Price and Income Elasticities of Demand for Canine Wellness Visits: An Exploratory Analysis

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Background

Since 1997:
- fees for veterinary services doubled (vet price index rose to 216)
- dog owners who did not visit a veterinarian in prior year rose to 19%
- number of visits/year by dog owners who did visit declined by 18%
- alternative sellers of pet health services or products proliferated and
- veterinarians’ incomes have stagnated compared to similarly educated professionals*

Data Issues

- Expenditure data on visit bundles confounds prices paid, quantities, and procedures purchased.
- PDS “amount spent” responses displayed far more variation than AAHA “fee charged” data.

Question

Is an aggressive pricing strategy rational, or is the demand for veterinary services more price elastic than veterinarians implicitly believe?

Solutions

- Focus on observations reporting “wellness visits” only (exam and/or vaccination) in the prior year, excluding outliers ($30 ≤ spent ≤ $250).
- Measure Q by the answer “times visited.”
- Measure P by “spent”/“times visited.”
- Measure latent P using hedonic regression.

Demand Function Estimation

The binary choice to make a wellness visit to a veterinarian appears to be price elastic. And the demand for canine wellness visits may* be:
1) price inelastic among current consumers
2) more price elastic among non-consumers who are nonetheless “in the market”
3) price elastic among poorer households
4) income inelastic among all potential consumers
5) unitary income elastic among those who do not think routine checkups are important.

Findings*

The 2012 Pet Demographic Survey (AVMA, 2012)
50,000 respondent households
Socioeconomic characteristics:
- age, family size, education, employment status, race, ethnicity, income, housing type, location
- Pets and pet characteristics:
  - number of dogs, cats, birds, ...
  - each pet’s age, sex, weight, breed, source, ...
  - Attitudes about pets and about veterinarians
- by pet category (Dogs, cats, birds, horses, …)
- Expenditure on the last/most recent visit to a veterinarian with dog(s) veterinary procedures at that last visit to a veterinarian (0/1)
- Total expenditure on veterinary care for the previous year on dog(s) veterinary procedures during the previous year (0/1)
- Total number of visits in previous year to the veterinarian with dog(s)
- Pet health insurance (0/1)

The 2012 Veterinary Fee Reference (AAHA, 2012)
Nationwide scope; annual
- 700 responding veterinary practices or hospitals
- by location, size and type of practice,
- for each type of pet (dog, cat, horse, …),
- for each age, sex, weight class (as appropriate):
  - fee charged for each veterinary procedure or service,
  - percent change in fee charged since prior year

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