

Estimating the Benefits and Costs of New and Disappearing Products

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Abstract

A major challenge facing statistical agencies is the problem of adjusting price and quantity indexes for changes in the availability of commodities. This problem arises in the scanner data context as products in a commodity stratum appear and disappear in retail outlets. Hicks suggested a reservation price methodology for dealing with this problem in the context of the economic approach to index number theory. Feenstra and Hausman suggested specific methods for implementing the Hicksian approach. The present paper evaluates these approaches and suggests some alternative approaches to the estimation of reservation prices. The various approaches are implemented using some scanner data on frozen juice products that are available online.

Keywords

Hicksian reservation prices, virtual prices, Laspeyres, Paasche, Fisher, Törnqvist and Sato-Vartia price indexes, new goods, welfare measurement, Constant Elasticity of Substitution (CES) preferences, Konüs, Byushgens and Fisher (KBF) preferences, duality theory, consumer demand systems, flexible functional forms.

JEL Classification Numbers

C33, C43, C81, D11, D60, E31.

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