

1982

## The Relative Importance of Physical Versus Service Attributes with Respect to Small Business Vendor Selection

Harold W. Babb  
*University of Richmond*

Amy S. Ashworth  
*University of Richmond*

Follow this and additional works at: <https://scholarship.richmond.edu/robins-white-papers>

---

### Recommended Citation

Babb, Harold W. and D. Neil Ashworth. "The Relative Importance of Physical Versus Service Attributes with Respect to Small Business Vendor Selection." E.C.R.S.B. 1982-6. Robins School of Business White Paper Series. University of Richmond, Richmond, Virginia.

This White Paper is brought to you for free and open access by the Robins School of Business at UR Scholarship Repository. It has been accepted for inclusion in Robins School of Business White Paper Series, 1980-2011 by an authorized administrator of UR Scholarship Repository. For more information, please contact [scholarshiprepository@richmond.edu](mailto:scholarshiprepository@richmond.edu).

THE RELATIVE IMPORTANCE OF PHYSICAL VERSUS  
SERVICE ATTRIBUTES WITH RESPECT TO SMALL  
BUSINESS VENDOR SELECTION

1982-6

Harold W. Babb  
and  
D. Neil Ashworth

E. Claiborne Robins School of Business  
University of Richmond  
Richmond, Virginia 23173  
Phone: (804) 285-6467

THE RELATIVE IMPORTANCE OF PHYSICAL VERSUS  
SERVICE ATTRIBUTES WITH RESPECT TO  
SMALL BUSINESS VENDOR SELECTION

Recent literature on the topic of vendor selection has focused on a broad, macro view of the relationship between the selection and buying processes (see e.g., Dempsey, 1978; Holt, 1981). However, most of the studies have not examined such processes in the context of the small business enterprise nor have they discriminated between the importance of physical versus service attributes. A recent study by Manzer, Ireland, and Van Auken (1981) did employ the small business in a "matrix approach" to vendor selection. However, there appears to be a paucity of research involving the relative importance of physical versus service attributes by small businesses in their vendor selection.

The purpose of this research was to examine the printing needs of small businesses in terms of both physical and service attributes related to the product. The paper will consider how data of this nature is important to the individual vendor with respect to a user selecting his firm over the competitor. In order to determine the relative importance of each attribute, customers of printers were queried on items in each category separately and in combination. The data were used to evaluate the customer's perceptions of how well a target printer satisfied these needs.

Research Design

The sample for this project was taken from a list of customers of a small printing firm. There were a total of 351 questionnaires mailed which included current customers, past customers, and one-time customers (prospects). There were a total of 72 usable responses for a return rate of approximately 21%. While this percentage is considered acceptable for

optimum validity, there were several factors which possibly reduced the potential return rate. The first of these was a second mailing made necessary by a postal problem. The other, and probably the one with the greatest effect, was the fact that a number of the organizations represented in the sample received 2-4 questionnaires. Even though these questionnaires went to different individuals, several respondents noted that it would be redundant to have more than one response from the same firm.

#### Procedure

A mail survey was used to obtain data. A draft of the questionnaire was tested using the field interview technique. The ten field interviews took place in a large metropolitan area which the printing company served. The purpose of the interviews was to help establish the questionnaires appropriateness as a measure of consumers' perceptions with respect to service and physical product attributes. Later, a second pretest was conducted by mail. The purpose of this pretest was threefold: (1) to obtain a measure of the probable expected return rate; (2) to determine the respondent's capability to understand and fill out the questionnaire; and (3) to determine if the information obtained could answer the questions addressed by this research.

#### RESULTS

As noted earlier, customers' printing needs were examined in terms of both physical and service attributes related to the product. In order to determine the relative importance of each attribute, customers were asked to rank items in each category separately and in combination. The rankings are presented in Table I.

### Ranking of Physical Attributes

As indicated in Table I, "overall print quality" is considered the most important physical attribute by the customers. On a scale from 0-200 points for the physical attributes category, "Overall print quality" would receive approximately 65 points. Both "half tone reproduction" and "color reproduction" would receive about 40 points each. The fourth major physical attribute, "binding/trimmers," would receive 35 points. Finally, there was minimal difference in the remaining 20 points available to those items designated as "other" (accuracy, typeset, etc.).

### Ranking of Service Attributes

For those items designated as service attributes, "reliable schedule and on-time deliveries," was recognized as the most important as one would suspect. When applying a scale of 0-200 points to weight the relative importance of each service attribute, "reliable schedule" would receive approximately 55 points. Both "timely responsiveness" and "technical expertise" would receive about 30 points each. "Good rapport" and "cooperation and flexible attitude" would receive about 25 points each. The remainder of the items would each receive about 10-15 points.

### Combined Ranking of Attributes

To determine the importance of physical attributes relative to those dealing with service, respondents ranked the numerous items together and then assigned "points" from a 0-200 point scale. As noted in Table I, "overall print quality" was considered the most important item regardless of classification. Customers then ranked "reliable schedules" as the second most important attribute. Each of these items would receive approximately 30 points during our "distribution" of the 200 points.

Table I

Customer Ranking\* of Printing Needs Related to Both  
Physical and Service Attributes

Printing Needs	Rank of Physical Attributes	Rank of Service Attributes	Rank of Attributes When Combined
<u>Physical Attributes:</u>			
Color Reproduction	3		3
Half-Tone Reproduction	2		4
Binding/Trimming	4		5
Overall Print Quality	1		1
<u>Others:</u>			
Accuracy, Typeset	5		11
Insert Preprint	7		13
Make-up	6		12
Paper Show Through	8		14(t)
<u>Service Attributes:</u>			
Good Rapport		5	9
Technical Expertise and Guidance		3	8
Timely Responsiveness and Feedback		2	7
Reliable Schedules and On-time Deliveries		1	2
Cooperative: Flexible Attitude		4	6
Convenience of Full Service		6	10
<u>Others:</u>			
Quarterly Control		7	14(t)
Errors Made Good		8	14(t)

\*Ranking is determined by the average customer response as to the relative importance of each item.

The remainder of the top five attributes are all classified as physical attributes. On the basis of scale points, "color reproduction" and half-tone reproduction" would receive about 20 points each with "binding/trimming" receiving 15 points. The remainder of major service attributes which were ranked 6th through the 10th position would each receive 10-15 points in our distribution of points.

#### Specific Firm Printing Attributes

Table II relates how the respondents perceived an individual firm with respect to printing attributes. Column one of the table represents the percent number of firms which replied that the firm was average or below average. As can be seen, the majority of all respondents felt that the firm was good or superior in all physical and service attribute categories. However, this can be very misleading.

Research has shown that user firms which rate their suppliers (goods or service) as average or below are in an active search for new suppliers. That is, they actively seek out potential new suppliers or, they are very willing to entertain a competitor's proposal. Therefore, a firm's purpose is not just to satisfy their customers, but to do it to the point where users are not left in an active search mode.

With respect to physical attributes 43.5% of the respondents said the firm was average or below in half-tone quality. The most important attribute, as related in Table I, overall quality, shows that 25.4% were less than satisfied. Accepting the premise stated in the above paragraph, one-fourth of the firm's customers are actively seeking a new printer.

This problem becomes even greater when we look at the service attributes. Reliable schedules, which were rated as being almost as important as overall print quality, indicate that 39.1% of the customers

Table II

<u>Attributes</u>	Printing Attributes			
	<u>% Average or Below*</u>	<u>Profit/ Non-Profit**</u>	<u>Number of Employees**</u>	<u>\$ Volume of Printing**</u>
<b>Physical:</b>				
Color reproduction	19.3	Same	Same	Same
Half-tone reproduction	43.5	Same	Same	Same
Binding/Trimming	27.4	Same	Same	Same
Overall Quality	25.4	Same	Same	Same
<b>Service:</b>				
Good Rapport	23.8	Same	Same	Same
Technical Expertise	34.4	Same	Same	Worse/ 1,000,000 over
Timely Responsiveness	42.2	Same	Same	Worse/ 1,000,000 over
Reliable Schedule	39.1	Same	Same	Worse/ 1,000,000 over
Cooperation/Flexibility	37.5	Worse/ 1,000,000 over	Same	Worse/ 1,000,000 over
Convenience	31.0	Worse/ 1,000,000 over	Same	Worse/ 1,000,000 over

\* Column 1 represents the percent number of firms which replied that the firm was average or below average out of 63 firms.

\*\* Columns 2, 3, and 4 are crosstabulations of each printing attribute based on firm characteristics.



are average or below in satisfaction level. Every service attribute except good rapport had an average or below average satisfaction level of greater than 30%. The table also shows that as the dollar volume of printing increases by firm, the service attributes were rated lower.

In typical sales force management language, this problem can be viewed as an opportunity. Although the data in this study does not allow for a conclusive competitive analysis due to the small number of respondents who used competitive firms, the assumption is that similar results would be found in other firms. Thus, if a small firm can adjust and satisfy their "average" customers better, they will not only foster continued patronage, but also attract customers of the competition which fall into the active search category.

#### SUMMARY AND CONCLUSION

The purpose of this study was to assess the printing needs of small businesses with respect to the physical and service attributes related to the product. The relative importance of each attribute was based on customer perceptions of the degree to which a specific printer was able to satisfy their needs.

Overall, customers placed most of their emphasis on the physical attributes of their printing needs. However, as one might suspect, customers did consider reliable schedules and deliveries to be a significant factor in their relationships with the organizations offering their printing services. Also, the overall quality of physical print attributes might be considered a necessary given by users of printing services. This would place greater emphasis on the service attributes when it comes to printer selection or retention. What this might lead to

is that all quality printers are expected to do quality printing but, the better firms "service" their client's needs to a greater extent. This information, although relating only to the printing industry, might also be true for other small business firms which have both physical and service attributes as a part of their total product offerings. Therefore, it would be important for the firms to consider which attributes are the "real" deciding factors in vendor selection.

Due to the exploratory nature of the study, however, results should be interpreted with caution. Further research is required to assess more rigorously the relative importance of physical versus service attributes. It is presumed that additional research will provide a more accurate record of the expectations of a firm's customers.

## REFERENCES

- Dempsey, William A. "Vendor Selection and the Buying Process," Industrial Marketing Management, Vol. 7, No. 4, 1978, pp. 257-267.
- Holt, W. L. "The Process of Selection - the Procurement Cycle," AIEE Proceedings, Spring, 1981, pp. 178-183.
- Manzer, Lee; Ireland, Duane R.,; Van Auken, Philip M. "A Matrix Approach to Vendor Selection for Small Business Buyers," American Journal of Small Business, Vol. 4, No. 3, Winter 1980, pp. 21-28.