Consumer Behavior

3. Complexe Choice Models

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3.1. Reviewing the Concept of Choice

3.2. The Hedonic Model

3.3. Discrete Choice Models

3.1. Reviewing the Concept of Choice

The neoclassical choice concept

Assumes that consumer choice is governed by preferences and constraints.

Constraints include market prices and the consumer's income. Generally negative values.

Preferences are related to the product's perceived ability of resulting in utility, and regarded as fixed. Generally positive values.

Consumer is a black box maximizing his/her utility. It is assumed that they will act rationally and will be able to quantify the utility derived from each choice.

Expected Utility results from the aggregation of positive and negative values.

U_A Fixed Income & Preferences U_B

$P_B > P_A$

$U_A > U_B$

Products A & B are assumed to match consumers' preferences and report the same levels of utility at the same price.

Since the preferences are equal in both choices, and given that B is more expensive than A, then a rational consumer will make choice A instead of B.

3.2. The Hedonic Model

New approach to consumer theory

1. The good, per se, does not give utility to the consumer; it possesses characteristics, and these characteristics give rise to utility.

2. In general, a good will possess more than one characteristic, and many characteristics will be shared by more than one good.

3. Goods in combination may possess characteristics different from those pertaining to the goods separately.

Lancaster, K. J. (1966) "A new approach to consumer theory". *Journal of Political Economy,* 74, 2, 132-57.

Hedonic regression models

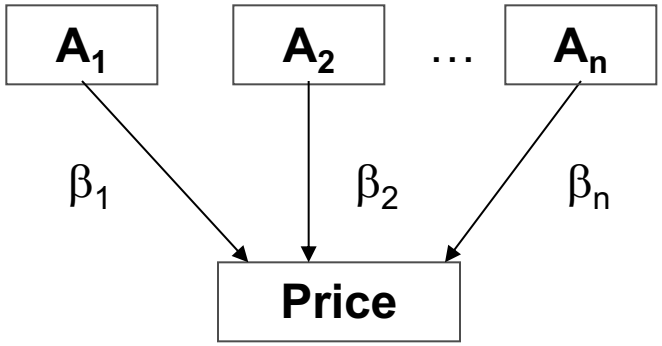
An individual's well-being depends on the attributes consumed and on expenditure on all other goods *y*.

Hedonic models describe the price as a regression function of the product's attributes.

$$P = f(A_1, \ldots, A_n)$$

$$\ln(P) = \beta_0 + \sum_{i=1}^{n} \beta_i \ln(A_i)$$

Where P = price; A_i = Product Attributes; $\beta_0, \ldots, \beta_n$ = Regression parameters.



β_l measures the impact of the corresponding attribute on the price paid for the product.

The hedonic models open the door to the concept of product differentiation.

3.3. Discrete Choice Models

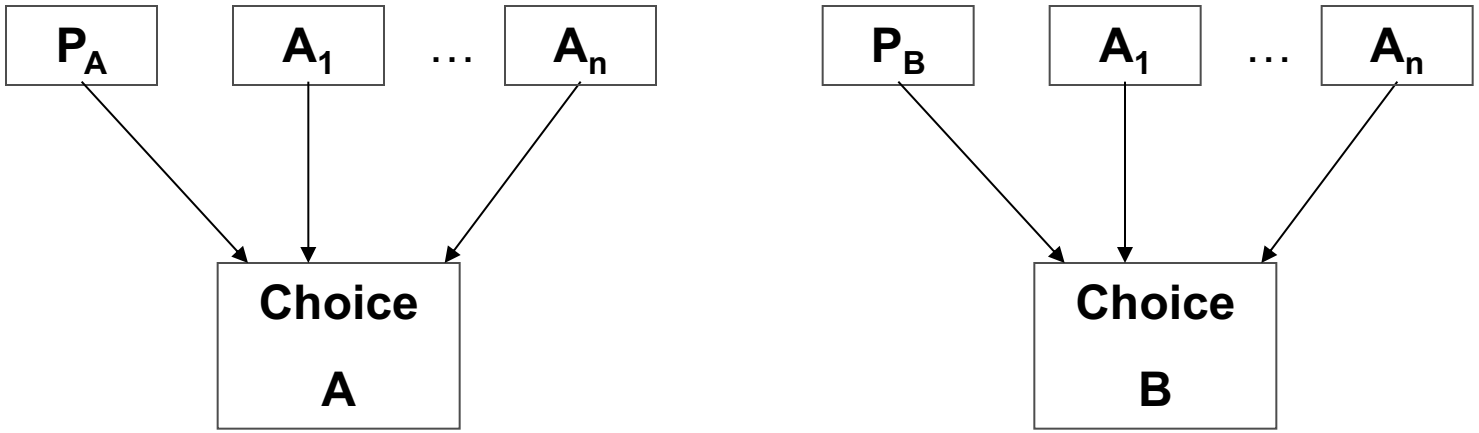
Assumptions and description

When making a purchase consumers do not rank products according to the utility they expect from the attributes, but choose the one reporting the highest utility and reject the rest.

Discrete choice models describe choices between two or more alternatives. They analyze situations in which the potential outcomes are discrete. Research interest focuses on "which one" instead of "how much".

Alternatives need to be mutually exclusive, exhaustive, and the number must be finite.

McFadden, D. (1986) "The choice theory approach to market research" *Marketing Science*, 5, 4, 275-29.



Consumer's choice is a function of the price and product attributes.

$$\text{Choice} = f(P, A_1, \ldots, A_n)$$

Consumers make one choice and discard the rest. The utility derived from each attribute and the constraint effect of price are estimated after a repeated set of choices.

EXAMPLE

Anisakis-Free Sustainable Product

Origin:
Imported
Extraction method:
Aquaculture
Price:
6.9 €/k

Natural Omega 3
Natural Omega 3

Origin:
Spain
Extraction method:
Capture
Price:
15.4 €/k

Sustainable Product

Origin:
Spain
Extraction method:
Aquaculture
Price:
9.8 €/k

Anisakis-Free Natural Omega 3

Origin:
Imported
Extraction method:
Capture
Price:
12.6 €/K

Fernández Polanco, J., Mueller, S. & Luna, L. (2013). "Are Retailers' Preferences for Seafood Attributes Predictive for Consumer Wants? Results from a Discrete Choice Experiment for Seabream (*Sparus aurata*)". *Aquaculture Economics and Management*. 17, 2, 1 – 20.

EXAMPLE

Marginal Willing to Pay for attributes: