

Chapter 2

LTL Study 2nd Edition - 2006

Customer Needs and Inferential Statistics

Overview

This chapter provides an in-depth look at the factors that influence the decision making process of customers when arranging shipments with LTL carriers. First, attributes that have been rated on a scale from 1 to 10 are reviewed (10-critically important, 5-important, 1-not at all important), then an objective look on customer needs is viewed through the correlation of attributes and overall performance measurements, and finally information is analyzed from the respondents weighting of price vs. non-price factors. The following sections discuss each of these in detail.

Section 1 - Customer Needs

This section contains an analysis of customer ratings for the importance of 19 LTL service attributes. These need attributes have been arranged in order of descending importance for each of 13 customer groups. **(beginning on page 2-2)**

Section 2 - Inferential Statistics Overview

This section provides an examination of the relationships between individual carrier performance attributes with the responses to the overall performance measurements. A respondent's assessment of the importance of an attribute is subjective. Section one contains the results of the direct examination of respondents about their assessment of each attribute's importance. This section is dedicated to an objective measurement of the importance of the performance attributes. **(beginning on page 2-21)**

Section 3 - Stated Importance of Price vs. Non-price Factors

This section displays the weight that customers put on price vs. non-price factors when making decisions determining their carrier(s) of choice for LTL shipping. Statistics for each of the demographic groups located in the study are included. **(beginning on page 2-34)**

Section 1 - Customer Needs

Customer need attributes (section 1) are the specific areas of service in which customers identify differences in their needs. For each of these customer need attributes respondents indicated their opinion of the importance of that attribute. Importance scores were collected on a one to ten rating scale with increased importance indicated by higher values. Data was collected for 19 individual customer need attributes.

Critical Attribute Summary

Exhibit 2-1 contains the number of respondents rating the importance of a particular attribute as “10” or “critically important”.

Customer Segmentation Groups

Exhibits 2-2 through 2-22 contain the customer needs results for each of the following customer groups.

Overall Customer Group

The overall group is the unsegmented group containing all respondents/customers.

Shipment Volume

Customers have been divided into the following three groups according to their stated average number of shipments per week.

- 3 – 10 Shipments
- 11 – 25 Shipments
- More than 25 Shipments

Markets

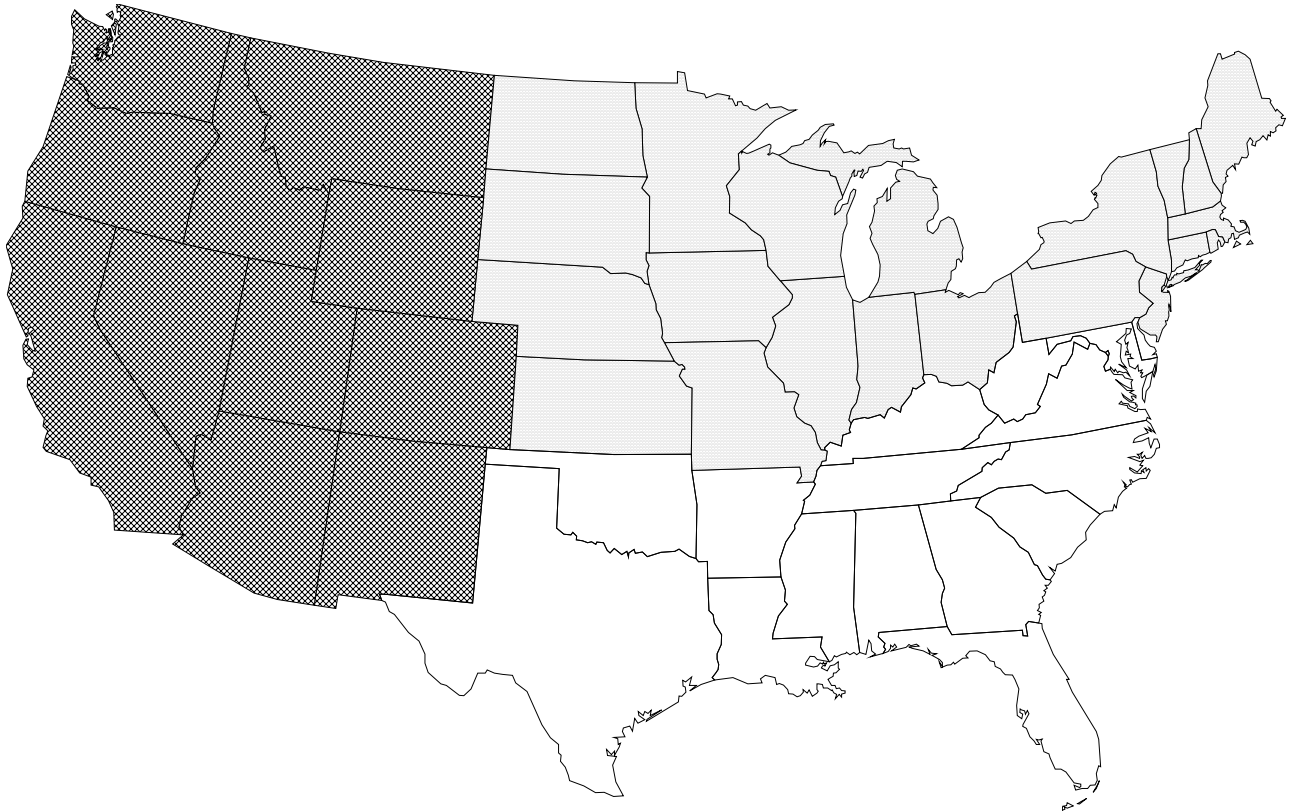
These six groups have been formed according to the respondent classification using the SIC division structure. These groups include:

- Construction
- Manufacturing
- Retail Trade
- Services
- Transportation, Communications, Electric, Gas, and Sanitary Services
- Wholesale Trade

Geographic Regions

Three geographic categories were chosen, based on the state in which each respondent is located. These geographic areas are:

- Northern U.S. (CT, IA, IL, IN, KS, MA, ME, MI, MN, MO, ND, NE, NH, NJ, NY, OH, PA, RI, SD, VT, WI)
- Southern U.S. (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV)
- Western U.S. (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY)



MASTIO Tool Set Tip

We recommend that you use the powerful segmenting capabilities of the Mastio's proprietary software for an in-depth analysis of the customer needs for any of the above groups or for any combination of these groups.

Electronic Edition(Microsoft® Excel® Spreadsheets)

In addition to the exhibits on the following pages, the customer needs data from the study is included in spreadsheet form for additional analysis. The spreadsheet is installed during the installation of the *Mastio Tool Set* software that is included with the purchase of this study. **The CD-ROM is located in the back cover of the printed report. The spreadsheet can be found by navigating to “c:\mastio\l2\excel\LTL2_Customer Needs.xls”.**

Please refer to the documentation that is provided for each of the spreadsheets included with the study. The documentation includes complete descriptions of the contents of each column in each of the spreadsheets provided. **This documentation is in the Adobe Acrobat format and can be located by navigating to “c:\mastio\l2\excel\Excel Description.pdf”.**

The instructions above assume that the software and spreadsheet files were installed on drive “C”. Substitute the drive letter appropriate for your installation if necessary.

Electronic Edition - Sample Spreadsheet

Questionnaire #	Question "7.3" Shipments picked up when promised.	Question "7.4" Shipments delivered when promised.	Question "7.5" Shipments delivered with no shortages or damage.	Question "7.6" Speed of transit.	Question "7.7" Broad range of services. (e.g. guaranteed & expedited svc.)	Time
12	10	10	10	5	10	
14	10	10	10	10	5	
22	10	10	10	10	10	
50	7	7	10	5	7	
53	5	5	5	5	5	
79	10	10	10	9	8	
116	8	10	10	7	1	
156	10	10	7	10	10	
194	10	10	10	5	5	
235	7	10	10	5	1	
263	10	10	10	9	6	
272	10	10	10	5	5	
296	10	10	10	10	10	
299	10	10	10	10	10	
304	10	10	10	5	5	
308	10	10	10	7	1	
317	8	7	10	5	1	
340	10	10	8	10	10	
341	10	10	10	10	10	
359	10	10	10	3	1	
360	10	9	10	8	5	
376	10	10	10	5	5	
377	8	9	9	8	5	
402	8	6	10	5	2	
408	7	10	10	7	5	
450	10	9	10	10	10	
481	8	9	10	9	8	
486	10	10	10	10	5	
489	10	10	10	10	5	
498	10	10	10	8	1	
511	10	10	10	5	5	
534	10	10	9	10	7	
543	10	10	10	10	10	
556	7	7	10	5	1	
557	7	8	9	7	6	
568	10	10	10	10	10	
578	10	7	10	8	2	
580	10	10	10	10	8	

Making Sense of Stated Importance Weights vs. Correlation (Derived Importance)

The following matrix and set of tables, exhibits 2-17 through 2-24, shows the correlation factors (an indication of derived importance) vs. the stated weights for all measured attributes (study questions). The four quadrants of the matrix show how various factors play in the customers' carrier selection decision process. These four quadrants are defined as:

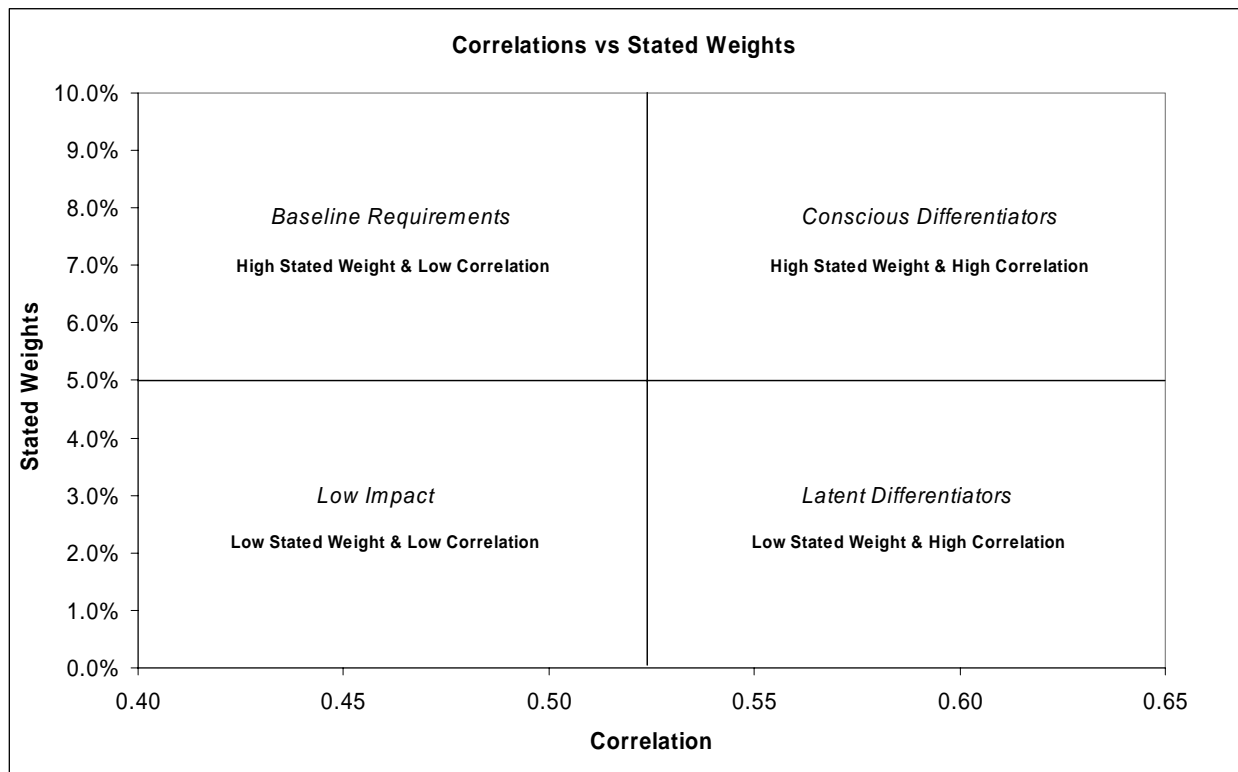
- **“Low Impact”** – These attributes have both a low stated importance and a low correlation to customers' likelihood to recommend a company. Therefore any work to improve these factors is likely to have a “low impact” on customer perceived value of your products and services.
- **“Baseline Requirements”** - These attributes have a high stated importance but a low correlation to customers' likelihood to recommend a company. They tend to be critical factors that would cause severe problems for a carrier that does not perform adequately on them. However since they do not correlate strongly to likelihood to recommend a company the customer needs on these factors are probably being met by most vendors. Therefore adequate performance on these factors is “expected” and no carrier in the current market is providing something that is far superior to others. The steering wheel in your car is good example of a baseline requirement. You wouldn't buy a car without one, but since most cars have an adequate steering wheel it probably doesn't affect your choice of a car.
- **“Conscious Differentiators”** - These attributes have both a high stated importance and a high correlation to customers' likelihood to recommend a company. Therefore superior performance on these factors is likely to help you differentiate the value of your products and services from the competition.
- **“Latent Differentiators”** - These attributes have a low stated importance but a high correlation to customers' likelihood to recommend a company. Therefore superior performance on these factors is likely to help you differentiate the value of your products and services from the competition but customers may not be overtly aware of the importance of this factor. An example of a latent differentiator is the prestige associated with the brand of automobile purchased. Car buyers usually don't say the prestige of the brand is important but the perceived prestige usually correlates strongly to overall preference.

Please reference the following tables to determine which attributes are located in the above categories and their respective quadrant on the following sample matrix.

Making Sense of Stated Importance Weights vs. Correlation (Derived Importance)

The following chart shows the correlation factors (an indication of derived importance) vs. the stated weights for all measured attributes (study questions). The four quadrants of the chart show how various factors play in the customers' carrier selection decision process. An attribute is plotted into a category based on its correlation to the overall question 'how likely would you be to recommend this company to others?' and its stated importance which is determined by the percentage of times an attribute is rated as 'extremely important'.

Exhibit 2-17

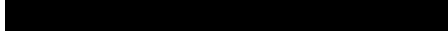




Please reference the tables on the following pages for a complete listing of attributes and their corresponding categories for each of the included demographics from the study. These tables provide an easy reference for determining which attributes are in which categories. Please refer to the Kano Model in Chapter 6 (section 2) for a more detailed explanation of the different types of needs associated with customer satisfaction.

Making Sense of Stated Importance Weights vs. Correlation (Derived Importance)

Exhibit 2-18

Overall (All Respondents)

Matrix Quadrant	Attribute
<p>Baseline Requirements (high stated – low correlation)</p> <p>These are essentially entry tickets to the market. Competent performance is expected. Gaps in baseline requirements are known to cause switching. Closing gaps in baseline performance factors takes first priority. Some competitors choose to differentiate on baseline requirements.</p>	
<p>Conscious Differentiators (high stated – high correlation)</p> <p>Factors in this area actively drive supplier selection decisions. Winning on factors in this category can be a power force for profitability, growth and customer retention. Closing gaps in conscious differentiators takes second priority.</p>	
<p>Latent Differentiator (low stated – high correlation)</p> <p>Customers don't say these factors are important but they correlate highly to a dependant variable that assesses overall satisfaction with a supplier (in this study "likely to recommend" is the dependent variable). Latent differentiators represent opportunities to make a pull-ahead move.</p>	
<p>Low Impact (low stated – low correlation)</p> <p>Low impact items are areas where performance at parity with competitors is sufficient.</p>	