Washington University Global Studies Law Review

Volume 1
Issue 1 *Symposium: APEC Competition Policy and Economic Development*

January 2002

Competition Policy Toward Dominant Utility Companies: Vertical Divestiture or Access Rules?

Toshiaki Takigawa
Kansai University

COMPETITION POLICY TOWARD DOMINANT UTILITY COMPANIES: VERTICAL DIVESTITURE OR ACCESS RULES?

TOSHIAKI TAKIGAWA*

I. INTRODUCTION

This Article compares different methods of introducing competition into monopolistic utilities. Regulatory reform introducing competition into utilities thus far has taken place primarily in developed countries. However, a few developing countries like Chile have initiated innovative regulatory reforms in the telecommunications and electricity sectors. Developing countries have the potential to leapfrog developed countries in terms of their regulatory reform because they can learn from pioneering countries' past mistakes. Efficient operation of utilities like the telecommunications and electricity utilities is vitally important for developing countries to achieve swift economic growth, as such utilities form the infrastructure for all industries.

Important utilities like the electric and telecommunications utilities have remained monopolies in most countries. Many economists previously rationalized these monopolies to be natural, but they have shown that because the elements of these utilities[1] are potentially competitive, only some elements form natural monopolies.[2] Technological progress continues to broaden the competitive elements in utilities.

Although many utilities are potentially competitive, monopolists can easily exclude new entrants from potentially competitive fields by offering

---

* Professor of Law, Faculty of Law, Kansai University, Osaka, Japan. A version of this Article was presented at the APEC Competition Policy and Economic Development Project, University of Victoria, Canada: Centre for Asia-Pacific Initiative.

1. For instance, both electricity generation and long-distance telecommunications are potentially competitive elements.

2. Robert Crandall and Jerry Hausman describe how competition in long-distance markets has expanded in U.S. telecommunications service. *See* Robert W. Crandall & Jerry A. Hausman, *Competition in U.S. Telecommunications Services: Effects of the 1996 Legislation*, *in* DEREGULATION OF NETWORK INDUSTRIES: WHAT'S NEXT? 100-02 (Sam Peltzman & Clifford Winston eds., 2000). Paul Joskow describes how competition in the U.S. electric power industry has expanded from being a wholesale power generation market to a retail market. *See* Paul L. Joskow, *Deregulation and Regulatory Reform in the U.S. Electric Power Sector*, *in* DEREGULATION OF NETWORK INDUSTRIES: WHAT'S NEXT?, *supra*, at 124-82.

utility services to consumers in a vertically integrated format.[3] This allows vertically integrated monopolists to block new entrants by denying them access to the monopolists' facilities that tend to form bottlenecks to competition.

Regulatory agencies may prohibit utility companies from denying access to such facilities, but such prohibitions often are ineffective in their attempts to reassure new competitors in the respective markets. Vertically integrated monopolists can treat new entrants unfavorably and rationalize that treatment with technical or other business reasons. This unfavorable treatment works in favor of the vertically integrated monopolists because regulators find it difficult to identify illegalities in such discriminating behavior. In order to effectively combat vertically integrated utilities, regulatory agencies should take measures to separate the naturally monopolistic elements of such utilities from the potentially competitive elements. Doing so would eliminate any incentive separated natural monopolists might have to discriminate between new competitors and incumbents.

Incumbent monopolists and commentators oppose the idea of vertical separation. First, they argue that vertical separation disrupts economies of coordination or "economies of scope." Second, they contend that well crafted access regulations can regulate the discriminatory conduct of integrated monopolists effectively, thereby reassuring potentially competitive utility elements.

This Article evaluates the comparative benefits of these two approaches to introducing competition into monopolistic utilities—(1) vertical separation (divestiture), and (2) access regulation without vertical separation—using two of the most important utilities (electricity and telecommunications) as examples. This Article compares the experiences in the United States, the United Kingdom, and Japan to assist developing countries in eliciting lessons to apply to their own regulatory reform.

Part II explains why deregulation and pro-competitive regulatory reform should replace traditional utility regulations. Part III examines the electricity and telecommunications sectors to explore options for vertically separating utilities, and then comparatively assesses and evaluates the merits of vertical separations and access rules governing integrated monopolists. Part IV examines methods for coping with utility reintegration. Part V concludes with several lessons regarding the comparative benefits of vertical separation and access rules.

---

3. For instance, electricity generation should be coupled with electricity transportation, and long-distance telecommunications service should be provided to consumers through a local loop.

II. DEREGULATION AND REGULATORY REFORM OF UTILITIES

A. The Advantage of Competition Over Regulation

All countries regulate utilities heavily. Governments regard such regulation as necessary to protect the interests of private citizens. First, governments view utility services such as electricity and telecommunications as being fundamentally necessary for citizens' daily lives, and regulation therefore is justified because it obligates utility companies to provide these important services to every citizen. Second, utility rate setting necessitates governmental control, as many utilities, due to a natural monopoly, can support only one provider per sector. Without governmental regulations, monopolists would be free to charge any amount for services they desired.

Regulated utilities are inefficient, running up increasingly high costs and charging exorbitant rates. Traditional utility regulation consists of cost-of-service rate controls in exchange for monopoly franchise grants. This system contains no incentives for utilities to improve their efficiency, a fact that economists were the first to notice and announce. Ordinary citizens usually do not realize the benefits of competition, as they are used to long-term utility monopolies. Furthermore, utilities employ a great number of people. These employees, through their unions, constitute strong interest groups that generally oppose regulatory reform.

From their roots in a small number of developed countries, deregulation and the regulatory reform of utilities have spread to many other countries, including some developing countries.[4] This trend originated in the United States, which demonstrated to other countries that deregulation and pro-competitive regulatory reform can produce enormous economic benefits.[5] These benefits subsequently turned out to be much larger than economists predicted. The liberation of economic activities, combined with enhanced competitive pressure, gave rise to unforeseen changes in business methods and industry structure.[6] Following deregulation, real operating costs of

4. Robert Hahn compiled regulations (the nature of state ownership and level of competition) regarding service industries (including airlines, urban transport, and telecommunications) in nine developing countries (including Chile, Korea, and Mexico) and reports that in all nine countries, the degree of regulation has decreased. Chile has achieved the largest reduction in regulations. ROBERT W. HAHN, REVIVING REGULATORY REFORM: A GLOBAL PERSPECTIVE 17-19 (2000).

5. The U.S. airline industry achieved the most notable benefit of deregulation, for deregulation has brought passengers roughly 27% lower fares since 1994. Steven A. Morrison and Clifford Winston, *The Remaining Role for Government Policy in the Deregulated Airline Industry*, *in* DEREGULATION OF NETWORK INDUSTRIES: WHAT'S NEXT?, *supra* note 2, at 1.

6. The most notable example of these changes is the hub-and-spoke-structure of airline routes and services in the United States.

deregulated industries in the United States fell roughly 25%-75%.[7]

The preceding example demonstrates that the benefit of competition lies more in its effect on dynamic efficiency than its effect on allocative efficiency. Competition produces dynamic efficiency by forcing companies to reduce costs and innovate. Competition inspires much more dynamic efficiency than generally is anticipated, as economists cannot predict how business will innovate under the pressure of competition.

New Zealand represents another good example of the benefits of deregulation and pro-competitive regulatory reform. In the mid-1980s, New Zealand adopted government-wide pro-competitive regulatory reforms to get out of a long-lasting economic slump. The Commerce Act, passed in 1986, codified the basic principle that competitive principles would govern economic activity.[8]

Studies on regulatory reform performed by the Organisation for Economic Cooperation and Development (OECD) compile the experience of regulatory reforms in OECD countries.[9] The OECD's synthesis generally supports the experience and methods of the United States and New Zealand. General lessons of this synthesis may be summarized as follows:

- Technological progress has made many utilities competitive. For those competitive elements, industry-specific government regulations distort competition and therefore should be abolished.
- For utilities in functioning competitive markets, the general rule of law should replace industry regulations. In particular, antitrust law should be applied to competitive utilities without exception.
- If preferential treatment for certain segments of the population (e.g., people living in remote areas) is deemed politically necessary, the government should directly and explicitly support them. Utility companies should avoid competition distorting cross-subsidization.

---

7. Clifford Winston, *U.S. Industry Adjustment to Economic Deregulation*, J. ECON. PERSPECTIVES, Summer 1998, at 89, 107 (1998).

8. Maurice P. McTigue, *Alternative to Regulation: A Study of Reform in New Zealand*, REGULATION, Winter 1998, at 34-40.

9. *See generally* OECD, THE OECD REPORT ON REGULATORY REFORM, VOLUME I: SECTORAL STUDIES (1997).

B. Monopoly Problems of Network Utilities

Rapid technological progress has widened competitive elements in utilities. Cores of utilities, however, remain natural monopolies due to economies of scale and vertically integrated networks. The electricity and telecommunications sectors best represent such natural monopolies. In the electricity sector, a high-voltage grid network forms a natural monopoly, and in the telecommunications sector, local loop networks remain natural monopolies. Cable television and wireless technologies like cellular and satellite communications together have made inroads into local telecommunications. However, the network effect of telecommunications works against small-scale entries, thus allowing monopoly positions of local incumbents to persist.

Large portions of the electricity and telecommunications sectors are not naturally monopolistic. Thus, new entries remain economically and technologically viable. Within the telecommunications industry, the long-distance communications sector is ripe for competition; within the electricity sector, electricity generation and retailing are ripe as well. However, if incumbent monopolists remain vertically integrated, entire elements of utilities likely will remain monopolies because incumbent monopolists naturally do not embrace new entrants. Vertically integrated monopolists can obstruct new entrants easily by denying them access to the incumbents' natural monopoly elements, thus creating bottlenecks to competition.

The experiences of recently deregulated industries demonstrate that regulation can be very costly and that complicated regulatory oversight rarely succeeds. The airline industry in the United States serves as the typical example. Hence, the general rule for regulatory reform of utilities containing a bottleneck element is to separate the bottleneck element from the competitive element. Regulatory agencies then can regulate the bottleneck element and leave the competitive element to both competition law and the general rule of law.[10]

III. DIVESTITURE OF BOTTLENECK ELEMENTS AND ACCESS REGULATIONS

Many countries already have successfully divested bottlenecks in the electricity and telecommunications sectors. However, divestiture is not necessarily the preferred solution due to fundamental differences between

10. Australia amended its competition law to properly apply it to "network infrastructure industries." *Id.* at 225.

major countries. In addition, marked differences exist between the electricity and telecommunications sectors.

A. The Electricity Sector: A Global Trend Toward Vertical Separation

The electricity industry is beginning to accept the merits of vertical separation. Nevertheless, two primary issues remain. First, how can governments legally divest investor-owned utilities without harming the interests of stockholders? Second, among the major developed economies, why is Japan so reluctant to adopt vertical separation?

1. United Kingdom: Vertical Separation at the Time of Privatization

The United Kingdom is a leading country in the vertical divestiture of electric companies. The success of the United Kingdom's divestiture gradually has influenced other European Union member countries through the European Commission's regulatory policies.

The experience of the United Kingdom demonstrates that governments should vertically separate state-owned utilities at the time of privatization. Divestiture of state-owned companies never harms investors, as the government owns them in full. In contrast, the United Kingdom privatized British Telecom while maintaining its vertical integration, the effect being British Telecom ultimately could not be divested without negatively impacting private investors who purchased stock.

The experience of the United Kingdom, together with similar experiences of Australia (specifically the state of Victoria) and New Zealand, show that separating the power grid from electricity generation and retailing does not cause a loss in an economy of scope—namely, an economy of integrated coordination.[11] Each state realized an industry-wide adaptation of demand and supply through the establishment of (1) grid access rules, and (2) a competitive spot market for wholesale electricity.[12]

A comparison of the United Kingdom and Australia (state of Victoria) raises questions about the merits of privatization. Both countries vertically separated their electricity utilities and introduced competition into electricity generation and retailing. The United Kingdom chose to privatize incumbent monopolists. However, Australia decided to maintain state ownership of incumbent utilities. Some scholars point out that the introduction of competition remains vitally important, whereas privatization does not itself

11. *Id.* at 159.
12. *Id.* at 177.

change utilities' performance.[13]

The Japanese experience, however, indicates that the introduction of competition should accompany privatization in order to improve the overall performance of utilities. For example, Japanese state-owned railways compiled an enormous amount of debt through years of competing against private railways and airlines. After being privatized in 1987, Japan Railway (JR) radically improved its performance and ever since has generated annual profits consistently. The JR experience exemplifies the following benefits of privatization: (1) state-owned companies expect that an infusion of tax money will wipe out any deficits while privatized companies cannot realistically hold such expectations; (2) privatization of utilities radically reduces irresponsible demands from politicians with local interests; and (3) privatization motivates labor unions to cooperate with management efforts to reduce costs and increase profits.

2. United States: Vertical Separation of Investor-Owned Utilities

Vertical separation of utilities in the United States offers lessons for countries in which private investors own the utility companies. Government-forced divestiture of investor-owned companies runs the risk of violating investors' private property rights.

(a) Difficulty in Securing Non-Discriminatory Grid Access

The electricity industry in the United States generally can be divided into three elements: (1) generation; (2) transmission; and (3) retailing (distribution). The generation element is potentially competitive, thereby simplifying the introduction of competition. Individual state governments should loosen restrictions on new entries into the generation market, while simultaneously obligating incumbent utilities to purchase electricity from the new generators at competitive prices.

A good way to make the electricity market genuinely competitive would be to make the retailing market competitive. To achieve this, new entrants into the retailing market (which in many cases will be the same new entrants into the generation market) should receive a measure of access to the incumbent utilities' power grids. California was the first of several States to introduce competition into electricity retailing. Unlike the State-owned utilities, States simply cannot order investor-owned utilities to divest their

13. *Cf.* DAVID M. NEWBERY, PRIVATIZATION, RESTRUCTURING, AND REGULATION OF NETWORK UTILITIES 185-87 (1999).

power grids. Therefore, California and this limited group of States mandated investor-owned utilities provide "open access," a policy that forced these utilities to make transportation available to independent generators at price and service levels equal to those provided to their own generators.[14]

Specifically for interstate transactions, the Federal Energy Regulatory Commission (FERC) issued Order 888 in 1996 to establish "functional unbundling," which encouraged utilities to separately manage transmissions and avoid discriminating among generators.[15] However, vertically integrated utilities possess both the incentive and ability to circumvent nondiscrimination rules.[16] Obeying the nondiscrimination rules conflicts with the incumbent utilities' self-interests. In addition, regulators generally find it hard to detect discriminatory conduct.

(b) The Success of "Operational Unbundling"

To eliminate the propensity to discriminate, regulators must dissolve vertical integration of utilities. New England and California are at the forefront of the movement to pressure utilities to transfer the management of their transmission operations to regional transmission organizations (RTOs). On pace with this, the FERC issued Order 2000 in December 1999. Order 2000 induces utilities to "operationally unbundle" their transmissions and establish RTOs.[17]

The orders issued by both the FERC and State governments stopped short of mandating divestiture by simply encouraging utilities to vertically separate their transmissions. The FERC and States adopted this voluntary approach out of consideration for the investor-owned structure of utilities. Mandatory divestiture may give rise to issues relating to both property right infringement and constitutional "takings" under the Fifth Amendment, but a clear legal standard remains to be established.

In many countries, investors own utility companies. These countries will

14. Commissioner Mozelle W. Thompson, Prepared Statement of the Federal Trade Commission Before the Subcommittee on Energy and Power of the Committee on Commerce, United States House of Representatives (May 6, 1999), *available at* http://www.ftc.gov/os/1999/9905/electricpowertestimony.pdf.

15. *Promoting Wholesale Competition Through Open Access Nondiscriminatory Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036, 61 Fed. Reg. 21,540 (1996), *clarified*, 76 FERC ¶ 61,009 and 76 FERC 61,347 (1996) [hereinafter Order 888], *on reh'g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048, 62 Fed. Reg. 12,274, *clarified*, 79 FERC ¶ 61,182 (1997), *on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248, 62 Fed. Reg. 64,688 (1977), *on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998).

16. *See* OECD, *supra* note 9, at 178.

17. *Regional Transmission Organizations*, Order No. 2000, FERC Stats. & Regs. 31,089, *on reh'g*, Order 2000-A, FERC Stats. & Regs. 31,092.

face the same legal issues faced by regulators in the United States, namely the difficulty of divesting private utilities. However, if antitrust authorities can find persistent discriminatory behavior by these utilities, courts may feel compelled to divest them. However, regulators find it hard to identify discriminatory conduct in vertically integrated utilities, and these utilities can present a vast array of reasons (e.g. a need for an uninterrupted supply) to justify their discriminatory treatment.

Regulators in the United States have been successful in vertically separating investor-owned utilities. The experiences in New England and California demonstrate to regulators in other countries that they can divest private utilities operationally by using their regulatory powers wisely. Facing numerous regulatory constraints, many utilities in the United States may have convinced themselves that a voluntary separation of transmissions serves their long-term interests. California's method of bundling the establishment of RTOs with payments for stranded costs proved particularly effective.[18]

3. Japan: The Slow Pace of Regulatory Reform

Like utilities in the United States, Japanese electric companies are investor-owned. However, unlike the United States, the Japanese government has neither mandated nor induced utilities to operationally separate transmissions. The Japanese government has limited regulatory reform in the electricity sector to deregulation of electricity generation and the limited liberalization of entries into retailing. Japan should learn from the experience of the United States: competition in retailing will not gain momentum without the operational separation of transmissions. Far from achieving operational separation, Japan has not even managed to achieve functional separation of transmissions. The Ministry of Economy, Trade and Industry (METI) (formerly the Ministry of International Trade and Industry) possesses the authority to intervene into the conduct of utilities but has never exercised it.

In August 2000, the Japanese Fair Trade Commission (JFTC), the governmental agency responsible for enforcing Japanese antitrust law, requested that the Tokyo Power Company improve its pricing for newly entering electricity retailers. The JFTC was concerned with potentially unfavorable treatment by the Tokyo Power Company toward new market entrants in comparison to its established retailer base.[19] The JFTC is going to find it hard to formally identify illegal discrimination because utilities can

18. A.B. 1890, 1996 Leg., 1996 Sess. (Cal. 1996).
19. *See* NIPPON KEIZAI SHINBUN [JAPAN ECON. J.], Aug. 11, 2000, at 3.

justify their discriminatory conduct with a limitless variety of seemingly valid but unverifiable reasons.

METI's failure to strive for full liberalization of electricity retailing remains a major limitation to Japanese electricity regulatory reform. In 2000, METI only planned to liberalize for customers whose consumption exceeded twenty thousand volts while gradually reducing the voltage floor.[20]

One cannot find any reason why regulators should introduce retail competition gradually. Inertia and switching costs naturally inhibit small-scale consumers from changing electricity suppliers. Under the pretext of avoiding radical changes, the Japanese Ministry of Finance made gradualism a marked feature of financial reform. However, gradualism slowed industry restructuring, eventually necessitating adoption of the "Big Bang" approach. The role of regulatory authority should be to enhance competition and not to slow down its acceleration.

Japanese electric companies have opposed swift liberalization, citing the need to preserve investments in nuclear technology. However, nuclear plants worldwide have lost cost competitiveness while simultaneously losing public support due to the concern over nuclear accidents and the dangers of nuclear waste.

Incumbent monopolists naturally dislike competition, and regulatory authorities should pressure them to be more tolerant of competition rather than sympathizing with their reluctance to accept it. The timidity of the Japanese electricity authority, the Natural Resources and Energy Agency, may be because it is situated within METI, which is responsible for both Japanese industrial policy and regulation. Industrial policy objectives and regulatory objectives should not coexist in one government agency because of their contradictory nature.[21] The Natural Resources and Energy Agency involves itself with industrial policy in the energy sector; thus, its officials tend to identify their interests with the interests of electricity companies. In fact, many such officials find their second careers in energy or electric companies.

The Japanese experience demonstrates the need for creating independent regulatory agencies outside ministries in charge of industrial policies. Such an organizational structure would force the regulatory agency to concentrate on promoting competition rather than leading the private sector.

---

20. MINISTRY OF ECONOMY, TRADE AND INDUSTRY, TSUSHO HAKUSHO [WHITE PAPER ON INTERNATIONAL TRADE: JAPAN] 141 (2000).

21. *See* OECD, REGULATORY REFORM IN JAPAN 107 (1999).

B. The Telecommunications Sector: Diversified Approaches Among Advanced Countries

In contrast to the electricity sector, where a clear trend toward vertical separation exists, telecommunications regulators in advanced countries exhibit diverse attitudes toward vertical separation. This part compares the different approaches of the United States, the United Kingdom, and Japan, and then evaluates the policy of vertically separating dominant telecommunications companies.

Vertical separation is more problematic in the telecommunications sector than in the electricity sector because telecommunications technology, particularly the packet-switched system, has blurred the boundary of the natural monopoly.[22] On the other hand, the local loop (particularly the section known as "the last mile") remains as the core of a natural monopoly in nearly every country.[23]

1. United States: Vertical Divestiture in Accordance with Antitrust Principles

(a) The 1984 Divestiture of AT&T and the 1996 Telecommunications Act

In 1984, following the landmark decision in *United States v. American Tel. & Tel. Co.*,[24] the U.S. Government in effect vertically separated the U.S. telecommunications industry when it divested AT&T of the regional Bell Operating Companies (BOCs), which were the twenty-two AT&T subsidiaries engaged in the business of providing local phone service. Ever since the divestiture, the U.S. Government has prohibited the BOCs from providing interstate telecommunications services. The rationale behind the district court's decision and the Department of Justice's (DOJ) prosecution to divest AT&T consisted of the following: (1) a vertically integrated monopolist (AT&T) possessed incentives to forestall entries into potentially competitive interstate telecommunications markets; (2) AT&T actually engaged in anticompetitive exclusionary conducts; and (3) the FCC could not detect AT&T's subtle forms of vertical foreclosure.

The vertical divestiture of AT&T, combined with horizontal divestitures,

---

22. *See* NEWBERY, *supra* note 13, at 190.

23. "The last mile" or "the last one mile" refers to the last portion of the local loop, namely the space between the central switch and office buildings or homes.

24. 552 F. Supp. 131 (D.D.C. 1982).

clearly was successful, as the U.S. telecommunications sector consistently has achieved the best performance (primarily rapid cost reductions and innovations) among advanced countries. Nevertheless, the Telecommunications Act of 1996 allowed BOCs to enter long-distance (interstate) telecommunications markets. However, the Telecommunications Act retained the district court's reasoning: BOCs are permitted to enter into long-distance interstate telecommunications only after fulfilling rigorous conditions that avoid a recurrence of vertical foreclosures.

(b) Unnecessary Complexities in U.S. Regulations of Local Telecommunications

As regulators separate bottlenecked local loops, U.S. telecom regulation maintains the potential to become light-handed. First, regulators should liberalize potentially competitive long-distance markets and leave their surveillance to enforcers of the antitrust laws. FCC regulation has followed this course: the FCC found AT&T to be non-dominant in 1995 and subsequently deregulated U.S. long-distance markets. Second, regulation of local telecommunications should be simplified, as independent BOCs possess no incentive to discriminate against long-distance carriers. Currently, FCC rules regulating local telecommunications are complex and have been contested in numerous courts.[25]

Although local telecommunications carriers are not vertically integrated, they do possess power in local markets and their rates therefore should be regulated. The ideal method would be for regulators to replace traditional rate-of-return regulation with price caps. Rate-of-return regulation only perpetuates the inefficiency of monopolists while price caps simulate competitive markets, thereby inducing monopolists to decrease costs. These reasons are what prompted regulators in the United Kingdom and United States to adopt price caps.

Price rate regulation of local BOCs is necessary for both consumer rates and access pricing for long-distance companies. Current FCC and State regulation of consumer rates and access pricing currently are unnecessarily complicated and anticompetitive due primarily to universal service considerations. "Universal service" in the United States and many other countries refers to the assurance of "affordable prices" for all citizens.[26]

25. The most important case thus far is the U.S. Supreme Court decision *AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366 (1999).

26. The Telecommunications Act of 1996, indicating "universal service principles," stresses that "[q]uality services should be available at just, reasonable, and affordable rates." 47 U.S.C. § 254(b)(1)

Many have interpreted the phrase "affordable prices" as assuring the same prices to people living in high-cost areas as those living in low-cost areas. Therefore, universal service has necessitated cross-subsidization between high-cost areas (primarily rural areas) and low-cost areas (primarily metropolitan areas), and between local markets and long-distance markets.

Universal service realized by cross-subsidization is anticompetitive, as prices departing from costs distort competition. Governments should accomplish universal service when politics necessitate it, by direct use of their budgets.[27] A universal fund system, by which all carriers contribute the funds necessary for universal service alleviates the anticompetitive nature of universal service, but it cannot eliminate the anticompetitive effects.[28] The anticompetitive and anti-deregulatory effects of universal service permeate a large majority of advanced countries. In addition, by including the unbundling obligation and long-run incremental cost-based (LRIC) interconnection pricing toward local BOCs, the Telecommunications Act of 1996 added two regulatory concepts that unnecessarily complicate the regulation of local telecommunications.

The unbundling obligation and LRIC pricing are the focus of much controversy and litigation. Economists' criticisms against unbundling and LRIC pricing are particularly convincing.[29] Current straightjacket regulations of local competition in the United States are anticompetitive and anti-deregulatory. Regulators should apply antitrust concepts like the essential facility doctrine and price caps[30] to local competition to achieve simplified and pro-competitive regulations.

(1996). The Telecommunications Act goes on to generally describe "universal service" as "an evolving level of telecommunications services that the Commission shall establish periodically under this section, taking into account advances in telecommunications and information technologies and services." *Id*. § 254(c)(1).

27. In the U.S. electricity sector, cross-subsidies seem much less important, as subsidies to rural areas generally have come in the form of explicit capital subsidies. R.W. CRANDALL, MANAGED COMPETITION IN U.S. TELECOMMUNICATIONS 10 (AEI-Brookings Joint Center for Regulatory Studies, Working Paper 99-1, 1999), *available at* http://www.aei.brookings.org.

28. *See* Press Release, Commissioner Furchtgott-Roth, Press Statement of Commissioner Furchtgott-Roth Regarding FCC's October 21 Universal Service Orders (Oct. 21, 1999), *available at* http://www.fcc.gov/Speeches/Furchtgott_Roth/Statements/sthfr953.html (last visited Mar. 7, 2002).

29. *See* JEAN-JACQUES LAFFONT & JEAN TIROLE, COMPETITION IN TELECOMMUNICATIONS 148-49 (2000).

30. The 1999 access-pricing rule adopted price caps for access pricing. *See* FED. COMM. COMM'N, FIFTH REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING, FCC 99-206 (1999), *available at* http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1999/fcc99206.txt (last visited Mar. 7, 2002) (adopting price caps for access pricing). Interconnection pricing for local competition should adopt price caps because it is logically inconsistent to differentiate interconnection pricing from access pricing.

2. *United Kingdom: Failure to Vertically Divest at the Time of Privatization*

While privatizing its state-owned telecom entity, the British government contemplated following the United States in its method of breaking up monopolists. However, to facilitate sales of stock in the newly privatized British Telecom, the government maintained the monopolist's vertically integrated structure. After the British government abolished the duopoly policy in 1991, thereby allowing free entries into the market, competition and performance improved in the British telecommunications sector. However, British Telecom still maintains monopolistic positions in both local and long-distance markets.

Electricity regulations worldwide and telecom regulations in the United States have proven the difficulty of detecting the discriminatory behavior of vertically integrated monopolists. It therefore is likely that the British regulatory authority, the Office of Telecommunications (OFTEL), encountered similar difficulties in identifying the anticompetitive practices of British Telecom.

Several commentators have pointed out the effectiveness of the accounting separation OFTEL imposed on British Telecom in 1995.[31] However, local loops and long-distance lines jointly bear a large portion of telecommunications costs which, according to economists, cannot be allocated properly.[32] Accounting separation fails to eliminate incentives for integrated monopolists to favor their own operators, making it doubtful that OFTEL can monitor British Telecom's anticompetitive foreclosures effectively.

3. *Japan: Adoption of a Halfway Measure—Transforming Nippon Telegraph and Telephone into a Holding Company*

In 1985, the Japanese Government privatized the Telecom Public Corporation, giving birth to the Nippon Telegraph and Telephone Corporation (NTT). Privatization of NTT, however, is not yet complete. The Japanese government still owns 59% of NTT stock, and the NTT Act obligates the government to possess at least one-third of NTT stock.[33] Japan has deregulated entries into telecommunications markets gradually, thus

31. *See* NEWBERY, *supra* note 13, at 327.
32. *See* CRANDALL, *supra* note 27, at 13.
33. *See* NIPPON DENSHIN DENWA KABUSHIKIGAISHA HŌ [NIPPON TELEGRAPH AND TELEPHONE COMPANY ACT], Law No. 85 of 1984, art. 4.

allowing several new entrants into the long-distance market. These "new common carriers" (NCCs) increased their market shares, thereby stimulating a greater level of effective market competition. In contrast, local telecommunications markets have allowed only small-scale entrants into the Tokyo metropolitan area. NTT still maintains a virtual nationwide monopoly.

The Ministry of Posts and Telecommunications (MPT), the governing body in charge of regulating Japanese telecommunications has contemplated divesting NTT in order to realize a more effective level of competition. In 1990, the Telecommunications Council, an advisory committee to the Minister, recommended divesting NTT into three separate companies. However, NTT successfully opposed the divestiture through the exertion of considerable political influence through its giant labor union.

The MPT and NTT reached a political compromise in 1996, under which NTT agreed to restructure itself into a holding company. Under the parent holding company, two local telecommunications subsidiaries (NTT East and NTT West), one long-distance company (NTT Communications), one cellular company (NTT Docomo), and several other subsidiaries all coexist.

The MPT publicized the NTT reorganization as a "separation of NTT."[34] However, this terminology is erroneous, as the parent company still holds 100% of the stock in NTT East, NTT West, and NTT Communications.[35] With complete stock ownership, the NTT holding company can manage itself as one entity. A holding company merely constitutes another corporate form for management of a multidivisional organization. NTT itself proclaimed that the NTT holding company will be "managed as one group" and aims to "develop as one group."[36]

Without regulation by the MPT, NTT can manage the holding company as one entity, just as other prominent holding companies (e.g., Citicorp) have been managed. The MPT has contemplated adopting measures restraining NTT with a view toward "securing fair competition."[37] However, if the MPT

34. For instance, the Telecommunications Council (a governmental deliberation council under the auspices of the Ministry of Posts and Telecommunications) reported that the reorganization of NTT realized a separation between the local telecommunication sector with its bottleneck facility and competitive sectors such as long-distance telecommunications. *See* Telecommunications Council of Japan, *Report on IT Revolution and Competition Policy* § 3(2) (Nov. 16, 2000), *available at* http://www.soumu.go.jp/joho_tsusin/pressrelease/japanese/denki/001116j601.html.

35. Parent NTT holds 67% of the outstanding stock of NTT Docomo. Nippon Telegraph and Telephone, Consolidated Subsidiaries Annual Report 2000, *available at* http://www.ntt.co.jp/ir/reports. Other stocks are held by individual and corporate stockholders. *Id.*

36. NIPPON TELEGRAPH AND TELEPHONE, NTT NO SAIHENSEI NITUITE [ON THE REORGANIZATION OF NTT] (May 29, 1998) (on file with author).

37. *See* Press Release, Ministry of Posts and Telecommunications, Public Opinions on NTT Reorganization and MPT's Responses (Apr. 23, 1999), *available at* http://www.soumu.go.jp/joho_tsusin/pressrelease/japanese/denki/990423j601.html. According to the MPT, "fair competition" means

forces NTT to allow its subsidiaries to operate independently, it would compromise the current holding company structure in which the parent holds 100% of the stock in its subsidiaries. In April 1999, the MPT announced that it would allow NTT subsidiaries to possess interlocking executives, reasoning that they are a normal feature of holding companies.[38] The MPT left other restraints ambiguous, planning to elaborate on them when it deemed necessary.

With the current holding company structure, the MPT can impose only facial restraints on NTT's management because the wholly owned subsidiaries could not act independently even if they wanted to. The holding company structure cannot function if there is a separation of management. Achieving management separation requires a complete legal separation of corporate ownership that would require NTT to give up its stock holdings in all of its subsidiaries.

Forcing NTT to give up its stock holdings in NTT Docomo would be the most effective way to introduce competition into local Japanese telecommunications markets. Cellular service in Japan has shown phenomenal growth: more than 40% of the population now uses cellular telephones. As more fixed telephone users switch to cellular telephones, it is likely that customers of NTT East, NTT West, and NTT Communications will shift to NTT Docomo. This shift then could lead to an internal conflict within the NTT holding company. In order to secure its competitive base, NTT Docomo should strive to achieve formative independence outside the NTT holding company structure.

Although the Japanese government owns 59% of NTT stock, individual stockholders exist. Such a large percentage of individual stockholders likely means that many will oppose a breakup of NTT in order to protect investor interests. However, Japan could break up NTT without harming investors because NTT is not purely a private company. NTT remains partly public due to the NTT Act of 1984, which placed NTT under MPT surveillance. The Japanese government could privatize NTT completely by selling all its stock holdings to the public while simultaneously abolishing the NTT Act. NTT companies then would gain liberation from government constraints and share value for the stockholders generally would increase.

NTT's divestiture would simplify access regulation against NTT. The newly independent NTT East and NTT West would be separated from the long-distance company, NTT Communications, and therefore would have no

competition on equal footing between NTT and its competitors.

38. *Id.*

incentive to discriminate against other long-distance companies. The MPT established access rules for NTT, but ambiguity remains therein because the exact costs for local and long-distance elements of NTT operation cannot be calculated. The MPT announcement in 2000 that due to pressure from the United States it would reduce NTT's access charge by 20% shows this ambiguity. The MPT did not amend the existing access pricing rule, which proves that access pricing rules always operate arbitrarily for vertically integrated firms. The MPT likely cannot eliminate this arbitrariness even after the adoption of LRIC access pricing rules.

4. Divestiture or Access Regulation: Which is Better?

The above comparison of vertical divestitures and access rules demonstrates the merits of vertical divestitures of integrated monopolies. At a minimum, for the electricity and telecommunications sectors, the regulatory benefits of vertical divestiture outweigh possible losses in an economy of scope. With regard to the objection regarding investors' rights, methods exist to accomplish vertical divestiture without harming their rights. The experiences of the U.S. electric and Japanese telecommunications industries illustrate this point.

Following the vertical divestiture of utilities, innovation will weaken the naturally monopolistic nature of bottlenecks gradually while simultaneously blurring the boundaries between natural monopoly and competitive elements. Such developments ultimately may lead to a reintegration of vertically separated utilities, a topic thoroughly discussed in Part IV.

IV. REGULATION OF REINTEGRATION

Following vertical divestitures, utilities often will seek reintegration into upstream or downstream markets through either vertical mergers or new investments. Regulators initially should seek to prohibit them from reintegrating; however, if market conditions change significantly after the divestiture, regulators should consider allowing the reintegration. Regulators should make the decision on whether to allow reintegration by balancing the economic efficiency expected from reintegration against the risk of competition distortion. Regulators should put more weight on the latter, as countries' experiences indicate that a loss of competition gives rise to tremendous economic inefficiency.

If regulators could invent effective safeguards to prevent abuses of market power, they could achieve the desired economic efficiency from vertical

integration without engendering market power issues. However, effective safeguards are difficult to realize.

A. Reintegration in the Electricity Sector: The Need for Prohibition

In the electricity sector, the natural monopoly of power grids is well established. The boundary between natural monopoly and competitive elements (i.e. electricity generation and retailing) is clearly demarcated. It is for this reason that regulators should prohibit transmission companies from reintegrating into generation or retailing. It is only after new technology eliminates the market power of transmission companies that regulators should allow this reintegration.[39]

Regulators in the United Kingdom faced this issue as two electricity generation companies (PowerGen and National Power) made bids to acquire distribution companies. The Monopoly and Merger Commission (MMC) found the mergers to be against the public interest. The MMC nevertheless recommended that the mergers proceed, albeit under certain conditions. However, the Minister of Trade and Industry rejected the bids in 1996, discarding the MMC's recommendation.[40] The Minister possessed a better grasp of the industry, as regulators cannot check the market power of the reintegrated company effectively through the regulatory safeguards. Richard Green and David Newbery point out that vertical integration would increase the difficulty of regulating such discriminatory contracts.[41]

B. Reintegration in the Telecommunications Sector: The Prohibition or Safeguard Approach?

The telecommunications sector has experienced more rapid technological developments and market transformations than the electricity sector. In response, telecom regulators may show more flexibility toward reintegration than electricity regulators. However, an important question remains: How much more flexibility can the telecom regulators have?

Regulators in the United States encountered this issue when a court entered a consent decree prohibiting divested BOCs from entering competitive portions of telecommunications markets. However, the FCC has mitigated this restriction by allowing BOCs to enter select competitive

---

39. In the near future, it is likely that new technology such as solar cells will eliminate the need for power grids. *See The Dawn of Micropower*, ECONOMIST, Aug. 5, 2000, at 75.

40. *See* NEWBERY, *supra* note 13, at 231-32.

41. *See* Richard Green & David M. Newbery, *The Electricity Industry in England and Wales*, *in* COMPETITION IN REGULATED INDUSTRIES 102 (Dieter Helm & Tim Jenkinson eds., 1998).

sectors of the telecommunications industry such as cellular services and electronic publishing.

The FCC imposed safeguards on BOCs, like accounting safeguards and separate subsidiary requirements, which have proven effective thus far. Few have raised complaints regarding abusive behavior of BOCs, and BOC market shares in newly entered fields have remained relatively static. However, regulators have allowed BOCs to enter only markets of minor importance. Real challenges will occur when BOCs reenter the interstate telecommunications market.

The Telecommunications Act of 1996 established rigorous conditions regarding the entry of BOCs into the interstate telecommunications market. These conditions preserve the spirit of the AT&T divestiture, for a BOC cannot enter into the interstate market until there are enough entrants into the local markets in which the respective BOC operates. So far, the FCC and DOJ have approved only the entry of a few BOCs' into the interstate market, which illustrates that the Telecommunications Act of 1996 provides the FCC with considerable discretion. The FCC and DOJ should take care not to rely too heavily on instituted safeguards. Experiences in advanced countries' electric and telecommunications industries demonstrate that vertically integrated monopolists possess strong incentives to cross-subsidize and that safeguards cannot block subtle discrimination by integrated monopolists effectively.

The FCC pointed out the salutary effect of price caps in reducing monopolists' incentives to engage in cross-subsidization, but this has little effect on monopolists because they can ignore short-term profit loss and continue harassing competitors.[42] In allowing the merger between a BOC (Bell Atlantic) and a medium-scale vertically integrated company (GTE), the FCC stressed the effectiveness of safeguards against the market power of the merged company.[43] However, the FCC admits that it cannot "foresee every possible type of discrimination, especially with evolving technologies"[44] and "hard-to-detect methods of non-price discrimination."[45] The FCC

42. *See* MARIUS SCHWARTZ, THE ECONOMIC LOGIC FOR CONDITIONING BELL ENTRY INTO LONG DISTANCE ON THE PRIOR OPENING OF LOCAL MARKETS (AEI-Brookings Joint Center for Regulatory Studies, Working Paper 00-04, 2000), *available at* http://www.aei.brookings.org/publications/working/working_00_04.pdf (pointing out that the effects of the price cap have been overstated).

43. *See* FED. COMM. COMM'N, GTE CORPORATION AND BELL ATLANTIC CORPORATION, FCC 00-221, para. 198 (2000).

44. *Id.* para. 179.

45. *Id.* para. 192.

contradicted its own ideology and policy by allowing the merger between Bell Atlantic and GTE.

V. CONCLUSION

By analyzing the electricity and telecommunications sectors in the United States, the United Kingdom, and Japan in detail, this Article illustrates the desirability of separating natural monopoly elements from potentially competitive elements. At least for the electricity and telecommunications sectors, the regulatory benefits of vertical divestiture outweigh any possible losses in an economy of vertical coordination. Even in the telecommunications sector, the merits of vertical separation, on the whole, overwhelm any potential losses in an economy of scope. This recommendation considers the proven difficulty of detecting discriminatory conduct within vertically integrated monopolists. For investor-owned utilities, governments, by wisely using their regulatory powers, can realize divestitures without harming investors' interests.

Additional recommendations:

Governments should establish regulatory agencies that exist and operate independently from ministries in charge of industrial policies. The coexistence of industrial policy and regulation in one agency obstructs regulators from concentrating on pro-competitive regulations.

Regulators should strive for simple regulatory structures. Complicated regulatory oversight rarely succeeds. Utility regulations have become unnecessarily complicated and anticompetitive due primarily to universal service considerations.

If the government finds universal service to be politically necessary, the government should provide support in the form of direct government funding. Universal service realized by cross-subsidization generates an anticompetitive market structure and excessively complicated regulations.

Unbundling and LRIC pricing in telecommunications created unnecessarily complex regulations. Regulators should apply antitrust standards and price caps to telecommunications markets to achieve simplified and pro-competitive regulations.

The adoption of a holding company structure cannot supplant vertical divestiture of utilities. A holding company is merely another corporate form for managing a multidivisional organization. With 100% of the subsidiary's stock in its possession, a holding company can suppress the independent conduct of subsidiaries easily, allowing it to manage the entire holding company as one entity.

Safeguards like accounting separation and price caps cannot effectively reduce monopolists' incentives to engage in anticompetitive conduct such as cross-subsidization. The establishment of safeguards is generally an inadequate substitute for the vertical divestiture of utilities.