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Floral Supplier Service Levels to Retail Florist and Mass Market Customers

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Abstract. A survey analysis of retail florists in the Midwestern United States and floral mass marketers, nationally, profiled the level of service provided by their primary floral suppliers on 10 service characteristics. There is substantial variability in service levels provided to retail florists and mass marketers by suppliers. The greatest variability in service levels was for services relative to maintenance of product quality, product availability, communications/order information, product discounts, and product labeling. Retail florists perceived higher levels of service relative to delivery speed and order/delivery reliability than mass marketers. Mass marketers perceived higher levels of service from suppliers relative to communications/order information and product labeling, compared to retail florists. The service profiles provide floral suppliers management information for the development of service programs targeted for specific customer segments.

In the highly competitive and international business climate of the floriculture industry, managers have realized the importance of improving product quality to remain competitive. However, as the U.S. economy evolves from a production orientation to one of service (Cowell, 1984), management of many businesses is viewing improvements to service as a competitive strategy in the global marketplace (Peters and Waterman, 1982; Garvin, 1983; Takeuchi and Quelch, 1983; Heskett, 1987; Lalonde et al., 1988).

A method of incorporating service as a strategic element within a business enterprise is for management to plan and develop a

customer service program (Heskett, 1971; Prince et al., 1989). Customer service comprises, in addition to the product, activities and performances provided by a supplier to a customer, with the purpose of gaining repeat sales (Hopkins and Bailey, 1970). Customer service forms the interface between sellers and buyers in the distribution channel and forms the basis for market transactions and distribution strategy (LaLonde, 1985). In the floriculture industry, services are important, as they comprise a major share of

the costs of marketing floral products (Goodrich, 1980; Sullivan et al., 1980).

For floral suppliers to derive the benefits of customer service, information relative to the levels of service currently provided by suppliers to their customers is needed. Development of this management information would provide floral suppliers with benchmark statistics relative to the competitive service levels within the industry. Furthermore, such industry statistics could be used by suppliers to develop target service levels or service standards when implementing a customer service program.

The survey. The research methodology was conducted as described by Prince (1989). Perceptions of suppliers' service performance were obtained from the buyers' perspective (retail florists and mass marketers), as advocated by LaLonde et al. (1988). The retail florist population comprised full-service florist shops in the states of Ohio, Indiana, Illinois, Michigan, Minnesota, Wisconsin, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. The mass-market population included supermarket chains, both cooperative organizations and independent food grocers, and nonfood mass merchandisers throughout the United States.

A random sample of firms from each population was selected and mailed questionnaires relative to services provided by suppliers. The floral buyer of each firm rated its primary supplier on the level of service provided for 10 service characteristics: supplier maintenance of product quality, order/delivery reliability, delivery speed, product availability, order/delivery flexibility, response to problems, accessibility, commu-

Table 1. Distribution of retail florists (RF) and mass marketers (MM) reporting service levels for supplier maintenance of product quality.

Question description	Sample	Service levels ^{a,y}				
		Under 80%	80%–89%	90%–94%	95%–99%	100%
		Percentage of firms				
Deliveries filled with the quality of floral product expected	RF	19	11	28	39	3
	MM	16	8	21	52	3
		<i>P</i> = 0.57				
Deliveries without damage due to improper packaging or shipping	RF	14	3	11	55	17
	MM	13	5	11	50	21
		<i>P</i> = 0.93				
Floral product purchases that are suitable for use	RF	12	2	11	65	10
	MM	13	3	3	55	26
		<i>P</i> = 0.02				

^aSeven-point scale collapsed into five categories; RF, n = 502; MM, n = 38.

^yP indicates significance of differences in percentage distributions between retail florists and mass marketers using χ^2 test.

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Table 2. Distribution of retail florists (RF) and mass marketers (MM) reporting service levels for supplier order/delivery reliability and delivery speed.

Question description	Sample	Service levels ^{a,y}				
		Under 80%	80%–89%	90%–94%	95%–99%	100%
		Percentage of firms				
Deliveries without some kind of billing or invoicing error	RF	14	1	8	58	19
	MM	21	0	5	50	24
<i>P</i> = 0.54						
Deliveries that are delivered on time	RF	16	5	10	40	29
	MM	13	8	16	58	5
<i>P</i> = 0.02						
		<u>Mean</u>	<u>Median</u>	<u>Mode</u>		
Time elapsed between the time an order is placed with supplier and when the product is received (days)	RF	0.8	0.5	1.0		
	MM	3.5	1.5	1.0		
<i>P</i> = 0.004 ^x						
Length of delay for deliveries that are late (days)	RF	0.5	0.3	0.3		
	MM	0.7	0.5	0.5		
<i>P</i> = 0.29						

^aSeven-point scale collapsed into five categories; RF, n = 502; MM, n = 38.

^yP indicates significance of differences in percentage distributions between retail florists and mass marketers using χ^2 test.

^yP indicates significance of differences in means between retail florists and mass marketers using *t* test.

Table 3. Distribution of retail florists (RF) and mass marketers (MM) reporting service levels for supplier product availability.

		Service levels ^{a,y}				
Question description	Sample	Under 80%	80%–89%	90%–94%	95%–99%	100%
Percentage of firms						
Deliveries filled with the floral products ordered	RF	12	4	10	55	19
	MM	11	3	18	42	26
<i>P</i> = 0.30						
Requests accommodated for specific or unusual floral product	RF	18	7	12	48	15
	MM	10	5	11	45	29
<i>P</i> = 0.21						
Deliveries that do not involve a floral product substituted for an unavailable product	RF	12	2	4	53	29
	MM	11	0	8	42	39
<i>P</i> = 0.35						

^aSeven-point scale collapsed into five categories; RF, n = 502; MM, n = 38.

^yP indicates significance of differences in percentage distributions between retail florists and mass marketers using χ^2 test.

Table 4. Descriptive statistics for retail florists (RF) and mass marketers (MM) reporting service levels for order/delivery flexibility and response to problems.

Question description	Sample	Service levels ^{a,y}				
		Under 80%	80%–89%	90%–94%	95%–99%	100%
		Percentage of firms				
Requests accommodated for last-minute changes in delivery	RF	15	2	5	35	42
	MM	13	3	8	47	29
					$P = 0.44$	
Problems, such as a mistake in delivery, that are resolved satisfactorily	RF	12	1	2	24	61
	MM	13	0	5	16	66
					$P = 0.54$	
		<u>Mean</u>	<u>Median</u>	<u>Mode</u>		
Elapsed time between the time supplier is informed of an inaccurate delivery and/or unacceptable product and when the error is remedied (days)	RF	1.3	1.0	1.0		
	MM	1.1	1.0	1.0		
					$P = 0.44^x$	

^aSeven-point scale collapsed into five categories; RF, n = 502; MM, n = 38.

^yP indicates significance of differences in percentage distributions between retail florists and mass marketers using χ^2 test.

^yP indicates significance of differences in means between retail florists and mass marketers using *t* test.

nications/order information, product discounts, and product labeling. A description of these service activities and their importance to floral retailers can be found in Prince et al. (1990). Questionnaire format used check-off categories, primarily seven-point and three-point rating scales relative to

the level of service provided. Such scales have been shown to reduce the burden on the respondent and to minimize random variation in response (Cox, 1980).

For the retail florist sample, 511 questionnaires were returned (25% response rate), with 502 usable for statistical analysis. For

the mass-market sample, 38 questionnaires were returned (29% response rate) and all were usable for statistical analysis. The mass-market sample was smaller than the retail florist sample because a mass-market respondent may make buying decisions for several hundred stores.

The type of suppliers identified by the survey respondents comprised wholesale florists (81%), wholesale growers (12%), shippers (4%), and brokers (3%) of floricultural products. The major products marketed by these suppliers included fresh cut-flowers (97%), fresh cut-foliage (65%), hardgoods (60%), flowering potted plants (30%), and potted foliage plants (17%).

Reliability analysis (Cronbach, 1951) and nonresponse bias tests (Miller and Smith, 1983) were conducted to ascertain survey item reliability and validity of the survey data. Test results indicated that the service measures achieved an acceptable level of reliability ($\alpha > 0.60$) and that nonresponse bias was not a serious threat to the validity of the results. Furthermore, the random sampling of firms from their respective populations allowed the generalizing of survey results to the floral mass market and Midwestern retail florist populations at large.

Service levels are defined as the percentage of the total interactions between suppliers and retailers that met the latter's expectations.

Product quality maintenance. Results revealed wide variability in the levels of product quality provided by floral suppliers (Table 1). However, these service levels were similar for retail florists and mass marketers. About 40% of retail florists and more than one-half of mass marketers reported that 95% or more of the product deliveries were filled with the quality expected. Conversely, between 15% and 20% of retail florists and mass marketers indicated much lower product quality, with < 80% of delivered product meeting the retailers' quality expectations.

About one-half of retail florists and mass marketers reported that 95% to 99% of deliveries from their primary supplier were free from packaging or shipping damage. In addition, $\approx$ 20% of retail florists and mass marketers reported no damage from improper product packaging or shipping.

Although some product deliveries did not meet quality expectations, many respondents, particularly mass marketers, indicated that most products were suitable for use. About one-fourth of mass marketers reported that all purchases from their supplier were suitable for use, and about one-half reported that 95% to 99% of purchases were suitable. Retail florists reported a lesser percentage of product suitable for use than mass marketers. This difference suggests that retail florists were either more discriminating on product quality than mass marketers, or that product quality was lower for retail florists than for mass marketers.

Overall, these data on product quality suggest that most delivered floral product is suitable for the retailers' use. However, to improve product quality, suppliers may need

Table 5. Descriptive statistics for retail florists (RF) and mass marketers (MM) reporting service levels for supplier accessibility and communications/information.

Question description	Sample	Service levels ^{2,3}				
		Under 80%	80%-89%	90%-94%	95%-99%	100%
When contacting supplier, supplier is readily accessible	RF	<i>Percentage of firms</i>				
		15	5	11	39	30
	MM	18	5	11	40	26
		<i>P</i> = 0.98				
Supplier uses FAX machine or computer-based equipment for communication	RF	<i>Distribution of firms (%)</i>				
		<i>Response categories</i>				
		Yes	Not sure	No		
	MM	12	11	77		
		63	3	3	4	
		<i>P</i> = 0.001				

²Seven-point scale collapsed into five categories; RF, n = 502; MM, n = 38.

³*P* indicates significance of differences in percentage distributions between retail florists and mass marketers using χ^2 test.

Table 6. Descriptive statistics for retail florists (RF) and mass marketers (MM) reporting service levels for supplier quantity and cash payment discounts.

Question description	Sample	Response categories		
		Yes	Not sure	No
Supplier provision of discounts for cash payments	RF	<i>Percentage of firms²</i>		
		15	15	70
	MM	13	40	47
		<i>P</i> = 0.001		
Supplier provision of quantity discounts for large floral purchases	RF	69	11	20
		63	21	16
	MM			
		<i>P</i> = 0.14		
Discount for cash payments	RF	Mean	Median	Mode.
			<i>Discount (%)³</i>	
	MM	5.6	2.0	2.0
		3.3	3.0	2.0
	RF	<i>P</i> = 0.08		
		13.9	10.0	10.0
Discount for quantity purchases	MM	10.3	7.0	5.0
		<i>P</i> = 0.18		

²*P* indicates significance of differences in percentage distributions between retail florists and mass marketers using χ^2 test.

³*P* indicates significance of differences in means between retail florists and mass marketers using *t* test.

Table 7. Distribution of retail florists (RF) and mass marketers (MM) reporting service levels for supplier product labeling.

Question description	sample	Service levels ²				
		Under 80%	80%-89%	90%-94%	95%-99%	100%
Deliveries labeled properly on the shipping container? box, or tag	RF	<i>Percentage of firms</i>				
		15	1	1	24	59
	MM	13	0	3	47	37
		<i>P</i> = 0.01				
Deliveries that include care tags and/or printed information related to floral care	RF	74	5	5	8	8
		48	5	5	21	21
	MM					
		<i>P</i> = 0.001				
Supplier provides bar code (i.e., Universal Product Code, U. P. C.) labeling of floral product	RF	<i>Response categories</i>				
		Yes	Not sure	No		
	MM	<i>Percentage of firms</i>				
		5	25	70		
	RF	32	10	58		
		<i>P</i> = 0.001				
Supplier provides "code dating" of its floral products with a date of product freshness	RF	5	19	76		
		21	8	71		
	MM					
		<i>P</i> = 0.001				

²Seven-point scale collapsed into five categories; RF, n = 502; MM, n = 38.

³*P* indicates significance of differences in percentage distributions between retail florists and mass marketers using χ^2 test.

to pay more attention to production and post-production treatments, rather than focusing attention on packaging and shipping meth-

ods. In addition, floral suppliers should closely monitor product quality received by customers to ensure that it meets the retailers'

expectations.

Delivery reliability and delivery speed. Floral retailers reported a high level of consistency in ordering/billing by their supplier, as one-fifth of retail florists and one-fourth of mass marketers reported no billing or invoicing errors by their supplier (Table 2). In addition, $\approx 50\%$ of each group indicated that these errors accounted for $< 5\%$ of deliveries.

The service level data indicated that retail florists perceived higher levels of delivery reliability by their supplier than mass marketers (Table 2). Nearly 30% of retail florists reported on-time delivery, compared to only 5% for mass marketers. However, this difference in perception may be due to more-stringent delivery scheduling standards of mass marketers compared to retail florists.

Retail florists reported that they receive better than a 1-day turnaround time from their supplier (Table 2). This response time is from the time they placed an order to the time they received the product. In contrast, mass marketers received a 3.5-day turnaround time from their primary supplier. For deliveries not on time, the average delay was about one-half day for retail florists and mass marketers, with most retail florists reporting three-tenths of a day delay in delivery. The duration of these delays varied substantially, ranging from ≈ 30 min to 7 days. Overall, these data on ordering/delivery suggest that suppliers provided excellent service in order-taking and processing reliability, but provided less consistency on delivery, especially for mass-market retailers.

Product availability. About 75% of retail florists and 70% of mass marketers reported an order fill rate of 95% or higher (Table 3). According to the responses, 15% of retail florists and twice as many mass marketers reported all requests for specific or unusual floral products were accommodated by their supplier; about one-fifth of retail florists but only 10% of mass marketers reported a lower level of service, as $< 80\%$ of requests for specific or unusual floral products by these retailers were accommodated by their supplier (Table 3). Most suppliers do not substitute other types of product for unavailable product, as $> 80\%$ of respondents reported that 95% or more of product deliveries did not involve product substitutes (Table 3). These results indicate that, while retailers usually receive the products ordered, many requests for unique or unusual products are not accommodated and product substitutions for unavailable products are not employed to any great extent.

Order/delivery flexibility and responsiveness. More than 75% of retail florists and mass marketers indicated that their primary supplier accommodated 95% or more of requests for last-minute changes in delivery (Table 4). In addition, $> 80\%$ of the respondents reported that, when problems in delivery occur, 95% or more are solved to the retailer's satisfaction. Elapsed time for a supplier to remedy a problem, however, varied widely, ranging from a few minutes to 30 days, but averaged slightly more than a

day. These results revealed that most suppliers provided a high level of flexibility and responsiveness in product delivery for their customers.

Accessibility and communications/order information. About 30% of respondents indicated that their primary supplier was always readily accessible, and $\approx 40\%$ indicated their supplier was accessible 95% to 99% of the time (Table 5). These data reveal that a large segment of floral suppliers provided high levels of accessibility and convenience for their customers.

The speed and reliability of communication between supplier and customer is an element of service that can be developed through the adoption, of appropriate communications technology. The suppliers' usage of communication/order information technology to communicate with their customers varied between respondent groups (Table 5), as mass marketers perceived higher levels of this service. Nearly two-thirds of mass marketers reported that their primary supplier used a facsimile (FAX) machine or other computer-based technology for communication, whereas only one-eighth of retail florists indicated that their supplier used this technology. Since the implementation of this technology requires adoption by both supplier and customer, these statistics suggest that the majority of retail florists have not adopted innovated technologies that may aid communication with suppliers.

Cash and quantity discounts. About 15% of retail florists and mass marketers reported that their primary supplier provided a discount for early cash payments (Table 6). For these respondents, this early payment discount averaged between 3% to 6% of sales, with most respondents reporting a 2% cash discount.

Although 15% or fewer of respondents reported a provision of cash discounts, $> 60\%$ indicated that their primary supplier offered discounts for purchasing in large quantities (Table 6). Most retail florists and mass marketers cited a discount of 10% and 5%, respectively, but the discounts ranged from 1% to 49%. These discounts were heavily dependent on the quantity purchased, the variety of floral product purchased, and the season of the year. These results suggest that, while suppliers have readily offered discounts to their customers for quantity purchases, they have restricted discounts for early payments.

Product labeling. About 60% of retail florists and nearly 40% of mass marketers reported that all deliveries from their primary supplier were labeled properly, while about

one-fourth of retail florists and about one-half of mass marketers reported that up to 5% of deliveries were labeled improperly on the shipping container, box, or tag (Table 7). In addition, nearly three-fourths of retail florists and about one-half of mass marketers reported that fewer than 80% of deliveries included "care tags" or printed information related to product care. Many suppliers apparently do not provide product care and handling information at the point of delivery for all products.

The service level data suggested that mass marketers received higher levels of labeling services from their suppliers than retail florists (Table 7). Very few retail florists reported that their supplier offered bar code labeling technology, whereas one-third of mass marketers indicated that suppliers offered this technology. In addition, only 5% of retail florists, but four times as many mass marketers, indicated that their supplier used code dating, an indicator of product freshness. Overall, these data revealed the low adoption rate of advanced labeling services by floral suppliers.

"Implications for management. A review of the results suggests that suppliers provided high levels of service relative to order/delivery reliability, delivery speed, order/delivery flexibility, response to problems, and accessibility. However, there is substantial variability in supplier services relative to maintenance of product quality, product availability, communications/order information, product discounts, and product labeling. This variability suggests that floral suppliers may not fully understand the service requirements of their customers. However, this variability in service also identifies market opportunities for suppliers developing customer service programs.

A comparison of the two customer segments revealed that retail florists perceived higher levels of service from their suppliers relative to order/delivery reliability and delivery speed than mass marketers. Mass marketers perceived higher levels of service from their suppliers relative to communications/order information and product labeling than retail florists. These differences in service levels between both groups suggest that the service requirements for each group may be different, thus requiring the establishment of separate service standards for each segment when developing a customer service program.

Although the implementation of a customer service program requires suppliers to estimate costs and benefits for a given service level, this research assists suppliers in

developing such programs. The service profiles provide benchmark statistics for 10 service activities in floral distribution. These service profiles may be used by suppliers in the establishment of service standards for their customers. Furthermore, the segmented service profiles highlight the strengths and weaknesses in customer service for florist and mass-market groups and may aid suppliers in developing effective service programs targeted for specific customer segments.

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