



Pricing for Researchers: Conjoint Analysis

Background

- Conjoint analysis is the most widely used multivariate research technique for establishing product attribute and price levels for both new and mature products.
- Conjoint analysis is typically used to measure consumers' preferences for different brands and brand attributes. Conjoint analysis revolves around one key idea; to understand the purchase decision best.
- This methodology was developed in the early 1970's. It has become one of the most widely used quantitative tools in marketing research.
- It is described in many published journal papers. Green & Rao (1971) first introduced the research concept and Batsell & Elmer (1990) discussed its application to pricing and demand forecasting.
- There are many different conjoint methods; adaptive conjoint analysis (ACA), full profile conjoint analysis (CVA) and choice based conjoint (CBC).

Description of How it Works

- Respondents in a market research interview (i.e. phone, in-person or web) are asked to make either choices or rankings of preference regarding hypothetical product profiles.
- A group of products and the products corresponding profiles are presented to a respondent (i.e. written description, pictures or physical products).
- The respondent is asked to select or rank the different individual product attributes or individual products.
- This process is repeated several times with the levels of each product/service attribute (and sometimes price) varying in each scenario.

- By analyzing the tradeoffs that respondents make in choosing their preferred products it becomes possible to see which product features respondents are willing to give up to obtain others.
- The conjoint analysis yields two measures: 1) The relative importance of each attribute and 2) the relative importance of each attribute level. If price is included in the conjoint test it becomes another attribute.

Strengths

- This analysis produces information that gives strategic direction for marketing managers. It can be helpful in developing forecasting models.
- Price is presented as one of many product attributes. This helps minimize price bias and game playing.
- Conjoint testing holds all extraneous real world factors constant (i.e. advertising, new product entries, stock outs, promotions, distribution, etc.).
- It can be used for both new and established products.
- CBC employs choice based methods.

Weakness

- Too many additional attributes besides price can dilute subject attention to price. This can result in an underestimation of the relative importance of price in an actual buying situation.
- Adaptive Conjoint Analysis is commonly known to underestimate the importance of price. In fact researchers refer to it as the 'ACA Price Effect'. Researchers have attempted to develop heuristic solutions to deal with the ACA Price Effect.



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- Some evidence is presented that demonstrates the relative value of price versus brand changes depending on the number of scenarios a respondent is exposed to.
- ACA and CVA are not choice based methods.

Measures of Predictive Validity

- ACA and CVA yield weak predictive measures with respect to consumer price sensitivity.
- CBC can yield highly predictive metrics when the research design is extremely well planned and executed.
- Conjoint techniques are not recommended for products that are impulse purchases or when the buying process is extremely complex.

Our Assessment

- CBC is the most applicable conjoint methodology for product and service pricing research. Future papers will discuss CBC otherwise known as Discrete Choice methods in greater detail.
- The research design for CBC is complex. All aspects of the buying process and product category must be well thought out. Market research managers should seek out practitioners that have had success in executing a CBC based pricing research projects.

Source:

1. Green, P. & Rao, V.R. (1971), Conjoint Measurement for Quantifying Judgmental Data. *Journal of Marketing Research* (August), p. 355.
2. Batsell, R.R. & Elmer, J.B. (1990), How to Use Market Based Pricing to Forecast Consumer Purchase Decisions. *Journal of Pricing Management* (Spring), p.5.
3. Hunt, Paul and O. Levy (2000) How to Execute an Effective Trade-Off Analysis. *Imprints: Professional Marketing Res4*. Huber, J. (1997) What we have learned from 20 years of Conjoint Research. *Sawtooth: Research Paper Series*.