A paradox of little pre-purchase search for durables: the trade-off between prices, product lifecycle, and savings on purchases.

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Application of Satisficing Optimal Decision: Paradox of Little Pre-Purchase Search for Big-Ticket Items

Our analysis discovers the general relationship between marginal savings on purchases \( \frac{\partial P}{\partial S} \), the time horizon of the consumption-leisure choice, and the potential labor income:

\[
- \frac{\partial P}{\partial S} = \frac{P_0}{T} \quad (16)
\]

This relationship can be illustrated by the paradox of little pre-purchase search for big-ticket items. In 1979 Kapteyn et al. published the results of the survey on consumer behavior. The author found that purchase decision concerned durables had been satisficing rather than maximizing (Kapteyn et al. 1979). Later Grewal and Marmorstein made the following comment to those results:

“Previous studies have consistently found that most consumers undertake relatively little pre-purchase search for durable goods and do even less price-comparison shopping.. (when) prices of the more expensive products tend to exhibit the greatest variation across stores. Given the aforementioned evidence regarding the price variation of big-ticket items, it appears that many consumers engage in considerably less price search than is predicted by the economics-of-information theory.” (Grewal and Marmorstein 1994, p.453)

R.Thaler documented that anomaly in the following manner:

“One application of marginal analysis is optimal search. Search for the lowest price should continue until the expected marginal gain equals the value of the search costs. This is likely to be violated if the context of the search influences the perception of the value of the savings. In Thaler (1980), I argued that individuals were more likely to spend 20 minutes to save $5 on the purchase of a $25 clock radio than to save the same amount on the purchase of a $500 television.” (Thaler 1987, pp.110-111)

We can check the results of R.Thaler’s experiment in order to show that there was no anomaly and that the case did not conflict with the marginal approach.

Suppose an individual who is ready to give up 20 hours of leisure to get (i.e., to work and to search for) a big-ticket item \( Q_{bti} \) and only 1 hour of leisure to get a cheap item \( Q_{ci} \). If we take the value \( dP \) as the constant, “the same amount” in R.Thaler’s experiment, for both items and, when \( S_0=0 \) and \( S=dS \), we have:

\[
\begin{align*}
\frac{\partial P}{\partial S} &= w \frac{\partial L}{\partial S} = -w \frac{L + S}{T} ; \\
dP(S) &= dS \frac{\partial P}{\partial S} = -w \frac{L + S}{T} dS ; \\
dP(S) &= -w \frac{L_{bti} + S_{bti}}{T} dS_{bti} = -w \frac{L_{ci} + S_{ci}}{T} dS_{ci} ; \\
dP(S) &= -w \frac{20}{T} dS_{bti} = -w \frac{1}{T} dS_{ci} ; \\
20S_{bti} &= S_{ci}.
\end{align*}
\]
When the individual finally makes these both purchases, he realizes that he has spent twenty
times more on the search for the cheap item than on the search for the big-ticket item. The advice
of “a reliable friend” to go to the other shop for $5 discount in R. Thaler’s experiment could not
give more than a minute to exit from the shop, to enter into another shop, and to buy there the
$500 TV with $5 discount.

References


