

PRICE BEHAVIOR IN A MARKET WITH INTERNET BUYER'S AGENTS

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Electronic markets are those in which transactions are carried out via information technology and telecommunications networks. A particularly exciting feature of electronic markets is the possibility of automating the search for price or other product information using an “agent” that retrieves the relevant information. The use of such agents has the potential to dramatically reduce buyers’ search costs. However, prior research suggests that making searches easier for the buyer may make the market less attractive for vendors.

Crowston (1996) considered the competitive effects of search agents used to support buyers and presented a simple model which predicted that agents for branded goods will be resisted. Evidence for this model is mixed: although several on-line CD vendors block Andersen Consulting’s Bargain Finder agent (Krulwich n.d.), uVision, a buyer’s agent for computer products, appears to have the cooperation of numerous vendors.

However, underlying the model and the prediction is a key assumption, namely that the vendor that is cheapest for one product will be cheapest for all. This assumption means that most vendors will not benefit from the agent. To test this assumption, daily price data was collected for nine computer products from a total of 47 vendors listing with uVision and for 73 CDs (from eight artists) from 15 vendors, using prices from selected on-line vendors, including those searched by BargainFinder and included another system, GEMM.

Results to date do not contradict the “cheapest-for-all” assumption. Two computer vendors are in the cheapest three for six out of nine computer products, while another 12 are in the top half of the price range for all products examined. For CDs, one vendor was cheapest for 31 of the 55 albums it offered, while another seven were cheapest for none. Interestingly, there was some evidence of specialization—three CD vendors offered only a few albums (one, six, and nine of the 73) but were cheapest for most of these (for one, five, and seven, respectively). Similarly, the cheapest vendors for software were not especially cheap for other products.

However, the overall pattern is clear: a few vendors seem to have consistently lower prices. This finding makes the success of uVision that much more surprising: while it seems logical to assume that firms would not choose to participate in a market where their prices can be easily and immediately compared to their competition and consistently found to be higher, the data suggest that this is the case. It is possible that vendors are still learning about Internet commerce and have not yet adapted to the higher level of competition. Of course, this analysis focuses only on price; vendors likely try to differentiate themselves on other dimensions.

Changes in prices over time were also examined to test a common prediction of the electronic commerce literature, that better information should lead to convergence of prices (e.g., Bakos 1991). Prices for five of the computer products seem clearly to be converging, while for one they are clearly diverging. The two measures chosen give different answers for the remaining three products. However, prices seemed to be converging for only 20 of the 73 CDs. This difference perhaps reflects the greater difficulty of searching for CD prices without a central agent like uVision.

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