Book Reviews

Michael S. Crew (ed.), *Deregulation and Diversification of Public Utilities*. Dordrecht: Kluwer Academic Publishers, 1989. ISBN: 0-89838-299-8.

Given the recent developments in telecommunications and banking, there has been considerable interest in deregulation and its consequences. As a portion of the title suggests, the essays in this collection are concerned with public utilities, although it cannot be said that all the papers deal with the issues of utility deregulation and diversification. Three of the essays deal specifically with the telecommunications industry while the rest deal either with power utilities or general issues regarding diversification and deregulation.

In "Feasibility of Deregulation: A Public Choice Analysis," Michael Crew and Charles Rowley consider a fundamental question: why deregulation? The answer seems obvious until considered carefully. As the authors note, the telecommunications, electricity, and gas industries all have some of the characteristics of natural monopolies but there is considerable interest in their deregulation. Yet the interest to deregulate does not extend to other industries, such as taxis, which have *no* natural monopoly characteristics. The authors try to resolve the paradox and after reviewing several economic theories of regulation, they argue that public choice theory combining Olson's (1965) theory of interest groups with Tullock's (1967) theory of rent-seeking offers the best explanation. As Olson observed, competition among interest groups introduces significant bias in political markets because the free-rider problem reduces the incentives to form and mobilize groups that do not have a substantial interest in the outcome. Therefore other, more specific, benefits must be offered to organize large pressure groups, such as those offered by a trade association.

Crew and Rowley argue that this bias, together with Tullock's theory of rent-seeking, suggests that politicians should be modelled as brokers in the political market for transfers of wealth. Essentially, voters and special interest groups 'demand' transfers from politicians while other voters and less effectively organized groups 'supply' these transfers. Crew and Rowley suggest that regulation offers several advantages over the more traditional tools of taxes and subsidies because the cross-subsidies that regulation creates are much less noticeable to voters. Therefore the authors predict that cross subsidies will be a major feature of regulation: long distance telephone users subsidize local users, heavily travelled airline routes subsidized low density routes, and so on. But these cross subsidies also suggest that large voting blocks, such as residential electricity users, were 'bought' by the regulatory arrangement and were not simply unable to detect the transfer. Certainly residential electric users gained from the higher rates imposed on business users. The ideas raised in the chapter are interesting although, as the authors mention, more research is needed.

Ingo Vogelsang's paper, "Price Cap Regulation of Telecommunications Services: A Long-Run Approach," considers the use of price caps as a replacement for rate-of-return regulation. The Federal Communications Commission hoped price caps would provide incentives to produce efficiently, protect consumers from monopoly power and simplify the administrative burden on regulators. The author combines the price cap with the 'Vogelsang-Finsinger' constraint, which defines the set of allowed prices for the regulated firm. The goal of the constraint is to allow only those prices that, when applied to last period's output and costs, will yield no excess profits. What is unclear is how the regulators can determine when the firm has earned excess profits without knowing the 'correct' rate of return in advance. If the regulators have determined the correct rate of return, then there is no need for the price cap and constraint to replace rate of return regulation. As

far as reducing the administrative burden facing regulators, Vogelsang's formulas for the constraint become complex and require more information as the model is made more realistic.

Chapters four and ten consider the effects of the financial structure of the regulated firm and its cost of capital. In "Efficiency Aspects of Diversification by Public Utilities," Roger Sherman suggests that economies of scope may justify diversification that is prevented by the Public Utility Holding Company Act of 1935. The Hope Natural Gas Company decision provided the guidelines still used to determine allowed profit rates on assets for regulated utilities. It was recommended that historical costs be used for capital financed by debt and current costs for capital financed by equity. Sherman notes that this approach is not consistent with theories of firm valuation and thus rate regulation exposes the regulated firm to different risks that might be reduced through diversification. For example, if regulators set the utility's rate of return below market levels, a diversified firm could draw on resources from other operations until the next rate hearing. Using market-to-book value as a measure of performance, Sherman finds that a dummy variable for diversification has a positive and significant effect on performance. Naturally, diversification into unregulated areas also provides opportunities for the firm to circumvent regulation and it may be necessary to divide the firm's operations into separate subsidiaries to prevent inefficiencies. At the same time, Sherman notes that if the separation is too strict, it may prevent the firm from fully realizing economies of scope.

Leonard Hyman and Heidimarie West examine the financial issues further in chapter ten, "Diversification, Deregulation, and Competition: Cost of Capital Implications for Electric Utilities." The authors argue that the electric utilities are following the gas and telephone companies in diversifying — despite their mixed results from diversification. The lessons from the gas and telephone experience are that it is difficult to enter competitive markets, particularly for utilities that define their end users too broadly, and both competition and diversification can increase the risk of investment. Hyman and West also find that utilities generally have significantly lower betas, higher levels of debt, and higher dividend payout ratios than industrial groups. However, industrial returns on equity are generally higher than for utilities and utility stocks sell at market/book ratios significantly below that of industrial firms. The authors conclude that as utilities continue to diversify and become more like other firms, their financial policies, particularly their high levels of debt and high dividend payouts, will also have to become more like other firms.

The relationship between accounting measures of profit and economic measures is the topic of chapters five and six. In "Efficient Income Measures and the Regulated Firm," Shimon Awerbuch notes that the accounting rate of return provides no information about the economic rate of return, yet the accounting return is the basis for ratemaking by regulators. The Financial Accounting Standards Board, which sets accounting rules, is oriented toward providing investors with fair and accurate information but the income measurements that result are not appropriate for ratemaking. If rates are not set properly, which is almost assured given current accounting methods, consumers may be over charged for certain services and may bypass the regulated industry (as in telecommunications) to avoid the inappropriately high costs. Awerbuch argues the accounting measurement errors are less important in competitive industries because competitive firms are price-takers and therefore accounting policy will not affect pricing or cash flows. For the regulated firm, however, prices are derived from the allowed rate of return set by regulators based on accounting measures. The measurement errors can be significant and the distortions may become worse when a regulated utility diversifies into a competitive market. Awerbuch provides several examples to illustrate the measurement errors caused by accounting methods under varying assumptions regarding technological change, inflation, and depreciation. He finds that in some cases the incentives created by regulation can be perverse. When new capacity is added to the firm, the price should be low to encourage increased use of the new capacity, yet current regulations would set a high price because of the larger rate base. Awerbuch concludes that if utilities are to continue diversification, regulators must become much more competent in evaluating accounting information.

William Hamlen and Susan Hamlen defend full cost allocation (FAC) methods in "Decentralized Pricing in Natural Monopolies." The authors reply to Baumol's criticism of FAC methods and find that different FAC methods, such as the Shapley and nucleolus approaches, can constrain profits fairly without forcing them below normal levels. They argue that decentralized decision-making will sometimes yield the same results as centralized decision-making using FAC methods.

Chapters seven and eight are concerned with the telecommunications industry. Almarin Phillips considers an interesting set of issues in, "New Technologies and Diversified Telecommunications Services: Policy Problems in an ISDN Environment." Given the divestiture in telecommunications, Phillips wonders if the new regulatory approaches are appropriate to promote the development and use of newer technologies in the future. Is the current competitive, multiple seller approach now pursued compatible with foreseeable technologies that appear to require *more*, not less, integration? Integrated services digital network (ISDN) is a set of standards for the digital communication of voice, data, and video information across the world. The advantage of ISDN is that it allows the integration of different kinds of digital information and services. Unfortunately, as Awerbuch notes, current regulatory policy requires the telephone companies to unbundle each part of their local exchange service and price the components at or above full cost to meet the equal access requirements in the settlement. But this unbundling contradicts the ISDN approach. Significant economies of scale and scope appear to exist but present policies prevent their exploitation. This may be significant because it may delay the introduction and widespread use of information services in the U.S. relative to other countries.

In "Contestable Markets and Telecommunications," Richard Simnett argues that the telecommunications industry is not contestable and is not likely to become so in the near future. Before divestiture AT&T had acquired detailed knowledge of its customers' telecommunications patterns. Simnett argues that this knowledge provides AT&T with a marketing advantage over rivals because it can target its advertising at those consumers who are most likely to purchase new services, while competitors are left with more costly and less clearly focused advertising campaigns. Simnett concludes that the residential and small business markets are not contestable because entrants face high sunk costs to increase their market share. The market for large business users is contestable, but these users have been able to meet their communications needs privately and were able to do so well before divestiture. Left unanswered is the possibility that market performance has improved since divestiture even if the present market structure is not contestable.

The last two chapters in the book deal with electric power generation. In "Competition and Cooperation in Deregulated Bulk Power Markets." Scott Herriott finds that competition is not necessarily incompatible with the cooperation necessary to realize lower costs in power plant operation and planning. Cooperation improves economic efficiency in several ways. In an economy energy exchange, firms share power in spot market transactions using the lowest-cost producers to minimize short run power costs in the system. When firms need to idle equipment for periodic maintenance or when emergencies shut down generators, coordination among utilities can provide continued power while requiring less excess capacity than if single firms were required to meet their customers' needs independently. Cooperation can also reduce long run costs of power generation since a pool of utilities may justify a larger, lower-cost plant that a single firm could not afford. Herriott argues that incentives exist to motivate this efficient cooperation as long as the firms generating power in the industry are separated from those that distribute that power. He also asserts that antitrust problems can be avoided if regional power markets have a sufficient number of generating firms.

The final chapter, "The Financial Fallout From Chernobyl: Risk Perceptions and Regulatory Response" by Catherine Eckel and Theo Vermaelen, is least related to the title of the book. The authors use an efficient markets model to determine whether the Chernobyl accident changed investors' perceptions of the expected returns from nuclear power. They find that Chernobyl had a negative effect on the stock returns to electric utilities with nuclear plants but the subsequent release of the Soviet's report four months later had an offsetting, positive effect. The authors find wide

variation in the response of common stock returns to the accident and they try to model this using variables to capture the liability exposure of the firms, the degree of their capacity that is nuclear, and whether the firm had new nuclear plants under construction. They find that the new nuclear capacity variable was significant in affecting the firm's stock returns during the periods of the accident and the report. It also might have been useful to consider a regulatory climate variable, such as Sherman used in chapter four, since it is possible that the varied response of common stock returns was due to the climate in particular states. For example, Massachusetts has opposed nuclear power for some time and an event such as Chernobyl could increase pressure on the utilities in that state even if it had no effects on utilities in other states.

Overall the book provides the reader with insights into the important issues regarding the regulation of public utilities. Those who are interested in a broad survey of developments in the area will find several chapters worthwhile. Researchers with interests in new work in public utilities and their regulation will find much to stimulate their thinking.

References

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Chung H. Lee and Ippei Yamazawa (eds.), *The Economic Development of Japan and Korea: A Parallel with Lessons*. New York, Westport, CT, London: Praeger, 1990. ISBN 0-27593-331-8.

As clearly shown by the establishment of diplomatic relations with Gorbachev's USSR, South Korea is emerging as a vital economic power now in this last decade of the century. However, compared with Japan's economic development, very little English literature is available about Korea. In Japan, where economic ties, as well as rivalry between the nations is keen, and about 600,000 Koreans are living in Japan with their special, permanent resident status, the number of books about the Korean economy is not small. However, if we limit our attention to scholarly analysis, the situation is much the same as with the English publications.

This timely book consists of an introduction by Chung H. Lee and Tuvia Blumenthal and then presents successsively six sets of parallel analyses about the economic development of Japan and Korea. The topics that are analyzed consist of (1) trade; (2) government; (3) imported technology; (4) financial systems and policies; (5) agriculture; and (6) education, respectively. The book is the result of a research project organized by the Resource Systems Institute, East-West Center, Honolulu, and the papers were presented at a conference held in April 1987.

As a consequence of its formal, symmetrical structure, this book reveals two important differences between the way the Japanese and Korean contributors analyze these topics. One difference is the time perspective adopted. The Japanese contributions provide historical overviews regressing back to the situation at the time of Meiji-Japan while their Korean counterparts seldom deal with the situation before the 1960s, and, certainly, not earlier than 1945. I admit this may be a natural result because of the different time spans of economic development represented by the two nations. However, the evident lack of frank discussion about the interrelations of the two neighboring nations (where at the core lies the legacy of Japanese colonial rule in Korea from 1910–45) gives the impression of a certain, reserved formality about confronting this challenging issue.

Another difference between the approaches of the Japanese and Korean writers has to do with the objectives of the analysis. In the Japanese contributions we encounter sincere effort to demystify of the prevailing model of the Japanese economy such as "Japan Inc." The most stimulating examples are Tajika/Yui's estimation of the policy effects on the cost of capital (Ch. 3) and Kohsaka's flat denial of the supposed effects of the