The Economic Theory of Consumer Protection in Health Care

Can a neoclassical economic model of consumer protection regulation in health care generate useful tests for improving consumer welfare? Regulation requires consumers to patronize one class of sellers when, in an unregulated market, some consumers would patronize a class of sellers who appear to offer a better price-quality tradeoff. Conditions in health care and characteristics of the neoclassical economic model make it highly unlikely there will be a useful test for a consumer protection effect.

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The Theory of Consumer Protection

The theory of consumer protection regulation in health care uses neoclassical economic principles. Consumers maximize perceived expected utility, which is a function of price and quality of their service. Quality is the probability a service will be safe and effective. Consumers either perceive the price-quality tradeoffs offered by sellers accurately ("accurates") or they perceive those tradeoffs inaccurately ("inaccurates"). Sellers are either in Class I or Class II. In an unregulated market inaccurates patronize Class II sellers, because they inaccurately perceive this class as offering a higher expected utility. Consumers who perceive price-quality tradeoffs accurately always patronize Class I sellers. Class I sellers offer the better price-quality tradeoff to all consumers. Regulation removes Class II sellers from the market, so that inaccurates must patronize Class I sellers. This increases the expected utility of inaccurates, although they may perceive a reduction and they may resist the regulation.

Implications and Tests of the Generative and Minimal Auxiliary Assumptions

Based on the generative assumptions stated above and a minimal set of auxiliary assumptions, the consumer protection theory has a number of implications. The minimal auxiliary assumptions are taken from mainstream neoclassical economic models in the industrial organization literature. Implications include that differences between quality levels are greater than the same differences as perceived by the inaccurates. That is, the inaccurates underestimate many quality differences. As an example, the inaccurates underestimate the difference in quality they receive from Class II sellers in an unregulated market and the quality accurates receive in the same market from Class I sellers. Tests of these implications, however, are unlikely in the context of health care. Testing the implications would require cardinal measures of differences in quality between services, cardinal measures of perceived differences in quality, and comparability of the measures for differences and perceived differences. Tests would also require matching instances with the same service used by consumers with identical preferences over price-quality combinations and identical perceptions of price-quality tradeoffs. Preferences and perceptions are unobserved, and the required matching for these and for service used will be difficult if not impossible. A natural experiment could conceivably allow the researcher to follow a consumer from an unregulated market to a regulated market, so that preferences and perceptions could be assumed constant. For the same consumer to use an identical service in both markets, however, is unlikely. It also is unlikely that the researcher would have longitudinal observations in a natural experiment.

Implications and Tests with Additional Auxiliary Assumptions

Adding auxiliary assumptions about relative prices paid by inaccurates in regulated and unregulated markets or by accurates and inaccurates in an unregulated market gives some advantages. The theory with these auxiliary assumptions gives implications that do not involve comparing differences in qualities with perceived differences in quality. If the auxiliary assumptions about prices are met, the measurement problems are significantly reduced.

As an example, if the accurates pay a higher price in an unregulated market than the inaccuates, there can be a consumer protection effect only if the accurates also receive a higher quality than the inaccurates. This quality

difference provides a test for a consumer protection effect of regulation that does not require comparable measures of quality differences and perceived quality differences. Significant problems of controlling for preferences, perceptions and services used remain. In a health care context, tests of the theory remain problematic.

Multivariate Approaches to Testing Implications

Multivariate techniques are a natural recourse for economists to control for (match) unobserved factors, like preferences for price-quality combinations and perceptions of price-quality tradeoffs. Selectivity models that incorporate latent variables as instruments for unobserved factors that vary systematically in the sample seem appropriate. For example, using data from an unregulated market, a latent variable equation for the propensity to choose a class of provider could be an instrument for accuracy of perception. Unfortunately, the estimation problem is very complex. Testing the consumer protection theory would require estimating simultaneously price-quality tradeoffs for different classes of sellers, a latent preference function for seller characteristics, latent perception functions for price-quality tradeoffs and separate choice functions for price and quality. It is unlikely such a system of equations could be identified and estimated in a simultaneous framework.

Conclusion

Can neoclassical economic techniques yield tests for a consumer protection effect of regulation in health care? Specifying the problem carefully and formally shows the answer is, "Only in extremely unlikely circumstances." One difficulty arises from measurement problems with the quality of health care and perceptions of the quality of health care. Another problem is that there are few regulatory changes in health care markets, and there is a slim likelihood of tracking individual consumers over the change in regulatory regimes. Even if many consumers were followed over a regulatory change, it would be necessary to observe the same consumer using the same service under each regulatory regime. Furthermore, some consumers would have to voluntarily switch classes of sellers between regimes. The practical likelihood of an adequate natural experiment is negligible.

A multivariate approach might hold many relevant factors constant across regimes without having to observe a change in regulations. Among multivariate approaches, selectivity models are designed to account for unobserved differences that are systematic across the sample. The accuracy of consumer perceptions is an important unobserved factor in the consumer protection theory, since it is related to selection of provider type in the generative assumptions of the model. The full consumer protection model, however, is a complex system of simultaneous equations. It also may have more than one unobserved factor that is systematically distributed across the sample. It would be difficult, at best, to specify and estimate an appropriate selectivity model.

Endnote
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