



## HATCO Dataset Documentation:

*Multivariate Data Analysis*, Sixth edition

“The world’s leading authority on applied multivariate data analysis based on number of citations, as reported by Google.Scholar.”

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HATCO has been utilized in past versions of the textbook and provides a simplified set of variables amenable to all of the basic multivariate techniques. It was obtained from the Hair, Anderson, and Tatham Company (HATCO), a large (though nonexistent) industrial supplier. It represents surveys of HATCO customers that were collected through an established marketing research firm.

The dataset consists of 100 observations on 14 separate variables and is an example of a segmentation study for a business-to-business situation, specifically a survey of existing customers of HATCO. Three types of information were collected:

- First is the perception of HATCO on seven attributes identified in past studies as the most influential in the choice of suppliers. The respondents, purchasing managers of firms buying from HATCO, rated HATCO on each attribute.
- Second are actual purchase outcomes, either the evaluations of each respondent's satisfaction with HATCO or the percentage of his or her product purchases from HATCO.
- Third are general characteristics of the purchasing companies (e.g., firm size, industry type).

The data provided should give HATCO a better understanding of both the characteristics of its customers and the relationships between their perceptions of HATCO and their actions toward HATCO (purchases and satisfaction). A definition of each variable and an explanation of its coding are given in the following sections.

### Perceptions of HATCO

Each of these variables was measured on a graphic rating scale, where a ten-centimeter line was drawn between the endpoints, labeled "Poor" and "Excellent". Respondents indicated their perceptions by making a mark anywhere on the line. The mark was then measured and the distance from zero (in centimeters) was recorded. The result was a scale ranging from zero to ten, rounded to a single decimal place. The seven HATCO attributes rated by each respondent are as follows:

- $X_1$  Delivery speed---amount of time it takes to deliver the product once an order has been confirmed
- $X_2$  Price level---perceived level of price charged by product suppliers

- X<sub>3</sub> Price flexibility---perceived willingness of HATCO representatives to negotiate price on all types of purchases
- X<sub>4</sub> Manufacturer's image---overall image of the manufacturer/supplier
- X<sub>5</sub> Service---overall level of service necessary for maintaining a satisfactory relationship between supplier and purchaser
- X<sub>6</sub> Salesforce's image---overall image of the manufacturer's sales force
- X<sub>7</sub> Product quality---perceived level of quality of a particular product (e.g., performance or yield)

### Purchase Outcomes

Two specific measures were obtained that reflected the outcomes of the respondent's purchase relationships with HATCO. These measures include:

- X<sub>9</sub> Usage level---how much of the firm's total product is purchased from HATCO, measured on a 100-point percentage scale, ranging from 0 to 100 percent
- X<sub>10</sub> Satisfaction level---how satisfied the purchaser is with past purchases from HATCO, measured on the same graphic rating scale as the perceptions X<sub>1</sub> to X<sub>7</sub>

### Purchaser Characteristics

The five characteristics of the responding firms used in the study, some metric and some nonmetric, are as follows:

- X<sub>8</sub> Size of firm---size of the firm relative to others in this market. This variable has two categories: 1=large, and 0=small
- X<sub>11</sub> Specification buying---extent to which a particular purchaser evaluates each purchase separately (total value analysis) versus the use of specification buying, which details precisely the product characteristics desired. This variable has two categories: 1=employs total value analysis approach, evaluating each purchase separately, and 0=use of specification buying
- X<sub>12</sub> Structure of procurement---method of procuring/purchasing products within a particular company. This variable has two categories: 1=centralized procurement, and 0=decentralized procurement
- X<sub>13</sub> Type of industry---industry classification in which a product purchaser belongs. This variable has two categories: 1=industry A classification, and 0=other industries
- X<sub>14</sub> Type of buying situation---type of situation facing the purchaser. This variable has three categories: 1=new task, 2=modified rebuy, and 3=straight rebuy