

89-12 **Lynch Jr., John G., Thomas E. Buzas, and Sanford V. Berg.** 1994.
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Abstract

Regulators of utilities that operate as local monopolies would like to set prices or allow rates of return based upon the quality of a utility's service. However, quality is highly multi-dimensional. Traditionally, regulators have collected measures of quality on many separate dimensions, and compared performance on these dimensions to explicit pass-fail standards. They have lacked a method of combining complex patterns of substandard and superstandard performance on these many dimensions to arrive at an overall evaluation of the quality of service. To redress this problem, we first describe the information processing problems regulators encounter when they attempt to integrate this complex array of information intuitively, and the problems that arise when the link between service quality (as reflected in patterns of passed and failed standards) and regulatory incentives is not made explicit to utility management. We develop a bootstrapped method for formalizing each expert regulator's evaluation policy using hierarchical conjoint analysis, and apply this method to the evaluation of local telephone companies by the Florida Public Service Commission (FPSC). We show that experts within the FPSC, the regulated utilities, and a large telephone customer exhibit very high agreement about how the various dimensions of quality should be differentially weighted. We derive a consensus measure of overall quality, Q , and identify a score associated with meeting all standards exactly, Q^* . Utilities can then be rewarded based upon whether or not they exceed Q^* , rather than on the basis of how many standards are met. Compared with a pattern in which each standard is met exactly, there exist patterns of mixed substandard and superstandard performance on the individual dimensions of quality that are less costly to produce and higher in overall quality. We compare utility incentives when rewards are based upon Q to those under the current pass-fail regime.