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**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 $\partial P/\partial S$, 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:

$$\begin{aligned} \frac{\partial P}{\partial S} &= w \frac{\partial L}{\partial S} = -w \frac{L+S}{T}; & dP(S) &= dS \frac{\partial P}{\partial S} = -w \frac{L+S}{T} dS; \\ dP(S) &= -w \frac{L_{bti} + S_{bti}}{T} dS_{bti} = -w \frac{L_{ci} + S_{ci}}{T} dS_{ci}; & (17) \\ dP(S) &= -w \frac{20}{T} dS_{bti} = -w \frac{1}{T} dS_{ci}; \\ 20S_{bti} &= S_{ci} \end{aligned}$$

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

1. Aguiar M., Hurst E. (2007). Lifecycle Prices and Production. *American Economic Review*. 97(5). 1533-59. <http://dx.doi.org/10.1257/aer.97.5.1533>
2. Carroll, C.D. (2001). A Theory of the Consumption Function, with and without Liquidity Constraints. *Journal of Economic Perspectives*. 15(3). 23-45. <http://dx.doi.org/10.1257/jep.15.3.23>
3. Cesario, F. J. (1976) Value of Time in Recreation Benefit Studies. *Land Economics*. 52(1). 32-41. <http://dx.doi.org/10.2307/3144984>
4. Diamond, P. (1971). A Model of Price Adjustment. *Journal of Economic Theory*. 3. 156-168. [http://dx.doi.org/10.1016/0022-0531\(71\)90013-5](http://dx.doi.org/10.1016/0022-0531(71)90013-5)
5. Fellner, G., Guth, W., Martin E. (2006). Satisficing or Optimizing? An Experimental Study. Max-Planck-Institut für Ökonomik. *Papers on Strategic Interaction*. 11. http://www.researchgate.net/publication/5018160_Satisficing_or_Optimizing_-_An_Experimental_Study
6. Friedman, M. (1953). *Essays in Positive Economics*. Part I. The Methodology of Positive Economics. University of Chicago Press (1953) 1970.
7. Grewal D., Marmorstein, H. (1994). Market Price Variation, Perceived Price Variation, and Consumers’ Price Search Decisions for Durable Goods. *Journal of Consumer Research*. 21 (3). 453-460. <http://dx.doi.org/10.1086/209410>
8. Horowitz, J. K., McConnell, K. E. (2003). Willingness to accept, willingness to pay and the income effect. *Journal of Economic Behavior & Organization*. 51(4). 537-545 [http://dx.doi.org/10.1016/S0167-2681\(02\)00216-0](http://dx.doi.org/10.1016/S0167-2681(02)00216-0)
9. Kapteyn A., Wansbeek T., Buyze J. (1979). Maximizing or Satisficing. *The Review of Economics and Statistics*. 61 (4). 549-563. <http://dx.doi.org/10.2307/1935786>
10. Larsons, D.M., Shaikh S. (2004). Recreation Demand Choices and Revealed Values of Leisure Time. *Economic Inquiry*. 42 (2), 264-278. <http://home.uchicago.edu/~sabina/Economic%20Inquiry.pdf>
11. Leibenstein, H. (1950). Bandwagon, snob, and Veblen Effects in the theory of consumers' demand. *Quarterly Journal of Economics*. 64. 183-207. <http://dx.doi.org/10.2307/1882692>
12. Lewer, J., Gerlich, N., Gretz, R. (2009). Maximizing and Satisficing Consumer Behavior: Model and Test. *Southwestern Economic Review* (Texas Christian University). 36 (1).

<http://ssrn.com/abstract=1740002>

13. Malakhov, S. (2011). Optimal Consumer Choices under Conditions of Sequential Search.(in Russian) *Economic Policy*. 6 (6) 148 - 168. The English version is available as “Optimal Sequential Search and Optimal Consumption-Leisure Choice” at: http://works.bepress.com/sergey_malakhov
14. Malakhov, S. (2013). Money Flexibility and Optimal Consumption-Leisure Choice *Theoretical and Practical Research in Economic Fields*. IV(1).77-88. http://asers.eu/asers_files/tpref/TPREF%20Volume%20IV%20Issue%201_7_%20Summer%202013_last.pdf
15. Malakhov, S. (2014). Sunk Costs of Consumer Search: Economic Rationality of Satisficing Decision. Forthcoming in *Theoretical and Practical Research in Economic Fields*. 5. 1(9), available at http://works.bepress.com/sergey_malakhov
16. Simon, H. (1957). Part IV in: *Models of Man*. Wiley, New York, 196 – 279.
17. Simon, H.(1967). Motivational and emotional controls of cognition. *Psychological review*. 74 (1). 29–39. <http://dx.doi.org/10.1037/h0024127>
18. Simon, H. (1972). Theories of Bounded Rationality. In C.B.Mcguire and Roy Radner (eds.) *Decision and Organization*. Nort-Holland Publishing Company, 161 – 176.
19. Simon, H. (1978). Rationality as Process and as Product of Thought. *American Economic Review*. 68(2). 1-16.
20. Slote, M. (1989). *Beyond Optimizing: a study of rational choice*. Harvard University Press. <http://dx.doi.org/10.4159/harvard.9780674434417>
21. Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., Lehman, D. (2002). Maximizing Versus Satisficing: Happiness is a Matter of Choice. *Journal of Personality and Social Psychology*. 83 (5). 1178-1197. <http://psycnet.apa.org/psycinfo/2002-18731-012>
22. Thaler, R. (1980). Toward a Positive Theory of Consumer Choice. *Journal of Economic Behavior and Organization*. 1. 39-60. [http://dx.doi.org/10.1016/0167-2681\(80\)90051-7](http://dx.doi.org/10.1016/0167-2681(80)90051-7)
23. Thaler, R. (1987). The Psychology of Choice and the Assumptions of Economics. in Roth, A.E. *Laboratory experimentation in economics: six points of view*. Cambridge University Press. 99-130.