

MANAGING THE MARKETING MIX FOR A NONPROFIT SERVICE

THOMAS G. PONZURICK, *West Virginia University*

LOUIS G. POL, *University of Nebraska*

C.L. ABERCROMBIE, *Memphis State University*

ROBERT L. BERL, *Memphis State University*

Market response research has contributed significantly to the development of marketing strategies in the for-profit, tangible product marketplace. However, no study has examined the relationship between market response and the elements of the marketing mix in a nonprofit service context. The purpose of this research is to address this issue. In doing so, the authors examine the market response--marketing mix relationship in the nonprofit service sector using a proven product-oriented methodology. The results substantiate two propositions. First, a product-oriented approach can, in some instances, be appropriate for service-sector research. And second, market response for a nonprofit service is a holistic function of all elements of the marketing mix.

INTRODUCTION

Marketing has been described as a facilitator of exchange between two or more parties. These exchanges can be either utilitarian or symbolic in nature (Bagozzi 1975). To facilitate exchange, marketing strategists generate variations in the marketing mix. The goal is to manage this mix in such a way so as to elicit a meaningful exchange and favorable response from the consuming marketplace.

Accomplishing this goal requires an understanding of market response theory and research. However, existing market response research tends to overlook the synergistic effect of all marketing mix variables involved (Wind and Robertson 1983). This shortcoming is compounded for nonprofit and/or service marketers since limited research exists on this topic. The unanswered question then becomes, how is a nonprofit/service marketer expected to manage his marketing mix without the guidance of topical research?

The answer, to this point, has been to utilize the findings of product-oriented market response models. Yet many of these models tend to fail the holistic criterion set forth

by Wind and Robertson (1983). Moreover, an underlying assumption has been that the product-oriented response models can be used to predict the relationship between market response and the marketing mix variables of a nonprofit service. The purpose of this study is to test this assumption as well as the theoretical relationship between market response and the holistic elements of the marketing mix.

BACKGROUND

Market response research can be traced to the economic roots of marketing literature. The understanding of this marketing effort began with the work of Chamberlain (1933). Prior to his research on monopolistic competition, market demand was considered to be largely the result of a single factor--price. The introduction of monopolistic competition, however, gave rise to the idea of using product differentiation and promotion to increase market demand. Several marketing mix theorems followed, but the one which has had the most impact on today's market response theory is the Dorfman-Steiner theorem.

The Dorfman-Steiner (1954) theorem of marketing mix optimization assumes that an organization faces a demand function which is optimized when elasticity is equal to zero. The function is stated simply as:

Quantity Demand = $f(\text{Price, Advertising, Distribution, Product Quality})$

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Since the advent of the Dorfman-Steiner theorem, many researchers have addressed the optimization issue using a variety of research methods

To address the various market response methods, Barnes (1982) has suggested a paradigm utilizing three distinct approaches. These approaches have been labeled direct, quasi-experimental (extracts the element's influence from other element effects) and decomposition (divides the marketing components into subpatterns to understand the contribution of each component). Each approach has proven useful in dealing with response issues as they relate to the for-profit product market.

To gain an insight into these three approaches, a chronological assessment of each perspective has been developed. A summarized contribution of each study is presented in Table 1. In reviewing these studies, it should be noted that the Dorfman-Steiner theorem provides the underlying foundation for these models.

As seen by this impressive series of market response studies, several approaches and many variables have

been examined. Included in these approaches have been static as well as dynamic parameters. Dependent variables have included market share, sales, and profits, while a host of independent variables have been utilized to operationalize the marketing mix elements. It is evident that these methods have contributed to market response theory. However, due to the methodological uniqueness of each approach, only one response method can be addressed at a time. With this in mind, and coupled with the exploratory nature of the present study, the authors chose to analyze the direct market response approach as it pertains to a nonprofit service entity.

TOWARD AN EXPANDED DIRECTION FOR DIRECT MARKET RESPONSE RESEARCH

The findings of the studies highlighted in Table 1, lead to the conclusion that a consumer-oriented marketing strategy is necessary in order to optimize a marketing effort and achieve the desired level of response from the consumer market. However, previous research also indicates that several issues have yet to be addressed in the response literature.

TABLE 1
AN ASSESSMENT OF THE THREE APPROACHES
FOR ANALYZING MARKET RESPONSE

AUTHOR/YEAR	CLASSIFICATION AND MARKETING MIX DIMENSIONS
<u>QUASI-EXPERIMENTAL APPROACH</u>	
Simon 1966	Compared the effect of a price change on retail liquor sales to similar markets where price was held constant. A high level of elasticity resulted. (Price and Product)
Reekie 1976	Extended Simon's model by comparing the effect of a price change on newspaper circulation versus circulation of newspapers that did not experience a price change. Conditions found appropriate for this approach were: (1) existence of independent markets; (2) market prices change independently; and (3) cross-elasticity of demand is near zero. (Price and Product)
Jung and Fuijii 1976	Using Simon and Reekie's method examined the price elasticity of demand for air travel. Treated the "products" as homogeneous while concentrating on price as the adjusting variable. (Price and Product/Service)
Krishnamurthi and Raj 1985	Examined the relationship between advertising content and consumer price sensitivity. Findings indicated that product price sensitivity decreased as a result of more noninformational type advertising. (Product and Promotion)
<u>DECOMPOSITIONAL APPROACH</u>	
Clarke 1973	Measured the effect that advertising of one brand had on the sales of another brand. Results indicated that advertising influences the sales of the advertised brand as well as the sales of other brands. (Promotion)
Schultz and Wittink 1976	Proposed theoretical conditions for the existence of primary demand, primary sales, competitive and mixed effects of advertising. Outlined a theory of industry advertising effects for investigating the influence of selective advertising on primary demand. (Promotion)

AUTHOR/YEAR	CLASSIFICATION AND MARKETING MIX DIMENSIONS
<u>DECOMPOSITIONAL APPROACH CONTINUED</u>	
Lambin, Naert and Bultez 1975	Generalized the Dorfman-Steiner theorem utilizing an econometric model for examining an oligopoly's market share and sales elasticity when firms adjusted their marketing mixes. The model was tested using a durable consumer good. The results indicated several firms had overinvested in advertising. (Price, Product, and Promotion)
Hanssens 1980	Extended the LNB 1975 model by treating competitive activities individually. The model was tested using the air travel market. Results indicated a distinction between market-expansive and competitive effects of the marketing mix variables. (Product/Service and Promotion)
<u>DIRECT APPROACH</u>	
Nerlove and Arrow 1962	Analyzed the effects of marketing variables over time by introducing the concept of advertising goodwill into a sales response model. Optimal conditions for price and advertising were then developed. (Price and Promotion)
Palda 1964	Tested the Dorfman-Steiner theorem by incorporating the lagged effect of advertising expenditures. Regression results affirmed the usefulness of the cumulative effects method for measuring advertising effectiveness. (Promotion)
Weiss 1968	Tested the thesis that the major marketing mix variables as a whole affect consumer purchase behavior and subsequent market share. Attempted to optimize the mix for these four marketing variables by examining their relationship with market share. Using static parameters, brand-identified products and dummy variables for product quality and distribution, a series of nine regression models were analyzed. The results showed advertising to have less of an influence on market share than price. (Price, Product, Promotion and Place)
Lambin 1970	Extended the Dorfman-Steiner Theorem to explicitly consider competitive effects. The resulting model introduced a lagged dependent variable which represented the retention rate of the marketing effort.
Sexton 1970	Developed a combination of models designed to determine an optimal marketing mix for a frequently purchased consumer product. Included models for brand share, product share and sales. Variables were lagged to represent the learning rate of product quality and advertising retention. Results found price dealings and print media to be the most effective marketing variables for changing brand share. (Price, Product, Promotion and Place)
Kotler 1971	Presented the constant elasticity equation for the Dorfman-Steiner Theorem. Equation "assumes each marketing mix variable has a constant and independent effect on sales and allows coefficients to be read as elasticities." (Price, Product, Promotion and Place)
Lambin 1972	Developed a computer model for empirically testing market response to changes in a brand's marketing mix. Results provided a system for accelerating decision-making for strategic marketing mix choices.
Balachandran and Gensch 1974	Ten quantifiable marketing mix variables and one environmental variable were used for determining the optimal marketing mix. Sales response was empirically tested with seven years of historical data using nonlinear Geometric Programming models. (Price, Product, Promotion and Place)
Prasad and Ring 1976	Examined individual and interactive effects of marketing mix variables upon market share. Results supported the hypothesis that advertising is more effective when price levels are lower. (Price and Promotion)
Wittink 1977	Developed a parsimonious model using cross-sectional and time-series sales data for a frequently purchased branded product. The variables examined were market share, price, advertising and random disturbance. Results indicated advertising expenditures tended to increase rather than decrease consumer price sensitivity. (Price and Promotion)
Farris and Buzzell 1979	Analyzed the logarithm of the ratio advertising/promotion to sales as the dependent variable. The cross-sectional approach empirically tested the explanatory power of factors which could be responsible for variations in promotional costs in the industrial market. Regression results indicated regular patterns of promotional spending. (Price, Product, Promotion and Place)
Jones and Zufryden 1982	Developed a new brand choice model using explanatory independent variables. The model used pricing and demographic variables to explain brand purchase decisions. (Price)

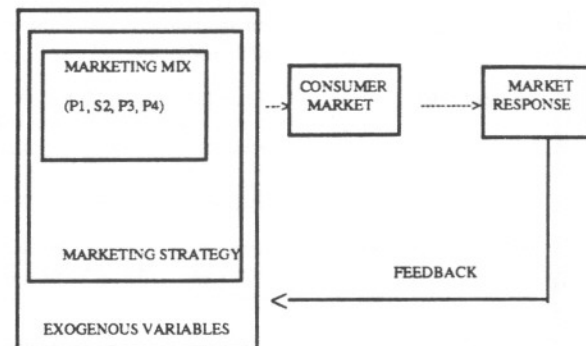
One issue concerns the limited number of studies that focus on the joint effect of all the marketing mix variables on market response elasticity. With the exception of three studies (Weiss 1968; Sexton 1970; and Balachandran and Gensch 1974), researchers have not attempted to simultaneously test the effects of all the rubrics. Instead, they have concentrated their efforts on one or two rubrics at a time, with advertising and price receiving the most attention. As Wind and Robertson state, "most research pursues a single-minded dedication to optimizing a single component of the mix while a void still remains in marketing's understanding of the synergistic effect found among the various marketing mix components" (Wind and Robertson 1983, pp. 12-25).

A second issue concerns the lack of research designed to determine the direct effect of the marketing mix on response to a nonprofit service. Several studies have analyzed market response rates in the for-profit service market. For example, Jung and Fuijii (1976) and Hanssens (1980) utilized the quasi-experimental approach in studying airline service, while Weinberg (1984) has specified decision rules for nonprofit organizational pricing strategies. However, no researchers have examined the relationship of market response rates to the marketing mix strategies employed by nonprofit service organizations, nor have attempts been made to examine the joint effects of all elements of a service's marketing mix as recommended by Wind and Robertson (1983). This is unfortunate, especially since Shostack (1977) and Berry (1980) have indicated that product-oriented concepts are not directly transferable to the intangible service sector. Therefore, in order to address these issues, a model was developed to test the direct relationship between the marketing mix strategies (all rubrics) of a nonprofit service organization and the resulting level of market response achieved.

THE THEORETICAL MODEL

Using Assael's (1981) stimulus-response model as a guide, a modified market response model is proposed. The premise of the model shown in Figure 1 is that marketing mix strategies for a nonprofit service should be based on the response of the aggregate consumer market. This stimulus-response model suggests that if the market is properly stimulated by the organization's marketing mix strategy subject to exogenous factors, the market will have a favorable response. The mix in this case is represented by the location (P1) and quality (S2) of the nonprofit service being offered, the promotional-efforts associated with that service (P3) and the cost to the user for enjoying that nonprofit service (P4).

FIGURE 1
A MODEL FOR EXPLAINING AGGREGATE
MARKET RESPONSE TO MARKETING MIX STIMULATION



HYPOTHESES

The following hypothesis is used to test the theory that market response for nonprofit services is a holistic function of the marketing mix strategy. That is, if the hypothesis is supported, the study will lend credence to the argument that the Dorfman-Steiner Theorem is applicable to nonprofit services as well as to previously tested and proven tangible products.

H1: The market response for nonprofit services is a joint function of marketing mix rubrics (product, place, promotion and price) working jointly.

Evidence. Market response theory holds that the interaction with and the response of the consumer market can be enhanced by the introduction of a marketing effort, including the marketing mix (Kotler 1980). The Dorfman-Steiner (1954) theorem argues for the optimization of the marketing mix, suggesting it will increase the level of market response in terms of criterion being maximized. Weiss (1968), Sexton (1970) and Balachandran and Gensch (1974) have empirically tested this theorem using the four marketing mix elements of a tangible product. It is, therefore, hypothesized that the same four elements of the marketing mix play a significant role in enhancing market response for an intangible nonprofit service.

Moreover, each element of the marketing mix may have a separate impact on market response. To test this theory in a nonprofit service context, sub-hypotheses are proposed for each marketing mix element. These are:

H1a: Market response for nonprofit services is a func-

tion of promotion. That is, as the amount of promotion increases, market response will also increase.

- H1b: Market response for nonprofit services is a function of pricing policies. That is, as the price associated with purchasing the service increases, market response for that service will decrease.
- H1c: Market response for nonprofit services is a function of the quality of the service offered. That is, as the quality of the service increases, market response will also increase.
- H1d: Market response for nonprofit services is a function of location/distribution. That is, as the intensity of the distribution system increases, market response will also increase.

Evidence. All four elements of the marketing mix have a bearing on the rate at which the market responds to an organizational offering (Dorfman and Steiner 1954). As for specific elements, promotional efforts have been empirically tested and found to have a significant bearing on the optimization of the marketing mix. Studies which have empirically tested this theory were discussed earlier. However, Farris and Buzzell (1979) have specifically tested advertising and sales promotional expenditures for the industrial market and suggested that variables representing premiums, coupons, media advertising and other communication efforts be included in the definition of promotion. Since communication is the objective of any promotional effort, variables reflecting this communication process are utilized.

Organizational pricing policies have also been shown to affect market response levels. Moreover, Kotler (1982) suggested that "price specials" can be introduced along with the standard list prices in order to stimulate market response for a nonprofit service. These specials include flexible pricing, seasonal discounts and priority pricing structures and are included in the research design. Moreover, price might be viewed differently in a nonprofit context. Given that many nonprofit organizations receive some type of operational subsidy and that the maximization of profit may not be a central goal, price may emerge as inconsequential to market response.

Studies discussed earlier have demonstrated how the product can be affected by the other elements of the marketing mix, especially price and promotion. However, Thomas (1978) theorized that an intangible service can also be differentiated based upon the benefits the user perceives will be received from consumption of that service. These benefits represent the salient points upon

which the marketing effort will enhance market interaction as suggested by market response theory (Kotler 1980). Thus, the variables which differentiate the quality of the service offered are used to incorporate "product" features in the research design.

Lastly, the elements representing the place function of the marketing mix have been found to affect market response. Weiss (1968) found distribution systems and retail availability to vary among product brands resulting in differential influences on sales while Farris and Buzzell (1979) concluded that a decentralized distribution network was more effective for increasing market response levels. Meanwhile, Balachandran and Gensch (1974) identified area population as an important location variable which could account for market response differentials.

RESEARCH METHODOLOGY

Participant Selection

The subject area chosen to test the hypotheses was collegiate football programs. Colleges and universities classified as Division I-A by the National Collegiate Athletic Association (NCAA) were selected. Since the financial goal of a collegiate athletic department is to generate revenue for facilitating growth and maintaining program continuity (Broyles and Hay 1979), the revenue goal of these departments reflects the definition of nonprofit marketing--providing a quality program in order to generate the funds needed to continue providing the quality program (Gaski and Etzel 1982). Furthermore, the Internal Revenue Service (IRS) generally views "an athletic organization promoting amateur sports competition as an exempt organization and thus gives that organization nonprofit status" (Exempt Organizations 1988, pp. 1028-1029). Therefore, by academic and IRS definitions the athletic department and the entertainment services it provides should be considered nonprofit due to the nature of its revenue goals.

The names and addresses of the 105 Division I-A university athletic directors were found in the *National Collegiate Athletic Association Directory*. Athletic directors were chosen as the contact person based on the assumption that they would have access to the information necessary to complete the questionnaire or be in a position of authority to pass the instrument to the person responsible for marketing the program. The questions used in this mail questionnaire were pre-tested in a pilot study.

To collect the data in an orderly and efficient manner, the Dillman (1978) "total design method" for mail surveys

was employed. Questionnaires were mailed to the athletic directors at the 105 Division I-A schools. After the initial mailout and three follow-ups, 99 completed returns were received. This is a 94.3 percent response rate.

Dependent Variable

To answer Shapiro's (1972) call for objectively measuring market response functions in the design of service-oriented studies, an attendance ratio was generated. This attendance ratio is analogous to the sales function used as the dependent variable in prior direct response studies (e.g., Farris and Buzzell 1979). The market response rate was obtained by dividing the respondent's actual home attendance by the potential home attendance (stadium capacity for all home games). It should be noted that the ratio logarithm is frequently utilized in research of this nature. However, in this case, the logarithm added no substantive or significant difference to the findings. In fact, the frequency distribution of this ratio approximated a normal distribution with a slight upward bias. Two market response rates (MRR) were 1.0 while the lowest MRR was .28. The mean MRR was .74 with a standard deviation of .20. Residual analysis for the regression equations seen in Tables 3 and 4 produced no abnormal plots.

Arithmetically, the formula is:

$$\text{Market Response Rate (MRR)} = \frac{\text{Actual Home Attendance for all Home Games}}{\text{Potential Home Attendance for all Home Games}}$$

This measurement is consistent with the methodology used to measure the marketing success of audience-oriented nonprofit organizations (Kotler 1982). Furthermore, Shapiro (1972) holds that "marketing success" in the nonprofit organization does not always produce financial viability and should not be measured in financial terms. The stadium seating capacity for all responding universities was obtained from the *National Directory of College Athletics (Men's Edition)*.

Attendance data were supplied by respondents via the mail questionnaire and were used in the computation of each market response rate. In order to insure the accuracy of the information, responses were verified with the post-game results published by various newspapers throughout the United States. Dividing total home attendance by the total stadium capacity for all home games produced the individual market response rates. It must be noted that although some schools may be hindered by the size of their stadium (either too small or large for their immediate needs), it is believed that appropriate marketing strategies designed to handle these situations could be

implemented to minimize the effect. Kotler (1980) discusses these strategies in terms of demarketing or synchro-marketing.

Independent Variables

There are many factors which may directly or indirectly affect market response to the marketing mix strategies of a nonprofit entertainment service. Kotler (1982) contends that audience development is important for this type of service and should consist of (1) researching the audience, (2) developing the product, (3) pricing the product, and (4) promoting the product. In keeping with the purpose of this study and the findings of prior research, the selection of independent variables focused on Kotler's latter three variables as well as place-related factors. To insure theoretical consistency, the independent variables were classified according to Lilien and Kotler's (1983) marketing mix paradigm.

Measures were selected to reflect the effect of advertising, sales promotion, personal selling and public relations on market response. Promotion-related variables included dummy variables for the existence of a promotional budget and the use of premium incentives. Other variables classified as promotional were the number of special promotions (other than homecoming), the number of stations in the respondent's radio network, and the extent of the head coach's public contact as determined by the existence of a television show, radio show and/or newspaper column.

Explanatory variables classified as price-related were the student and non-student ticket policies. Non-student ticket policy was dichotomized into a one-price versus a flexible-price policy while the student ticket policy was categorized as free admission versus paid admission. A third variable associated with the purchase of a ticket was the existence of priority seating. More importantly, the donation level required to obtain priority seating was at issue here. To determine aggregate donation requirements, the average of the reported levels of donation criteria were established as an independent variable.

Variables reflecting the "product" features were also utilized in order to quantify the quality of the service being offered. Classified as quality-related variables were the number of games won during the prior two seasons and the quality of the schedule played. The number of games won was obtained from NCAA reports, while schedule quality was determined by the number of self-designated rivals respondents played during the season.

Place-related variables included stadium location and the location of ticket sale outlets. In both cases, the variables were coded to represent on-campus versus off-campus locations. Another independent variable considered relevant to the location of the respondent was area population. Area population was determined using a two-step approach. First, if the respondent was located within a Metropolitan Statistical Area (MSA), the population of the MSA was included in the analysis of that respondent. If the respondent was not located within an identified MSA, the respondent's county population was used. This was done to avoid creating an unofficial MSA by arbitrarily including contiguous county populations in the respondent's market area. The area population for each respondent was identified using the 1980 United States Census of Population.

Directional Relationships

Since the marketing mix's effect on market response is crucial to this study, the independent variables characteristic of each element of the mix are discussed in terms of their directional relationship with market response. With this in mind, variables classified as promotional in nature were considered part of the respondent's communication process and the existence and/or utilization of each was hypothesized to have a positive relationship with market response. This hypothesis assumes that an increased communication effort would enhance market response. Furthermore, assuming that the market is price elastic, it was hypothesized that both a flexible non-student ticket policy and a no charge student ticket policy would have a positive effect on market response. The use of priority seating donation requirements was hypothesized to have a negative correlation with market response.

Incorporating the findings of product-related market response research, a positive relationship was hypothesized to exist between market response and a decentralized ticket distribution system (Farris and Buzzell 1979), area population (Balachandran and Gensch 1974), and the utilization of a convenient (on-campus) stadium. Based on the product-oriented findings of Weiss (1968) and Sexton (1970), service quality was also hypothesized to have a positive influence on market behavior. Therefore, it was assumed that both schedule quality and the number of games won would have a positive impact on market response. By testing these directional hypotheses in this nonprofit service context, insight into each variable's relationship with market response can be realized.

Statistical Procedures

The goal of the analysis was to develop a reduced variable multiple regression model predicting the MRR. In cases

where incomplete responses (missing values) were acquired, the decision was made not to make response substitutions. Given the limited sample size (99), the use of substitutional methods for missing data could not be justified on sound methodological grounds. Therefore, the analysis proceeded with 73 cases. The reduction in the number of cases analyzed does not adversely affect the representativeness of the sample. That is, institutions with conference affiliation comprised 77.8 percent of the total sample and 78.1 percent of the subsample. Nor was this subsample significantly different since the mean size of the population for the total sample was 964,560 while the mean size of the population for the subsample was 938,433. This method (casewise deletion) was utilized in both steps of the statistical analysis.

The proposed model is:

$$\text{MRR} = a + \text{PCX1} + \text{PCX2} + \text{PCX3} + \text{PCX4} + e$$

Where:

- MR = market response as measured by market response rate
- a = constant
- PCX1 = promotion classified variables:
 - Have a Marketing/Promotional Budget:
 - (1) yes (0) no
 - Number of Stations in the Radio Network
 - Use of Promotional Premiums:
 - (1) yes (0) no
 - Number of Special Day or Group Promotions
 - Extent of Head Coach's Public Contact:
 - (0) no media outlets (1) one media outlet
 - (2) two media outlets (3) three media outlets
- PCX2 = price classified variables:
 - Non-Student Ticket Policy:
 - (1) one price (0) flexible
 - Student Ticket Policy:
 - (1) paid (0) no charge
 - Donation Criteria for Priority Seating:
 - mean donation
- PCX3 = product (service) classified variables:
 - Two-Year Win Record:
 - total number of games won
 - Number of Reported Rivals Played During 1983 Season
- PCX4 = place classified variables:
 - Stadium Location:
 - (1) on campus (0) off campus
 - Ticket Sale Outlets:
 - (1) on campus only (0) on and off campus
 - Area Population:
 - MSA or county population
- e = Error.

ANALYSIS

Correlation

A zero correlation matrix including all of the variables of interest is shown in Table 2. The largest correlations

between level of market response (MRR) achieved and an independent variable are with the number of stations in the respondents radio network (.53), the non-student ticket policy (.42) and the number of games won the past two seasons (.41). Moreover, the correlation coefficients between the independent variables are low (the highest .41 between size of the radio network and number of group promotions) indicating that these are indeed independent constructs and measures.

The positive relationship between the size of the respondent's radio network and the market response rate means that as the number of radio stations increases, the level of market response also increases. The correlation coefficient for the non-student ticket policy indicates that a one-price ticket policy tends to achieve a higher level of market response than a flexible ticket price policy. Lastly, the positive relationship between games won the past two seasons and the level of response suggests that, as expected, the quality of the nonprofit service has a positive bearing on market response.

Regression: Full-Variable Model

The full-variable regression equation is presented in Table 3. It shows that the number of stations in the respondent's radio network is the best predictor of market response ($\beta = .28$; $p < .05$). The second best predictor is the aggregate amount of donation required to obtain

priority seating ($\beta = -.20$; $p < .05$). The third most significant predictor is the number of games won during the past two seasons ($\beta = .19$; $p < .05$). No other variables were able to satisfy the minimum requirement of a .05 level of statistical significance. The explained variance of this model (R-Squared) was found to be .565, the adjusted R-Square value was .469 and the F-statistic value was 5.894.

The correlation coefficients seen in Table 2 suggest that multicollinearity is not an issue here. Moreover, the tolerance criterion for all variables in the equation was set at .01 to avoid multicollinearity. As stated earlier, residual analysis produced no abnormal plots.

Regression: Reduced-Variable Model

A reduced-variable model was developed in which the same independent variables were allowed to remain in the equation only if the partial regression coefficients were statistically significant at the .05 level. As seen in Table 4, the results of this reduced-variable regression equation indicates that the number of stations in the radio network is the best predictor of market response success ($\beta = .42$). The second best predictor is the mean amount of donation necessary to acquire priority seating ($\beta = -.24$) followed by the number of games won during the past two seasons ($\beta = .23$) and the type of ticket sale outlets utilized (on-campus versus off-campus

TABLE 2
ZERO ORDER CORRELATION MATRIX

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Market Response	1.00													
(2) Stadium Location	.27 ^b	1.00												
(3) Donation Criteria for Priority Seating	-.25 ^b	-.01	1.00											
(4) Non-Student Ticket Policy	.42 ^a	.19	-.19	1.00										
(5) Student Ticket Policy	-.15	-.08	-.01	-.04	1.00	1.00								
(6) Type of Ticket Sales Outlet		.29 ^a	.15	-.03	.04	-.01	1.00							
(7) Offer Premiums	-.33 ^a	-.10	.17	-.23 ^b	-.22	-.19	1.00							
(8) Number of Group Promotions	-.37 ^a	-.02	-.09	-.31 ^a	.10	-.16	.23 ^b	1.00						
(9) Program Has a Marketing Budget	-.18	-.24 ^b	.19	-.02	-.09	-.33 ^a	.08	.14	1.00					
(10) Size of Radio Network	.53 ^a	.17	-.00	.39 ^a	-.10	.14	-.20	-.41 ^a	.00	1.00				
(11) Amount of Head Coach's Media Contact	.24 ^b	.00	.04	.25 ^b	.08	-.08	-.01	-.04	.11	.34 ^a	1.00			
(12) Number of Rivals Played	.16	-.05	-.01	.31 ^a	-.13	.16	-.29 ^a	-.13	-.08	.27 ^b	.08	1.00		
(13) Total Wins Past Two Years	.41 ^a	.07	-.04	.29 ^a	-.05	.08	-.17	-.17	.09	.38 ^a	.20	.21	1.00	
(14) Logarithm Size of Area Population	-.32 ^a	-.37 ^a	.26 ^b	-.40 ^a	.11	-.25 ^b	.18	.14	.29 ^a	-.34 ^a	-.15	-.16	-.15	1.00

n = 73

^ap < .01

^bp < .05

TABLE 3
REGRESSION RESULTS FOR PROPOSED FULL VARIABLE MODEL

INDEPENDENT VARIABLES	UNSTANDARDIZED REGRESSION COEFFICIENTS	STANDARDIZED REGRESSION COEFFICIENTS
PCX1 - Promotion		
Offer Premiums (1=Yes; 0=No)	-75.014	-.185 ^b
Number of Group Promotions	-10.451	-.108
Program Has a Marketing Budget (1=Yes; 0=No)	-54.550	-.124
Size of Radio Network	1.968	.280 ^a
Amount of Head Coach's Public Contact (0=0; 1=1; 2=2; 3=3)	39.116	.149
PCX2 - Price		
Student Ticket Policy (1=One Paid; 0=Free)	-86.790	-.187 ^b
Non-Student Ticket Policy (1=One Price; 0=Scaled)	57.706	.138
Mean Donation Required For Priority Seating	-.179	-.208 ^a
PCX3 - Product		
Number of Games Won Past Two Seasons	8.196	.199 ^a
Number of Rivals Played in 1983	-8.939	-.116
PCX4 - Place		
Stadium Location (1=On-Campus; 0=Off-Campus)	48.208	.117
Ticket Sale Locations (1=On-Campus; 0=Off-Campus)	70.573	.165 ^b
Logarithm of Area Population	15.439	.113
Constant	434.644	
Complete Equation (F)	5.894	
R-Squared	.565	
Adjusted R-Squared	.469	
n = 73		
^a p < .05		
^b p < .10		

outlets) (beta = .20). No other variables remained in the equation. The explained variance (R-squared) is .446, the adjusted R-square is .413 with an F-statistic of 13.701. The tolerance criterion was again set at .01. The residual plots produced no abnormalities. The results support the general hypothesis of the study. That is, measures of each marketing mix rubric appear in the reduced variable model. Furthermore the sign of three of the effects (promotion, product and place) are in the hypothesized

direction (positive). The fourth, price, is negative as expected.

DISCUSSION

The purpose of this study has been twofold. The first purpose was to develop and test a product-oriented predictive multivariate direct response model to determine its usefulness in a nonprofit service context. The

TABLE 4
REGRESSION RESULTS FOR REDUCED VARIABLE MODEL

INDEPENDENT VARIABLES	UNSTANDARDIZED REGRESSION COEFFICIENTS	STANDARDIZED REGRESSION COEFFICIENTS
Number of Stations in Radio Network (Promotion)	2.960	.421 ^a
Mean Donation Levels for Priority Seating (Price)	-.207	-.240 ^a
Total Games Won Past Two Seasons (Product)	9.436	.230 ^a
Ticket Sale Locations (Place) (1=On-Campus; 0=Off-Campus)	86.44	.203 ^a
Constant	549.618	
Complete Equation (F)	13.701	
R-Squared	.446	
Adjusted R-Squared	.414	
n = 73		
*p < .05		

results of this effort indicate that this form of product driven research can be appropriate for analyzing this type of situation. As one would expect, the findings indicate that market response was positively correlated with the level of promotional effort expended as well as the quality of the entertainment service offered. This is not surprising in that promotional effort and product quality have been found to have a positive effect on consumption. Market response was also found to increase when the service provider utilized a centralized ticket distribution network. This is logical if one considers season ticket sales as part of the centralized ticket distribution system. Those respondents with a large number of season ticket holders should experience a higher rate of market response. Finally, the inverse relationship found to exist between donation requirements and market response is consistent with price elasticity theory and suggests that this nonprofit entertainment service is part of a wider entertainment service industry.

The second purpose of this study was to test a set of hypotheses. Based on the multiple regression analysis of the reduced variable model, the four sub-hypotheses are not rejected. Thus, the statistically significant presence of variables representing each marketing mix element in the reduced variable model indicated that all four elements of the marketing mix are significant functions of

market response for this nonprofit service. Although the other marketing mix variables were not statistically significant predictors themselves, they helped explain response rate variance and should therefore be considered in conjunction with the significant variables in order to fine tune a nonprofit organization's marketing strategy.

The support for hypothesis H1 and the subsequent results provide insight into two distinct issues. First, the findings lend credence to the argument that the marketing mix should be viewed holistically rather than as individual elements when marketing mix strategies are being developed. This is consistent with Wind and Robertson's (1983) contention that marketing strategists should view the components of the marketing mix synergistically rather than individually. Second, the results indicate that market response theory can, in some cases, be successfully transferred to the nonprofit service sector. In this case the transfer has been restricted to the direct response relationship. The effectiveness of the other methods (quasi-experimental and decompositional) for analyzing market response in the nonprofit service sector require further exploration.

Although these findings are meaningful, it should be noted that the study of response functions for nonprofit

services is in the embryonic stage. The effort reported here was cross-sectional and therefore is limited by the shortcomings of this type of research. It is recommended that future research explore the market response issue for nonprofit services in a longitudinal fashion. A long-range study of this subject could result in a more dynamic model.

In addition, price may not be an important determinant of market response for many or even most nonprofit organizations. In the context of the subject studied here, there is a profit motive, especially at institutions where excess dollars earned are used to support other university programs. With respect to other nonprofit organizations, subsidies and the lack of a profit motive may mean that prices are set to maximize attendance or meet some other goal even though revenues earned cannot support the activities in question. In these cases, the price/market

response relationship would be altered.

Taking into account these limitations, marketing managers can gain insight into the development of a marketing mix strategy for nonprofit services. This insight indicates that, decision-makers who are considering a change in the marketing mix, should understand that the four rubric are closely interrelated, and that a change in one rubric (e.g., promotion) is likely to impact the other rubrics as well as the response desired. When the other rubrics are affected (and most of the time the effects will be unknown), future efforts to adjust the mix will be confounded. This would indicate that nonprofit marketing mix strategies should be developed from a holistic perspective. Otherwise, adjustments to one rubric at a time will likely result in fragmented and only vaguely understood effects on the criterion selected for measuring market response success.

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ABOUT THE AUTHORS

Thomas G. Ponzurick (D.B.A. Memphis State University) is an Associate Professor of Marketing at West Virginia University. His research has been published by the *Journal of Transportation Research*, *Journal of Marketing Education*, *Journal of Applied Marketing Research*, and *Health Marketing Quarterly*.

Louis G. Pol (Ph.D. Florida State University) is a Professor of Marketing at the University of Nebraska at Omaha. His research interests include business and health care demography and he is the author of *Business Demography* (Greenwood Press) and *The Demography of Health and Health Care* (Plenum).

C. L. Abercrombie (Ph.D. University of Illinois) is a professor of marketing and former chairman of the Department of Marketing at Memphis State University. His research has been published by the *Journal of Marketing*, *Journal of Services Marketing*, *Health Marketing Quarterly*, and the *Journal of Professional Services Marketing*.

Robert L. Berl (Ph.D. Georgia State University) is Professor of Marketing at Memphis State University. Prior to becoming an educator, he had twenty years of experience in the marketing of both industrial goods and financial services. His main research interests are with services/nonprofit marketing, sales management and personal selling.
