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COMPETITION AND REGULATION IN TELECOMMUNICATIONS

Examining Germany
and America

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WHAT IS WRONG WITH AMERICAN TELECOMMUNICATIONS?

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For more than sixty years, voice telephony was provided by the American Telephone and Telegraph Company (AT&T) as the franchised and regulated monopoly. Divested of its local operating companies in the 1984 landmark antitrust case, AT&T has become the dominant of three voice and data long distance providers while its former operating companies have become dominant single providers of local service. After nearly three years of telecommunications explicit “deregulation” in the United States, centering on the Telecommunication Act of 1996, there is little to which regulatory officials in charge of such deregulation can point in terms of benefits in the form of lower prices or innovative services. The prospects for rapid improvement are bleak. Whether or not America’s defectively designed regulatory institutions are reparable, it is critical that other nations recognize the

American mistakes in telecommunications and strive to avoid repeating them.

The “star” network configuration required for provision of telecommunications services has inherent economics of scope and scale, as well as well-recognized network externalities. These structural characteristics have attracted regulation, in the form of state and federal agencies that determine the holder of a “franchise” and the terms and condition for the franchises to provide service. Regulation of telecommunications in the United States has been embodied in a “regulatory contract” between the private carrier and the regulatory authority, which in the first instance is a state public utilities commission (PUC) and in the second instance is the Federal Communications Commission (FCC), which has jurisdiction over interstate communications. In practice, American regulators have shaped the regulatory contract in a manner that sacrifices the economies of scale and scope; instead they have designed the regulatory contract to capture network externalities and to use supracompetitive returns on exclusive service provision to fund various politically favored goals.

American telecommunications contains an artificial regulatory segregation of local exchange telephony from interexchange (“long-distance”) telephony that arose principally from the manner in which the U.S. Department of Justice and AT&T settled their antitrust lawsuit with the divestiture of the Bell System in 1984. This distinction is important because it affects in substantially different ways the competitive strategies of the local exchange carriers and the interexchange carriers. The adverse unintended consequences of the divestiture decree would, after the Telecommunications Act of 1996, be little more than a historical curiosity were it not for the fact that the 1996 legislation enshrined much of the misguided case-by-case policy that arose between 1984 and 1996. Foremost among the consequences has been an application of regulatory and antitrust policy that has perpetuated barriers to entry into interexchange markets on the basis of an American version of dominant firm regulation.

In addition, incumbent local exchange carriers (known as ILECs under the Telecommunications Act of 1996) face a regulatory disadvantage. Where the state public utilities commissions (PUCs) have promoted entry, principally in commercial and industrial services, the ILECs seek to match the prices and services of entrants (known as competitive local exchange carriers or CLECs). But in low-density residential and small business markets, the ILECs have recently sought to set higher prices, now free of subsidies, and high enough to equal to the stand-alone cost of service by potential entrants (namely, the CLECs). This reversal of sectoral price levels—now low on industrial, high on residential—has been a restructuring that has followed behind market changes. Beyond playing catch-up, the ILECs seek to develop new profit opportunities by bundling local exchange and local interexchange services with long-distance services. But all of the regional Bell operating companies (RBOCs), which notably do not include GTE, continue as of the end of 1998 to be unable to obtain FCC certification to offer customers bundled service in their local service regions.

The basic determinant of the competitive condition of the ILECs has been a set of regulatory policies concerning entry and its consequences for cost recovery of the incumbent telephony network. These policies seek to achieve an overlay by entrants on the incumbent star network of the local loop, central office switch, trunk/tandem, to terminal or long distance switch. The FCC seeks at least a partial new layer, with the old and new interconnected, before declaring local exchange to be “competitive.” Only achieving that designation allows the incumbent carrier to become an entrant in other more profitable markets (such as long distance). With respect to entry, the regulator may accomplish the pricing of unbundled network elements (UNEs) in either of two ways: The regulator can price UNEs on the basis of efficiency principles, or the regulator can provide the entrant an implicit subsidy, by implementation of “TELRIC plus X” prices, where TELRIC denotes total element long-run incremental cost. The adoption of the latter pricing rule to date, which is widespread at the state level, has created a stand-

off between ILECs and entrants. That impasse has prevented the telecommunications industry from restructuring on the basis of economic efficiency rather than regulatory strategy. Surely it is economic folly to mandate unbundling of any network element that is not “essential” in the antitrust sense—that is, a network element that cannot be readily duplicated by the entrant or procured at competitive prices from the same vendors who supply the element to the incumbent firm subject to the unbundling obligation.

The impasse over pricing of unbundled network access also has induced the ILECs to resort to constitutional litigation that asserts that regulators have set TELRIC in a way that produces prices and terms for unbundling that are inherently uncompensatory. Consequently, they argue, the rules for pricing UNEs confiscate an ILEC’s property without just compensation. This gives rise to claims for “stranded costs,” currently one of the most controversial subjects in the regulation of network industries.

Stranded costs are costs that a regulated firm has been authorized to recover through regulated prices, but which the firm is no longer able to recover once the market in which it provides service is open to competition. One can envision at least three kinds of stranded costs.

In the United States the kind of stranded cost that is most familiar is in the electricity context, and these are what might be called “historic” stranded costs. Such costs are associated with nuclear plants, renewable energy contracts, and other currently uneconomic investments for the supply of electricity that were made in the past. The recovery of the cost of, and a competitive return on, that investment was designed to take place over an extended period of years, through depreciation schedules. But the advent of competition occurs before full cost recovery has taken place. Some in the United States doubt the existence of a stranded cost problem in telecommunications because they do not observe similar kinds of uneconomic historic investments in capacity. That view, however, ignores that *any* kind of investment in capacity may be rendered uneconomic if it has been subject to cost recovery at

an allowed rate of regulatory depreciation that lags behind the true rate of economic depreciation.

A second kind of stranded cost is what might be called “forward-looking” stranded cost. This problem is especially critical in the American telecommunications industry. It arises where the current structure of regulated retail rates is such that when the network is unbundled and pieces of the network are priced on an incremental cost basis (or even below an incremental cost basis, as we believe to be the case in some states). In this circumstance, there is a revenue shortfall that is incurred each day the incumbent firm operates under those price regulations. That is a revenue shortfall that continues into the future. Unlike historic stranded costs, these forward-looking stranded costs are not the least bit retrospective in nature.

A third kind of stranded cost, also prospective in nature, can arise if, after the move to open network access, the incumbent firm continues to bear asymmetric regulatory obligations, such as carrier of last resort obligations or requirements to provide service to certain preferred customer classes below the true cost of providing service to those customers. As selective entry takes place and picks off the high-margin customers who provide the source of funds to subsidize those negative-margin activities, there is a revenue shortfall. Again, this cost recovery shortfall takes place each day into the future that the incumbent firm operates under that regulatory structure.

This form of targeted entry is often called “cherry picking” or “cream skimming.” The term that has been coined to describe the circumstances that give rise to vulnerability to cherry picking or cream skimming is “incumbent burdens.” An incumbent burden is the opposite of a barrier of entry. It is a burden that is asymmetrically borne by an incumbent firm but not the entrant. So, when the entrant arrives, that firm does not face that cost when competing against the regulated firm that is already serving the entire market.

There are three basic scenarios by which the stranded cost issue has been addressed by regulatory bodies in actual cases in the United States and elsewhere. The first is the Hong Kong experience, which, to

our knowledge, has not been followed so far in the United States. In late 1997 and early 1998, the Office of Telecommunications Authority in Hong Kong wanted Hong Kong Telecom, which had an exclusive international license that was set to expire early in the next century, to relinquish prematurely its license and thus forfeit its exclusivity. In Hong Kong, because of the small size of the area, there are only two kinds of service: local service and international. There is no service akin to domestic long distance. Thus, the international license generated all the revenue that Hong Kong Telecom used to subsidize monthly local rates for both residential customers and business customers in Hong Kong. In the span of about three months, the regulator and the company negotiated a resolution of the stranded cost problem that consisted of the following terms. Hong Kong Telecom agreed to surrender its exclusivity. In return, the regulator allowed Hong Kong Telecom to rebalance rates, bringing business customers' rates immediately up to cost and residential customers' monthly access rates up to cost over a three-year phase-in period. In addition, when the parties then calculated the remaining net revenue impact of the loss of exclusivity, it was clear that there was still a shortfall. So the government of Hong Kong wrote a check to Hong Kong Telecom for about U.S.\$800 million. To our knowledge, there has not been any similar experience in the United States of a regulator and the incumbent firm swiftly negotiating a deal for addressing stranded costs.

The second approach to stranded cost issues is one where regulators either have (1) rejected the idea that there is such a thing as stranded costs that gives the regulated firm a legally enforceable right against the government or (2) disputed the magnitude of stranded costs to such an extent that the practical effect is to reject any appreciable recovery. In those cases, the result has been litigation by the incumbent regulated firm against the public utility commission for violation of the Takings Clause of the Fifth Amendment of the U. S. Constitution and also for breach of the regulatory contract. This litigation approach to stranded cost recovery has played out in electric power in New Hampshire. In telecommunications, takings claims have been pressed by GTE and

other companies in dozens of states based on the belief that the regulated prices of unbundled network elements were set at confiscatory levels. Also in the appeals of FCC orders relating to unbundling of network elements, access charge reform, and universal service reform, telephone companies and their trade association, the U.S. Telephone Association, have pressed takings arguments to the U.S. Courts of Appeals.

The third approach to addressing stranded cost issues is the route that Massachusetts, Pennsylvania, California and other states have chosen in their restructuring of the electric power industry. This process brings all the stakeholders get together, usually in a very expansive notice of proposed rulemaking. Public comment is solicited on a wide range of issues—not just stranded cost issues, but also codes of conduct, supplier of last resort obligation, and so forth. Such a proceeding has generally followed the enactment of a retail competition statute by the state legislature, or in some cases it may anticipate enactment of such a statute. In these states, it has been recognized that once retail competition is permitted, the price of retail services is no longer a viable means to recover stranded costs; thus, stranded costs must be recovered through a non-bypassable, competitively neutral end-user charge. That charge goes on the bill of all electricity customers, and thus it does not affect the choice of whether a customer buys electricity from *A* or *B*. The charge resembles the subscriber line charge in telecommunications.

One clever variation on the end-user charge is to “securitize” the stranded costs. This is done through the issuance of “transition bonds.” The amount of stranded costs that has been estimated and approved for recovery is paid off immediately through a bond issuance that is serviced by an end-user charge known as the “transition bond charge.” This approach that has been taken in Pennsylvania in the electric power industry. It has the effect of placing the cost recovery risk on new investors who step into the shoes of the investors of the incumbent utility. These bond issuances are expected to be AAA-rated because they are relatively secure debt instruments. Even though the

bonds are not backed by the full faith and credit of the state, they are serviced exclusively by a rate order that is approved by the regulator specifically for that purpose.

The dilemma of stranded cost recovery in American telecommunications could, of course, have been averted through the adoption of an alternative regulatory strategy that would not have attempted to set UNE prices at all, but rather would have opened all markets to competitive entry. Regulators have rejected that approach because certain potentially adverse regulatory consequences can be envisioned. Thus, the FCC defines the terms of the debate at a level of abstract, conjectural meta-reality. The debate takes on a life of its own, with entrants and incumbents expected to frame their strategies in terms of effects on abstract results that the FCC focuses on. One finds, for example, respected scholars advocating elaborate tests for determining the permissible date for market entry by the RBOCs into long-distance markets. It is inherent in the FCC's meta-reality that the agency's fears of potential long distance competitive harms cannot be falsified. In this respect, the FCC's fears are self-fulfilling prophecies of the need for continued regulatory oversight of entry into all markets.

Unfortunately, the official policy of the United States during the current administration appears to be to export America's approach to telecommunications regulation to every nation seeking in wonderment to appreciate it. This orientation is clear from the way that the FCC attempted to put its gloss on the 1997 World Trade Organization (WTO) agreement on telecommunications services and, in particular, the way in which the FCC has attempted to dictate to other sovereign nations the terms of reform of settlement rates while ignoring the pricing of U.S. outbound international services. Similarly, with respect to pricing of unbundled network elements, one should expect that in other nations that are signatories to the 1997 WTO agreement on telecommunications services, pricing that follows TELRIC rules for UNEs will be the central, and most disruptive issue to be resolved in implementing "procompetitive regulatory principles" outlined in the WTO's reference paper.

What is the escape from this situation, in which industry growth is held back by the lack of competitive entry brought about by regulatory agencies ostensibly acting in the name of protecting consumers? It is natural to fall back on the standard *deus ex machina* of technological innovation. To be sure, there are technologies that offer bypass of the stalemate, such as internet telephony for long-distance. These responses, however, can go a great deal further than just equipment replacement. In response to the perverse regulatory environment that has evolved since 1996, one can envision "the strategic corporation," with access to the newest technologies, and ample financial resources, configuring the telecommunications corporation of the 21st century to: (1) offer a package of long-distance, local exchange, and data services, (2) outside of FCC and state regulatory jurisdiction. This can be realized by reorganizing from the ground up as a CLEC, separating the delivery of services from the ownership and operation of the local wireline loop. One already observes the ILECs attempting to mutate in this direction through their applications under section 706 of the Telecommunications Act of 1996, in which they propose to exempt new generations of data services from the unbundling requirements for local telephony under sections 251 and 252 of the act. But the narrow possibility of a managerial plus technological salvation should not deflect attention from the billions of dollars wasted in seeking to overcome regulatory barriers to achieve strategies that enhance the growth of the industry. Clearly, whether evasion is worth the costs is a question that must be asked also by every nation now establishing a body of telecommunications regulation like that in America. Regulators in other nations who look to the American experience for guidance should therefore heed the Latin maxim, *Caveat emptor*.