REGULATORY INERTIA AND RISK REDUCTION

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Abstract

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1. Introduction

The regulation by government of private enterprise has often been considered to produce a type of inertia, in which regulated firms are unable to respond as quickly or decisively to changing market conditions as they could in the absence of regulation. The detrimental effects of such inertia are obvious; less obvious is the fact that offsetting benefits may emerge as well, as Goldberg (1976) and Linhart et al. (1983) have shown.

Although certain direct effects of regulatory inertia have been examined in the literature, it remains an open question how this inertia could alter the risk faced by producers and consumers in an uncertain environment. This paper addresses that question.

The motivation behind the question is twofold. First, if at least some producers or consumers are risk-averse, then they would not be indifferent to changes in risk resulting from inertia. Any reduction in the riskiness or degree of fluctuation of one or more relevant economic variables would be perceived as a benefit, apart from caveats discussed in Shaffer (1984). On the other hand, if inertia could be shown theoretically to increase that risk, then an additional drawback of regulatory inertia would be identified. Thus, the question has practical implications for cost-benefit analysis when deciding whether or how to regulate a particular market or industry. The usefulness of this paper stems primarily from these policy aspects of the question.

Approaching from the opposite direction, other research has explored the notion that a regulated industry somehow faces less risk than an unregulated one, whether due to inertia or to other causes. Peltzman (1976) derives a reduction of risk as one side effect of his theory of regulation, while Hogan et al. (1980) demonstrate the effect empirically. Owen and Braeutigam suggest inertia or lag as the causal mechanism in this "smoothing" phenomenon, though without proof. Thus, it is also possible to view this paper as a theoretical investigation of the hypothesis of Owen and Braeutigam, or more generally as an attempt to derive an alternative to Peltzman's
explanation of findings such as those of Hogan et al. (1980). The paper is less satisfactory from this viewpoint, which would regard the results as negative.

2. Background

The analysis incorporates implicitly any conceivable feature of regulation that would produce the described effects. Perhaps the best way to think of what is being modeled is to consider a regulatory agency as an entity that has authority to approve, modify, or reject the choices made by the regulated industry in one or more parameters. The parameters could include the price level, profit rate, quantity, quality, number of firms, operating policies of specific firms, or any number of other items. The approval process is not only time-consuming but also (without going into elaborate detail as to the regulator's objective function) somewhat adversarial, in the sense that large changes are more likely to be blocked, scaled down, or delayed than small changes. This condition could arise almost independently of the choice of objective function if the regulator faces incomplete and costly information, since large proposed changes would justify greater expenditure on information and more intensive scrutiny (with concomitant delays and negotiations for compromise) than would smaller changes.

Regulatory lag or inertia is interpreted in a highly abstract fashion in an effort to capture the essence of the relevant behavior without restricting the model to specific institutional frameworks or forms of regulation such as licensing requirements, rate regulation, etc. Such particular types or instances of regulation could all emerge as special cases of a properly constructed general model. The details of an appropriate model are difficult to specify, however. If one takes the effect of regulation to be merely a lag in the sense of delaying economic adjustments to changed conditions, then the problem would appear to be trivial with the sole result being an increased deadweight loss during the period of adjustment. Linhart et al. (1983) show this intuitive guess to be wrong.

This paper follows a different approach. The economy is considered to function in discrete time periods, with a random or pseudo-random "outcome" in each period. The outcome may be given different interpretations depending on the specific form of regulation or the category of agents (producers vs. consumers) to which the model is applied. For example, if we apply the model to analyze the impact of regulatory inertia on risk-averse producers, then one appropriate definition of "outcome" would be the level of profit accruing to a given firm, or perhaps to the industry as a whole. If, on the other hand, we seek to characterize the effect of inertia on consumer welfare, then it would be more appropriate to define the outcome in terms of personal wealth or income. The analysis applies with equal force to either case. Thus, we shall speak of utility functions without specifying whose they are, with the understanding that any producer or consumer can be thereby represented, given a suitable definition of outcome. The intent of this seeming ambiguity is to maintain the highest level of generality.