

The Basis for Traditional Rate of Return Regulation

To a large degree, the regulation of public utilities evolved because of the belief that the mechanism of competitive free enterprise could not be relied upon to protect and further the public interest in certain instances. It has long been theorized that certain types of goods and services cannot be efficiently provided under conditions of competition: either a single strong firm would evolve to dominate a particular geographical market area, or excessive cost and needless duplication would result, if numerous companies did survive in the same market area. To prevent such waste and protect the public interest, the government has historically intervened in public utility markets. Either it operates a single enterprise or legally sanctions or encourages the operations of a single privately owned enterprise. In the latter case, the government may offer some degree of protection from competition (e.g. partial exemption from anti-trust laws, access to rights of way). In exchange for this privilege and protection, the utility is subject to regulation in the public interest.

Most theorists on this subject agree that the primary objective of regulation has always been to produce results in the utility sectors of the economy which parallel the ones that would be obtained under conditions of effective competition. These economists recognize that effective competition does not always prevail in our economy, but it represents an ideal to strive towards, since it provides a high degree of efficiency and equity.

Using this competitive standard, under traditional regulation rate levels should be set to provide a well-managed utility with the opportunity to cover all of its necessary costs, including a fair return on the capital employed. Although the utility may recover more or less than its full cost in the short run, its total cost should generally be equated with total revenues over a longer period of time. When rates are adopted in this manner, there will be an equitable and efficient balance between the interests of the utility and its investors and those of its customers. Such a balance, which occurs naturally in markets controlled by effective competition, has also been the goal for rate base regulation in most jurisdictions.

Problems Associated with the Traditional Form of Regulation

Although the public interest has been served well by traditional regulation, there are several aspects of rate base regulation that have led some observers to question whether it is still appropriate for the telecommunications industry. Most of this criticism has focused one or more of the following issues: (1) the lack of strong incentives to minimize costs; (2) lack of productivity improvement; (3) costs of regulation; and (4) the trend towards increased competition, and the associated problems with mixing competition and regulation.

(1) The lack of incentive to minimize costs

The cornerstone of rate of return regulation is that prices are directly tied to each firm's individual costs. The utility is normally given an opportunity to recover all of its prudently incurred costs, including a fair return on its invested capital. Therefore, as the firm spends more money, it will eventually be allowed to charge higher prices.

Furthermore, because the regulated firm is given the opportunity to earn a particular

percentage return on its investment, simply by increasing its investment it can generally increase its prices, and therefore its aggregate earnings (in total dollars). This is virtually the opposite of what would occur in a competitive market, where unnecessary expenses and investment always translates into profit reductions.

Under competitive conditions, prices are dictated by the market, not the individual firm's actions. Thus, profits and costs are generally inversely related. When the firm increases its costs, its prices stay the same, and its profits tend to decrease. This relationship creates a powerful incentive for competitive firms to minimize costs. For regulated firms during a rate case, the cost-earnings relationship is direct, rather than inverse, and the incentive to control costs is thus diluted. The higher the costs allowed in the rate case, the higher the prices which the firm is allowed to charge.

It would not be correct, however, to claim that traditional form of regulation has resulted in drastic economic inefficiencies. The potential incentive to over-inflate costs is one of the reasons why every state maintains an extensive regulatory infrastructure. The increase in prices due to increased costs is not automatic, and it may never occur. Under traditional regulation, companies' costs are reviewed and audited, and there is always the risk of disallowance associated with any additional investment or increase in costs. This review process has to a large degree been successful in preventing grossly excessive spending by regulated companies. While most observers concede that weak incentives to control costs is one of the problems with traditional regulation, there is no evidence that it is a fatal flaw. To the contrary, this problem is mitigated by several factors, including the vigilance of regulators, who attempt to detect and disallow excessive or imprudent costs, and the beneficial effects of "regulatory lag." During the interim period between rate cases (which can often be several years), prices are not tied to costs, and thus the normal inverse relationship between costs and profits tends to prevail. In fact, during periods when costs are declining, earnings can grow rapidly, and profits can expand well in excess of the firm's cost of capital.

(2) Lack of productivity improvement

However, some have argued that over extended periods the lack of competitive pressures will lead to a lower rate of productivity improvement than would occur under effective competition. In other words, while regulators are typically successful in detecting excessive costs and imprudent expenditures, it is sometimes argued that they don't force prices, and costs, down as rapidly or as deeply as would competitive forces. This argument is often based on the premise that profits from unusually successful innovations will be limited by regulation, while shareholders may be forced to bear the burden of unsuccessful innovations, particularly if the investment is found not to be "used and useful." Thus, management may be slow to innovate, if it perceives a lack of symmetry in the risks and rewards of such efforts. Even if one accepts this logic as a theoretical matter, it isn't clear whether this alleged problem is significant in practice. Disallowances in the telephone industry are relatively rare. Most investments have been allowed in rate base, including experimental ones that were not fully successful.

Also, it must be remembered that during the period between rate cases, there is no direct relationship between costs and prices, because prices are frozen at a particular level.

Therefore, during the period between rate cases, a profit maximizing firm has an incentive to innovate and take the initiative to adopt new technologies, reduce the

workforce where possible, and take other steps to reduce costs. The longer the period between rate cases, the greater the "regulatory lag". The greater the lag, the greater the incentive to curb costs and therefore increase profits. During the lag period, it is largely irrelevant that the firm is regulated. Also, a certain degree of professional pride will foster innovative techniques and result in productivity enhancements, regardless of whether the financial benefits flow to stockholders or to customers. It must be remembered that in large corporations--both regulated and unregulated--employees will personally receive only a small percentage of the benefits they generate. It is questionable whether engineers and managers care whether the fruits of their efforts ultimately flow to an impersonal mass of stockholders or an equally large and impersonal group of customers.

(3) Costs of regulation

Obviously when an industry is subject to regulatory oversight, society has to pay the cost of reviewing the operations of firms within that industry. There are numerous commissions and agencies at both the state and federal level; in total they employ thousands of people. The very nature of rate base regulation requires the expenditure of significant amounts of time and money in order to examine a carrier's rate base, to calculate the cost of capital, and to make pricing decisions. In a completely competitive environment, much of this effort would be unnecessary, since the public would be protected by the "invisible hand" of competition, rather than the "visible hand" of regulators.

Short of a complete transition to effective competition, however, it isn't clear that significant cost savings can be realized. While many jurisdictions have experimented with price caps and other substitutes for traditional regulation, it isn't clear whether this has resulted in any net reduction in the costs of regulation. In principle, price regulation has the potential to reduce the need for auditors and other regulatory staff, and thus it could conceivably result in some reduction in costs over time; however, due to the newness of this form of regulation, and the fact that the transition from one form of regulation to another necessarily requires extensive study and control, it is questionable whether regulatory costs can be reduced in the short run without a commensurate reduction in protection for the public.

(4) The industry's trend towards competition, and the associated problems with mixing competition and regulation.

The basic rate of return mechanisms inherent in traditional regulation were designed and implemented many decades ago. During the early 1900's, when rate of return regulation was first extensively applied to the telecommunications industry, only one provider needed to be regulated in each market--typically AT&T. Things have changed, and the telecommunications environment is much more complex. The divestiture of the Bell Operating Companies from AT&T has increased the number of firms that must be regulated. More importantly, technological advances have begun to break down the previously insurmountable barriers to entry. Microwave, satellite, digital and transistor technology, for example, have helped create an environment of increased competition for many telecommunications goods and services. However, incumbents still enjoy varying degrees of monopoly power in most, if not all, segments of the industry. Given the changes in the industry, some commenters have asserted that rate base

regulation is no longer an appropriate method of regulating today's telecommunication companies. Critics have argued that traditional regulation operates too slowly, and does not allow firms the pricing flexibility they need to respond to competitors' actions. More importantly, however, are the potential problems found when integrated firms enjoy varying degrees of market power in different markets. In this situation, the environment is ripe for anticompetitive behavior. The incentive for such behavior is magnified under traditional regulation, particularly when the firm produces numerous products from a common set of employees and investment.

The potential for anticompetitive behavior by regulated firms

Some anticompetitive behaviour takes the form of nonprice favouritism; however, most is price related, including the pricing of competitive services at unreasonably low levels (competitive underpricing), the use of revenues from less competitive services to financially support (cross-subsidize) more competitive services, and the overpricing of bottleneck services, including those used by competitors.

When a firm is subject to competition in at least one segment of the industry but still enjoys monopoly power in at least one other segment, it has strong incentives to use the revenue from one or more of its quasi-monopoly services to offset the cost of one or more of its quasi-competitive services, thereby allowing the firm to price the latter service(s) "below cost." Whether or not this practice qualifies as "cross-subsidizing" as that term is technically applied in the economics literature, it is certainly disturbing and potentially undesirable.

More generally, a problem exists whenever an integrated firm operating in both quasi-competitive and quasi-monopoly markets takes advantage of opportunities to shift costs from the former to the latter category, to overprice its less competitive services, and/or to underprice its more competitive services. A generic term for these practices, including those which fall within the strict definition of *cross-subsidization* and those which do not, is *anticompetitive pricing*, meaning that the integrated firm is strategically pricing its services to exploit the market power it has in the less competitive markets. The goal may be to deter competitive entry, to gain a competitive advantage, or to maintain dominance in a potentially more competitive market.

As long as these firms remain vertically integrated mixes of quasi-competitive and quasi-monopoly operations, they will have incentives to engage in anticompetitive pricing. Similarly, opportunities for cross-subsidization and competitive underpricing will continue to exist wherever the integrated firm provides both quasi-monopoly and quasi-competitive services using joint or common resources. The costs of these resources (e.g., personnel, equipment, services) are referred to as *joint or common costs*.

Agencies that have recognized these potential problems associated with traditional regulation

The FCC has stated:

We have every reason to expect, moreover, that the telecommunications industry will continue to be marked in the future by the same steady technological advancement it has demonstrated in the past. This will lead to greater competition than at the present and a continuing shift in the boundaries between the

competitive segments of the telecommunications marketplace. Notwithstanding this technological change and growing competition, we could continue our current practice of implementing cost allocation systems that present strong deterrents to anticompetitive activity associated with those boundaries, it will become increasingly difficult to obtain these benefits while concomitantly holding to a minimum the costs such deterrents impose on society. We conclude, therefore, that it is prudent to implement regulatory systems that are better able than rate of return to operate effectively in an environment marked by competition and technological change. [FCC, In the Matter of Policy and Rules Concerning Rates for Dominant Carriers, Order on Reconsideration, CC Docket No. 87-313, FCC 89-91, p.19.]