaps add additional ones.

Our proposed solution to these problems derives from the nature of the technology and markets of network industries. These industries involve two basic functions: the commodity and delivery of the commodity. With the opening up of traditional network industries to competition, it has become apparent that the natural monopoly argument generally applies to delivery rather than production. Our basic proposal is that the core monopoly of the regulated business be clearly separated from all other parts of the business and this core should become the primary focus of regulation. The non-core parts of the business should be driven primarily by competition, with the sole role of the regulator in this non-core areas to assure rapid and unconstrained entry. For example, the gas industry has unbundled production, transportation, and distribution of gas and has encouraged the entry of brokers and other financial intermediaries to set up delivery and risk management contracts. This has assured that there is competition in the production of the commodity, natural gas, while the transportation and delivery of gas (which may be regarded as the core monopoly functions of this industry) are usually performed by a monopoly. The electric utility industry has traditionally been organized as a vertically integrated industry, where the utility generates, transmits, and distributes power to the final consumer. There was always some on-site generation where large process industries generated electricity mostly for their own use. With the Public Utilities Regulatory Policies Act of 1978, and the Energy Policy Act of 1992, other companies have entered the generation business. The Modification of Final Judgment recognized the importance of severing the more competitive long-distance business from the monopolistic local business by divesting local into seven RBOCs and leaving AT&T with long distance, equipment manufacturing, computers, information services, and Bell Laboratories. This structure, however, did not draw a bright line between competition and monopoly. The RBOCs were not solely monopolistic businesses. They operated the Yellow Pages advertising and quickly faced competition in their intraLATA toll markets. Some of their access business was also under attack, particularly in the case of their larger customers.

Despite the increased competition, the RBOCs were extremely successful following the Divestiture. They were successful both in their traditional monopoly markets and also in the competitive arena. They benefited considerably from changes in technology with rapid growth in all usage, access, and lines. As a result, they began to look less like the monopolistic providers of access and local service then they had at Divestiture and, as a result, became increasingly eager to enter the long-distance and information markets. The Telecommunications Act set up a process to allow this, taking the RBOCs further away from their monopoly roots. As yet, they have not entered the long-distance market nor have the inter-exchange carriers made any significant entry into the local markets. In view of the disappointing performance at bringing about increased competition in both local and long-distance service, the alternative of paring down to the core of the monopoly may have several advantages from a competitive point of view.

Given these problems, the idea of redefining the monopoly and concentrating the regulation there warrants consideration. The initial step would be to determine which stages of the vertical structure of an industry are potentially competitive and which are structural monopolies. The regulation would then be directed to the natural monopoly stages that have been identified. How such issues might be resolved will be examined in the next section. While we will briefly review a number of alternatives, we argue that the regulatory governance is in need of significant change, including a re-evaluation of the objectives of regulation.

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4 It is not to say that absolutely no alternatives exist. Residential subscribers could consider wireless systems. However, the prices have not yet become sufficiently attractive that most subscribers would find them attractive for their residential service, except perhaps in some isolated location where installing a wireline would be very unattractive.

5 AT&T has shelved its efforts and has announced its intention to merge with TCI as an alternative route to local competition. Similarly, MCI is merging with WorldCom.
2. Changes in Regulatory Governance in Network Industries

Our approach takes into account that fact that, although there has been significant entry, entry has not been uniform. Entry has not occurred at all vertical stages of the industry. This is for good reason; some vertical stages may still have strong characteristics of natural monopoly because of the economics of scale, of scope, of contiguity, or for other industries depending on the industry. The residual natural monopoly parts of the business are, in our view, those with which regulation should be focused directly. Approaching this problem for each of the industries is complex. In this section, we will examine some of the details of the proposed approach for telecommunications, electricity, and gas. The application would have major differences in each of the industries. In addition, we will provide some evaluation of the efficiency consequences of the proposal in each industry.

2.1. Telecommunications

Continuing with the telecommunications industry example, there is a case for arguing that the monopoly is the wires, poles, trenches, conduits, and the like used to provide access from the subscriber to the network. The next step calls for a decision as to the firm to divest itself of all of its activities except its redefined core monopoly. If divestiture is deemed appropriate, the firm would become a provider only of "access" or a "Loopco." As an access monopolist, it would only provide service to other firms. It would not provide retail service. Its customers would be other telephone companies. It would be regulated by a commission, which would adjudicate disputes between it and the other telephone companies.

While divestiture provides a very "clean" solution, it is not necessarily the only solution. An alternative would require that the RBOC not offer any retail services in the area served by its Loopco. Thus, in the Loopco area in which the RBOC owned Loopco, the RBOC would have only wholesale customers, exactly as in the case of a divested Loopco. The RBOC would, however, be able to have retail customers anywhere outside its Loopco territory. So an RBOC would not be allowed to have any retail customers in its current territory but would be able to in the rest of the country. Its existing and new wireless customers would be unaffected. Thus, it would be itself a user of its Loopco for terminating its wireless calls and terminating the calls of its customers outside its territory.

A prohibition on retail customers within its Loopco area creates a problem for the RBOC. It would presumably be seeking business from all types of customers except in its Loopco's territory. This would not present a problem for small residence and business customers as the RBOC would be banned from serving them within its Loopco region. Large business is sufficiently spread across the country that it might be significantly handicapped in competing for contracts to provide for a large company's business nationwide in that it could not offer service to a customer's plant located in its Loopco area. One approach would be to allow RBOCs to compete in multi-location contracts over a certain size irrespective of whether the customer had a plant in its Loopco territory. Given the ubiquitous nature of the large corporation, most and probably all of the Loopcos would be involved. In many cases, they would only be involved in contracts with the company's telecommunications provider to supply special access, for example, a high capacity fiber link to the company and the telephone provider's switch. This would be a suitable boundary line. Provided certain conditions were met, including large-scale special access and multiple locations nationwide, the RBOC could seek a waiver to be allowed to provide retail service within its Loopco's territory. The process would involve a number of regulatory complications, with the regulator being required to adjudicate as to whether a particular customer qualified for this waiver. The other alternatives would be to have an absolute prohibition on retail business within its Loopco territory. If it found this unacceptable, it would still have the option of divesting its Loopco.

One model of the Loopcos calls for divestiture and the other does not. To bring about the divestiture model might require new legislation or antitrust actions against the RBOCs. The other model might not require any changes. Any RBOC wishing to enter long distance would be allowed to do so provided it set up a Loopco and provided no retail service within the territory of the Loopco. In either case, the RBOCs and other local companies would be given their choice of whether to divest or not to divest under these conditions. The non-divestiture model might be attractive to them if they could sell their local customers to providers of what would now be end-to-end service. For example, each long-distance carrier could be offered the opportunity of buying the RBOC's local service customers who are currently receiving long-distance service. This would presumably raise a significant injection of funds that could be used to further its entry into long-distance outside the Loopco's territory.

Irrespective of whether divestiture occurred or not, the Loopco would be subject to regulation. Other telecommunications services normally would not be regulated. The regulation of the Loopco would be by price not by profits. If the Loopco received an increase in its access demand, it would benefit in terms of increased profits. It would also have an incentive to build new capacity if demand was growing. Since it would be subject to price-cap regulation, the Loopco would be able to be flexible in its prices. If it found that it was losing access traffic to wireless

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6 This access system is used twice to make most telephone calls—at origination or at termination of a call. Where a wireless phone is used, the cellular company provides the origination portion of the call. A subscriber may also call a cellular customer or might use his telephone line to access the internet. Alternatively, it would divest itself of its other businesses and retain just the monopoly core.

7 Recent proposals by LCI and C. Michael Armstrong, the Chairman of AT&T, argue for a clear "structural separation" between the RBOC's access facilities and the rest of the business if they are to be allowed into the business of long distance. See AT&T press release, May 5, 1998 and LCI Petition for Expedited Declaratory Rulings, Federal Communications Commission Docket No. 98-5.

9 This would certainly be the intention at least. However, as the recent FCC ruling providing compensation for payphone owners for 800/888 calls made from payphones indicates, regulation can appear in all sorts of places.
companies, it would be able to adjust its rates accordingly.

The advantages of the Loopco approach are that it clarifies the regulatory and also severely restricts the scope of regulation. Most importantly, it offers the potential of opening up telecommunication to competition by making competition in the end-to-end market possible. The proposal has some disadvantages. Its adoption will not result only in efficiency gains. The main concern would be the loss of scope economies, which would occur primarily in two areas. Currently, RBOCs provide not only local access (the wires, etc.) but also local calling and interLATA toll service, which requires that they own and operate switching and transmission plant in addition to loop plant. This plant is currently integrated into their loop plant. If the Loopco is required only to provide loop services, then any scope economies currently being achieved would be lost. A number of possible solutions exist to this problem in addition to divesting these facilities. One approach would be for the Loopco to retain these facilities and resell their services on a wholesale basis to competing carriers. The disadvantage of this approach is that it would expend the Loopco’s activities beyond the loop and possibly make its regulation as a provider of monopoly services more complicated. The complications, however, may not be too severe. The RBOC would be able to decide whether to divest these non-loop facilities from the Loopco or to retain them. If they were retained, the solution might be for the Loopco to have two baskets. Basket 1 might be access and local usage and Basket 2 would be transmission services. The price cap on Basket 1 might offer the retail service provider a fixed fee per line for access and a per minute of use charge for charge for any calls made. It would then be for the retail service provider to decide whether it wished to offer flat rate or measured local service or other creative pricing option. Basket 2 would be the transportation services within the existing LATA. The retail services provider would buy such services depending on how many facilities he had colocated within the Loopco’s central office.

If the Loopco provided not only loop services but also transportation and switching services within the LATA, it would be in many ways similar from a strictly network point of view to the existing RBOCs. However, the Loopco would be in the wholesale business and not the retail business, as the RBOC is currently. For an RBOC, the choice would be between being in the retail business or in the wholesale business in its existing territory. Either it could divest its Loopco and provide end-to-end service nationwide or it could divest the retail business in its current territory and provide end-to-end service in the rest of the United States. Either option would focus on the monopoly and provide the regulator with the ability to offer some protection from monopoly exploitation.

There are undisputed scope economies of supplying local service and long-distance service. The Loopco proposal would forgo these. However, under the existing arrangement, these scope economies have been foregone entirely, and, if the lamentably slow progress of bringing about local competition as envisioned in the 1996 Act continues, this will never be fully achieved. So, at least compared with the status quo, the Loopco proposal involves an identical loss in efficiency from failure to achieve economies of scope from integrating end-to-end service. There may be some loss of scope economies from RBOCs ceasing to provide retail

local service in their Loopco area. For example, to schedule a repair or an installation, the subscriber would contact his provider who would forward the customer’s order to the Loopco for fulfillment. This is unlikely to be a huge loss as, given the fall-forwarding ability of modern telecommunication, the provider would likely have all calls forwarded to the Loopco in any case. Absent a detailed study, it does not appear that there is likely to be a major loss of scope economies as a result of the Loopco proposal.

The Loopco proposal may be criticized on grounds that it may not promote innovation and other dynamic efficiencies. This could apply to a divested, fully independent Loopco whose only service was wholesale access. However, if RBOC predictions of increasing competition in the access market from CATV and wireless are true, then the Loopco may well have an incentive to innovate and, indeed, the Loopco’s access monopoly will disappear. In this event, the LEC owning the Loopco would be able to show non-dominance and might then be in a position to petition for the lifting of any restrictions for it to provide full service, including long distance in its Loopco territory.

2.2. Electricity

Changes in the organization of the electric power industry continue to be the subject of much debate following the Energy Policy Act of 1992 and the start of a process of opening up of the industry to competition. Here we will provide a brief statement of the problem and discuss, in somewhat simplistic and general terms, the implications for regulation. The approach we take is to focus on the core monopoly, in a similar fashion to our proposals for telecommunications. In a vertically integrated electric utility, it is the wires that are the monopoly and not the generating plants. Generating plants can compete with one another as long as they are connected to the wires of the transmission and distribution systems. The wires from the plant to the distribution network take the power from the generator to the distribution system. The distribution system is like the local loop in that it provides for delivery to the final consumer. It is clearly a monopoly, at least until it is possible to install on site distributed generation, say in the form of fuel cells connected to the gas mains.

Given the nature of the industry, there seem to be three basic models for regulatory purposes. There are: the fully vertically integrated firm, regulated as presently (the Genco-Tranco-Disco case); the firm which has divested generation but retains transmission and distribution (the Tranco-Disco case); and the case of the distribution company only (Disco). Within each case there are a number of possibilities. The Tranco case. Here the Disco might make the distribution wires available to an energy services provider (Esco). As in the telecommunication case, it would be the Esco who interacted with customer. The Disco would

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10 See, for example, Kleidoufer (1998) for a discussion of such issues in the context of the transmission sector.
11 As Green and Newberry (1992) have shown, the location of the plant in relation to the transmission bottleneck may give certain power plants monopoly power.
be supplying the Esco with wholesale use of the wires, which it would resell to its customers. The Disco would be subject to price-cap regulation and the Esco would not be subject to price regulation. The bundles of services supplied could be quite varied. For example, unbundling and rebundling could take place. Take metering as an example. The Esco might be responsible for customer metering, or the Disco might perform this function or independent and competing contractors might perform it. There are other services that are needed for the supply of electricity. Some of these may involve significant market power. The provision of peak loads and backup power is an example. The supply of electricity requires back-up power otherwise significant damage or disruption costs might occur in the event of an outage. One source of back-up power would be an independent generator supplying power on site to a large industrial user. The independent generator will need back-up power to handle forced and scheduled outages. He could go to the Esco, the Disco, the Transco, or a Genco to provide this back-up.

Without going into details, the implications for an existing vertically integrated electric utility may involve a number of options. The utility could divest itself of all its generation and just operate as a Disco-Transco. It would then, like the Loopco, just provide services wholesale to Gencos, and Escos who would then deal directly with the final consumer. One model of the Disco-Transco would have it providing all the metering and other ancillary services, such as back up power and network support. An alternative model would allow provision of at least some of these services by others. For example, it might be possible to allow competition for all retail metering, but the Transco might be responsible for metering the power it receives at its bus from the Genco or Esco. Some back-up power and network support might be provided by individual Escos or Gencos or even by individual customers, for example, on-site back-up generation. The critical issue would be where the user provided his own back-up power that he could be made to bear the entire costs of his own failure to supply. If he could, then there is no reason why the Disco-Transco has to get involved. However, to insure the viability of the network, the Transco-Disco might provide the back-up in certain instances.

It is clear that a number of complex structures are possible. There may be distinct advantages in having vertically integrated utilities divest themselves of their generation and act only as a wholesale provider of energy and ancillary services to Escos and to the Independent System Operator responsible for transmission and load stabilization. The regulator would then be concerned with regulating only the core monopoly, namely transmission and system operation, plus the wires portion of distribution. Like the Loopco case, this would be an extremely tidy solution from the regulatory point of view and would allow the regulator to focus on the core monopoly while allowing competition in all of the other services. A further advantage of this solution is that, in terms of resources employed, transmission and distribution accounts for about thirty percent of the investment and probably less than 10 percent of the total fuel, O&M, and other variable expenses. Thus, the vast bulk of the provision of the service would be subject to competitive supply, providing customers with the potential benefits of competition. A further benefit is that financial intermediation and brokering of contracts between generators and load managers (including Escos) could act as market makers and offer value added services including risk management.

2.3. Gas

Like other network industries, the gas industry consists of production, transmission, and distribution. Traditionally, gas distribution companies purchased gas from the pipelines or from the producer and paid pipelines for transportation. Now, however, gas distributors only provide this service for their smaller customers. Their larger customers either purchase gas directly themselves or through a broker, and the gas utility supplies transportation and other services, for example, storage for the servicing of peak demands. The structure is different from the current structure of telecommunications, as gas distribution companies are allowed to provide end-to-end service. Indeed, for small customers they do so. They buy the gas and arrange bulk transportation through the pipeline, which together with local storage enables them to provide end-to-end service.

While the structure of the industry continues to evolve, it is clear that the trend is clearly toward more unbundling. Producers are largely unregulated. Transmission and distribution companies face regulation, currently in the form of the traditional cost-of-service variety but, increasingly, in the form of incentive regulation, which is also referred to as performance-based regulation. The unbundling, which began in the late 1980s and has continued unabated, has promoted a transparent pricing of production, transportation, and distribution. This, with separation of ownership of the elements of the supply chain has also encouraged the entry of significant brokering and intermediation services into this market, including an active futures and options market and very significant competition arising from the activities of intermediaries. Local distribution companies can use the services of competing brokers to shop around for the best prices and delivery terms. They can contract for firm or interruptible supply, absorb uncertainties in various financial and technological ways, and generally profit from the tremendous increase in competition and variety available from it. While this unbundling process began with larger customers, just as in the case of electric power and telecommunications bypass, it is now moving into the arena of retail choice. For example, smaller customers, including residential customers, will increasingly be able to purchase gas through an energy-service company or broker. If this trend continues, gas companies may evolve into the equivalent of Loopcos, providing only wholesale delivery service. From a regulatory point of view, this would have all the advantages claimed for regulating only the core monopoly.

12 See Croyle (1997) for a discussion of unbundling of the metering function.
13 Indeed, one major utility has made a move in that direction. GPU has, by its overseas acquisitions and its creation of a nuclear generating arm, begun to position itself to be a Disco-Transco. It has not announced any plans to exit the retail business.

14 For a good introduction to the history of natural gas deregulation and the restructuring of the industry in the 1980s and 1990s, see Doane and Spulber (1994).
postal. Despite the obligation to provide single-piece end-to-end service, our proposal would orient postal services very much toward local delivery networks. Even under public ownership, there would be an increased potential for much more contracting out. Independent contractors for the postal administrations might operate local delivery networks. Postal services might take on the role of franchisors for local delivery networks. Some of the networks would be operated by franchisees, while others would be owned and operated by the national postal administration. Hybrids might be possible in that franchisees might operate networks where the postal service owned the facilities. Under public enterprise, the absence of residual claimants would attenuate such incentives for efficiency. Even under public enterprise, some changes would occur, and the possible contracting arrangements are considerable. For these reasons, we regard further discussion as beyond the scope of this paper.

4. Summary, Conclusions, and Implications

We have examined the problem of regulatory governance when entry into a regulated monopoly is allowed. We have argued that, while such markets display competition, a residual or core monopoly remains, and it is this residual upon which regulation should be focused. Our proposals build on the apparent trends in most network industries toward unbundling of the various components of the value chain to assure greater transparency of the cost of each of these components (from generation to final customer distribution). Our proposal is to join this obvious trend and to reinforce it with appropriate changes in regulatory governance. We argue that the structure of present network monopolies, or their inherited partially deregulated descendants, should be restructured so that monopoly providers would, in most instances, provide only wholesale service. Furthermore, this monopoly would be confined to the core area (typically in local delivery), where overwhelming scale or scope economies continue to make monopoly provision desirable. Retail services would be subject to competition. Regulatory commissions, instead of acting directly on behalf of consumers, would now act directly on the part of the firms in competition for the consumer’s dollar. Their key responsibility would be to assure fair and open access to competitors to the core monopoly-provided services and to regulate the price and quality of these latter services. Competition would be allowed to work within the industry where the industry was competitive. The monopoly segment of the industry would be regulated. The benefits of competition would be available, and monopoly regulation would rule in the residual monopoly segment. This approach would presumably offer greater efficiency gains compared to the older system, where the entire industry was treated as a monopoly and no entry took place. Shrinking the monopoly makes cross subsidies more difficult to hide, offering this benefit as well as the discipline provided by competitive entry.

The question must be asked as to whether this approach is worthwhile relative to the alternative governance structure of laissez-faire. Laissez-faire might be considered the only true form of deregulation or at least the ultimate outcome of a process of deregulation. This is effectively the approach taken when the Civil Aeronautics Board was abolished in 1978 “letting the airlines be,” with no regulator to set prices or otherwise act as referee. Laissez-faire is the ultimate in deregulation, and the question to be answered in this context is whether it should be considered as a governance structure to be implemented immediately or ultimately or whether it is even feasible in network industries. It would be relatively easy to craft an argument for laissez-faire on the grounds that the monopoly rents will be dissipated by rent-seeking within the regulatory process along the lines of Posner (1969; 1975). A contrary argument is that by paring down the regulation to the residual monopoly that the rents are reduced. Another argument is that rents are no longer dissipated in thwarting entry to the competitive segment of the industry.

The arguments for laissez-faire in network industries are far from compelling. True laissez-faire would imply not just the abolition of regulation but also immunity from antitrust actions. Given that this is this is out of the question, effective laissez-faire would imply no regulation but the possibility of antitrust action. This much deregulation would, however, be considerable and would not likely to be politically feasible, in part because there would be a genuine concern about monopoly power in these situations. Let us look at the consequences of laissez-faire in telecommunications and postal service.

In telecommunications, prices of local service in rural locations could rise considerably. In some urban areas, prices for local service would fall or stay approximately the same. In others, they would fall. It might be even more difficult for long-distance carriers to get into the local market. Absent regulation, there might be no pressure for an RBOC to allow its long-distance rivals into the local market, since its own entry into the long-distance market was no longer barred. Competition from wireless and CATV has not developed as fast as once expected. So the RBOCs under laissez-faire would enjoy considerable monopoly power at the expense of long-distance carriers. In this sense, the best option for a long-distance carrier would be to pursue a merger further consolidating the industry. Given the consolidation that has recently taken place and is continuing to take place, it is not likely that this process would further enhance competition.

Laissez-faire for postal and delivery services would have a number of likely

17 We have examined the USO in the postal sector in a forthcoming paper (Crew and Kleindorfer 1998).

18 Cramton (1997) provides an insightful analysis of the issues involved, including the major issues of political feasibility at this time.
19 Currently, the airlines are in this situation of being subject to the antitrust laws but not regulation. This has not necessarily made the industry competitive. There is a concern that the major airlines’ control of gates and slots gives them considerable monopoly advantages.
20 Telecommunications, given the pace of technological change and the rapid growth in the market, seems likely to offer much better prospects than electricity and gas.
21 The latest proposed merger between Southwestern and Ameritech follows the acquisition of Pacific and Southern New England.
consequences. Universal service would disappear in its present form. Rural areas might get some kind of service but at a considerably increased price. In addition, quality of service would be likely to deteriorate.

Given the likely alternatives, namely the current situation and laissez-faire, the approach suggested here is identifying the residual monopoly and regulating the remaining core has much to recommend it.

References


