

### Primary Database

The primary database, consisting of 100 observations on 18 separate variables, is based on a market segmentation study of HBAT customers. HBAT sells paper products to two market segments: the newsprint industry and the magazine industry. Also, paper products are sold to these market segments either directly to the customer or indirectly through a broker. Two types of information were collected in the surveys. The first type of information was perceptions of HBAT's performance on 13 attributes. These attributes, developed through focus groups, a pretest, and use in previous studies, are considered to be the most influential in the selection of suppliers in the paper industry. Respondents included purchasing managers of firms buying from HBAT, and they rated HBAT on each of the 13 attributes using a 0–10 scale, with 10 being "Excellent" and 0 being "Poor." The second type of information relates to purchase outcomes and business relationships (e.g., satisfaction with HBAT and whether the firm would consider a strategic alliance/ partnership with HBAT). A third type of information is available from HBAT's data warehouse and includes information such as size of customer and length of purchase relationship.

By analyzing the data, HBAT can develop a better understanding of both the characteristics of its customers and the relationships between their perceptions of HBAT, and their actions toward HBAT (e.g., satisfaction and likelihood to recommend). From this understanding of its customers, HBAT will be in a good position to develop its marketing plan for next year. Brief descriptions of the database variables are provided in Table 3, in which the variables are classified as either

**TABLE 3 Description of Database Variables**

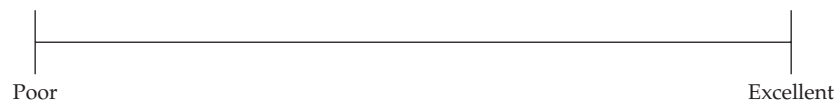
Variable Description	Variable Type
<b>Data Warehouse Classification Variables</b>	
X <sub>1</sub> Customer Type	Nonmetric
X <sub>2</sub> Industry Type	Nonmetric
X <sub>3</sub> Firm Size	Nonmetric
X <sub>4</sub> Region	Nonmetric
X <sub>5</sub> Distribution System	Nonmetric
<b>Performance Perceptions Variables</b>	
X <sub>6</sub> Product Quality	Metric
X <sub>7</sub> E-Commerce Activities/Web Site	Metric
X <sub>8</sub> Technical Support	Metric
X <sub>9</sub> Complaint Resolution	Metric
X <sub>10</sub> Advertising	Metric
X <sub>11</sub> Product Line	Metric
X <sub>12</sub> Salesforce Image	Metric
X <sub>13</sub> Competitive Pricing	Metric
X <sub>14</sub> Warranty and Claims	Metric
X <sub>15</sub> New Products	Metric
X <sub>16</sub> Ordering and Billing	Metric
X <sub>17</sub> Price Flexibility	Metric
X <sub>18</sub> Delivery Speed	Metric
<b>Outcome/Relationship Measures</b>	
X <sub>19</sub> Satisfaction	Metric
X <sub>20</sub> Likelihood of Recommendation	Metric
X <sub>21</sub> Likelihood of Future Purchase	Metric
X <sub>22</sub> Current Purchase/Usage Level	Metric
X <sub>23</sub> Consider Strategic Alliance/Partnership in Future	Nonmetric

independent or dependent, and either metric or nonmetric. Also, a complete listing and electronic copy of the database are available on the Web at [www.pearsonhigher.com/hair](http://www.pearsonhigher.com/hair) or [www.mvstats.com](http://www.mvstats.com). A definition of each variable and an explanation of its coding are provided in the following sections.

**DATA WAREHOUSE CLASSIFICATION VARIABLES** As respondents were selected for the sample to be used by the marketing research firm, five variables also were extracted from HBAT's data warehouse to reflect the basic firm characteristics and their business relationship with HBAT. The five variables are as follows:

$X_1$	Customer Type	Length of time a particular customer has been buying from HBAT: 1 = less than 1 year 2 = between 1 and 5 years 3 = longer than 5 years
$X_2$	Industry Type	Type of industry that purchases HBAT's paper products: 0 = magazine industry 1 = newsprint industry
$X_3$	Firm Size	Employee size: 0 = small firm, fewer than 500 employees 1 = large firm, 500 or more employees
$X_4$	Region	Customer location: 0 = USA/North America 1 = outside North America
$X_5$	Distribution System	How paper products are sold to customers: 0 = sold indirectly through a broker 1 = sold directly

**PERCEPTIONS OF HBAT** Each respondent's perceptions of HBAT on a set of business functions were measured on a graphic rating scale, where a 10-centimeter line was drawn between the end-points, labeled "Poor" and "Excellent," shown here.



As part of the survey, respondents indicated their perceptions by making a mark anywhere on the line. The location of the mark was electronically observed and the distance from 0 (in centimeters) was recorded in the database for that particular survey. The result was a scale ranging from 0 to 10, rounded to a single decimal place. The 13 HBAT attributes rated by each respondent were as follows:

$X_6$	Product Quality	Perceived level of quality of HBAT's paper products
$X_7$	E-Commerce Activities/Web Site	Overall image of HBAT's Web site, especially user-friendliness
$X_8$	Technical Support	Extent to which technical support is offered to help solve product/service issues
$X_9$	Complaint Resolution	Extent to which any complaints are resolved in a timely and complete manner

#### Overview of Multivariate Methods

$X_{10}$	Advertising	Perceptions of HBAT's advertising campaigns in all types of media
$X_{11}$	Product Line	Depth and breadth of HBAT's product line to meet customer needs
$X_{12}$	Salesforce Image	Overall image of HBAT's salesforce
$X_{13}$	Competitive Pricing	Extent to which HBAT offers competitive prices
$X_{14}$	Warranty and Claims	Extent to which HBAT stands behind its product/service warranties and claims
$X_{15}$	New Products	Extent to which HBAT develops and sells new products
$X_{16}$	Ordering and Billing	Perception that ordering and billing is handled efficiently and correctly
$X_{17}$	Price Flexibility	Perceived willingness of HBAT sales reps to negotiate price on purchases of paper products
$X_{18}$	Delivery Speed	Amount of time it takes to deliver the paper products once an order has been confirmed

**PURCHASE OUTCOMES** Five specific measures were obtained that reflected the outcomes of the respondent's purchase relationships with HBAT. These measures include the following:

$X_{19}$	Customer Satisfaction	Customer satisfaction with past purchases from HBAT, measured on a 10-point graphic rating scale
$X_{20}$	Likelihood of Recommending HBAT	Likelihood of recommending HBAT to other firms as a supplier of paper products, measured on a 10-point graphic rating scale
$X_{21}$	Likelihood of Future Purchases from HBAT	Likelihood of purchasing paper products from HBAT in the future, measured on a 10-point graphic rating scale
$X_{22}$	Percentage of Purchases from HBAT	Percentage of the responding firm's paper needs purchased from HBAT, measured on a 100-point percentage scale
$X_{23}$	Perception of Future Relationship with HBAT	Extent to which the customer/respondent perceives his or her firm would engage in strategic alliance/partnership with HBAT: 0 = Would not consider 1 = Yes, would consider strategic alliance or partnership