

Volume 7, Number 2

ISSN 1095-6298

ACADEMY OF MARKETING STUDIES JOURNAL

An official Journal of the

Allied Academies, Inc.

Newell D. Wright
James Madison University

Editorial and Academy Information
may be found on the Allied Academies web page
www.alliedacademies.org

The Academy of Marketing Studies is a subsidiary of the Allied Academies, Inc., a non-profit association of scholars, whose purpose is to support and encourage research and the sharing and exchange of ideas and insights throughout the world.

Whitney Press, Inc.

*Printed by Whitney Press, Inc.
PO Box 1064, Cullowhee, NC 28723*

Authors provide the Academy with a publication permission agreement. Allied Academies is not responsible for the content of the individual manuscripts. Any omissions or errors are the sole responsibility of the individual authors. The Editorial Board is responsible for the selection of manuscripts for publication from among those submitted for consideration. The Editors accept final manuscripts in electronic form and the Publishers make adjustments solely for the purposes of pagination and organization.

The *Academy of Marketing Studies Journal* is owned and published by the Allied Academies, Inc., PO Box 2689, 145 Travis Road, Cullowhee, NC 28723, (828) 293-9151, FAX (828) 293-9407. Those interested in subscribing to the *Journal*, advertising in the *Journal*, submitting manuscripts to the *Journal*, or otherwise communicating with the *Journal*, should contact the Executive Director at info@alliedacademies.org.

LETTER FROM THE EDITOR

Welcome to the *Academy of Marketing Studies Journal*. The Academy of Marketing Studies is an affiliate of the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The *AMSJ* is a principal vehicle for achieving the objectives of the organization. The editorial mission of this journal is to publish empirical and theoretical manuscripts which advance the discipline, and applied, educational and pedagogic papers of practical value to practitioners and educators. We look forward to a long and successful career in publishing articles which will be of value to the many marketing scholars around the world.

The articles contained in this volume have been double blind refereed. The acceptance rate for manuscripts in this issue, 25%, conforms to our editorial policies.

As editors, we intend to foster a supportive, mentoring effort on the part of the referees which will result in encouraging and supporting writers. We welcome different viewpoints because in differences we find learning; in differences we develop understanding; in differences we gain knowledge and in differences we develop the discipline into a more comprehensive, less esoteric, and dynamic metier.

The Editorial Policy, background and history of the organization, and calls for conferences are published on our web site. In addition, we keep the web site updated with the latest activities of the organization. Please visit our site and know that we welcome hearing from you at any time.

Newell D. Wright
James Madison University
www.alliedacademies.org

ACADEMY OF MARKETING STUDIES JOURNAL

TABLE OF CONTENTS

LETTER FROM THE EDITOR	iii
A HAZARD FUNCTION APPROACH TO MODELING CONSUMER SEARCH	1
Peggy Choong, Niagara University	
CELEBRITY ENDORSERS: SPOKESPERSON SELECTION CRITERIA AND CASE EXAMPLES OF FREDD	13
Robert A. Swerdlow, Lamar University Marleen R. Swerdlow, Lamar University	
AN ECONOMIC DECISION-MAKING FRAMEWORK FOR PRICE BUNDLING OF RETAIL BANKING SERVICES	27
J. Bryan Hayes, Mississippi College Marcelo Eduardo, Mississippi College	
HOW ACCURATELY DOES THE CPI MARKET BASKET MEASURE RURAL HOUSEHOLD CONSUMPTION? A RESEARCH METHODOLOGY	39
Thomas A. Dukes, Christian Brothers University Sarah T. Pitts, Christian Brothers University Rob H. Kamery, Christian Brothers University	

MODELING INCREASED REPURCHASE INTENTIONS FOR HIGH-TECH B2B OFFERINGS	55
Gregory M. Kellar, Penn State University, Delaware County Michael W. Preis, Long Island University/C.W. Post Campus	
GENERATION Y: A BRIEF SYNOPSIS AND THEIR REACTION TO THE EVENTS OF SEPTEMBER 11 th	75
Robert D. Montgomery, University of Evansville M. Gale Blalock, University of Evansville Graham T. Paxton, University of Evansville	
THE EFFECT OF CULTURAL DIFFERENCES ON EFFECTIVE ADVERTISING: A COMPARISON BETWEEN RUSSIA AND THE U.S.	89
Danny L. Rhodes, Anderson College Charles R. Emery, Lander University	
DIFFERENCES IN CHARISMA, ETHICS, PERSONALITY, AND MACHIAVELLIAN CHARACTERISTICS OF MALE AND FEMALE MARKETING STUDENTS	107
J. Mike Rayburn, The University of Tennessee at Martin John Overby, The University of Tennessee at Martin Kevin Hammond, The University of Tennessee at Martin	

MANUSCRIPTS

A HAZARD FUNCTION APPROACH TO MODELING CONSUMER SEARCH

Peggy Choong, Niagara University

ABSTRACT

This study recognizes the stochastic element in the consumer search process and develops a stochastic model of search termination that incorporates the effects of time elapsed since commencing search, individual and product characteristics and unobserved heterogeneity.

Results indicate substantial duration dependence. Perceived benefits of search, size of the evoked set and the quality of past experience are found to be important determinants of the hazard function. This study highlights the importance of accounting for unobserved heterogeneity and the sensitivity of the parameter estimates to the specification of its distribution.

INTRODUCTION

What causes a customer to terminate his search process and purchase? This is a pervasive question faced by numerous marketing managers. Many studies have documented the effects of consumer characteristics on the extent of information search for durable products as well as patterns of search across information sources (Punj & Staelin, 1983; Kiel & Layton, 1981; Furse, Punj & Stewart, 1984; Beatty & Smith, 1987; Srinivasan & Ratchford, 1991; Putsis & Srinivasan, 1994). However, to date, there has been little significant work documenting the termination of consumer search and final purchase. In addition, contemporary marketing literature on the extent of search does not explicitly model the fact that the duration of search is a stochastic process. Thus, a consumer may terminate search early if he/she got lucky and chanced on a good deal early in the search process or he/she may be unlucky and not obtain an acceptable offer until late in the search. A complete model of search behavior would account for this stochastic element.

Another shortcoming of the literature on search is that it fails to model the possible effects of unobserved heterogeneity. The most common method of accounting for observed heterogeneity is to include consumer, retailer and product characteristics in the model, and to estimate how the measured extent of search varies with these variables. However, given the difficulty of determining and measuring these characteristics, there are likely to be many variables that affect search that are unmeasured. A complete model of search behavior would explicitly model the effect of this unobserved heterogeneity, and failure to do so may contaminate the estimates of the included variables (Heckman & Singer, 1984).

This study focuses on the rate of search termination and its determinants, using a stochastic model of search within the framework of a conditional hazard function. The probability of search termination is modeled as a function of the duration of search, measured consumer characteristics and unobserved factors.

HAZARD FUNCTION

Hazard function models have been used extensively in economics and statistics literature especially in the areas of research on job search, employment and unemployment (Jones, 1988; Lancaster, 1985; Flinn & Heckman, 1982). It has been used in a study on inter-purchase timing in marketing (Jain & Vilcassim, 1991) but never in the area of search. Since the hazard function can be thought of as the rate at which an event occurs, its application in this area of search termination is very appropriate.

For the purpose of this study, let the random variable T be the time a consumer spends searching for external information before purchasing an automobile. Duration T spans between the interval $[0, \infty)$. The hazard function $\lambda(t)$ can therefore, be defined as:

$$(1.) \quad \lambda(t) = \lim_{\Delta t \rightarrow 0} \frac{\Pr(t < T < t + \Delta t | T > t)}{\Delta t}$$

Equation 1 indicates that the hazard function simply specifies the instantaneous rate of search terminating at time t , given that the consumer is still searching at t . In other words, conditional on the consumer not having purchased, the hazard function measures the likelihood of search ending at time t .

The hazard function is a convenient method of organizing, testing and interpreting data in cases where conditional probabilities are theoretically or intuitively appealing. The basic requirements of the hazard function are non-negativity and finiteness. This makes it less stringent than the requirements of probability distributions, which are required not only to be non-negative but also to sum or integrate to unity.

Since there are likely to be individual differences in the rate of terminating search, how individual characteristics enter into the hazard model needs to be specified. Also, since identifying all relevant characteristics is difficult, if not impossible, unobserved or unmeasurable heterogeneity needs to be taken into account. Accordingly, the conditional hazard, conditioned on a vector of consumer characteristics \mathbf{X} , and on unmeasured heterogeneity θ is specified as (Flinn & Heckman, 1982; Heckman & Singer, 1984):

$$(2.) \quad \lambda(t | \mathbf{X}, \theta) = \lambda_0(t) \phi(\mathbf{X}, \beta) \psi(\theta),$$

where λ_0 is the baseline hazard corresponding to $\phi = \psi = 1$; β is a vector of parameters corresponding to the consumer characteristics X ; θ is unobserved heterogeneity. The observed and unobserved heterogeneity act multiplicatively on the hazard function and in effect serve to shift the hazard from its baseline.

For the specification of the measure of covariates, the commonly used form is adopted:

$$(3.) \quad \phi(X, \beta) = \exp[X\beta]$$

Since the expression $\exp(\cdot)$ is always positive, the hazard function is automatically non-negative and finite for all X and β . Following Heckman and Singer (1984) the unobserved heterogeneity shall be specified as follows:

$$(4.) \quad \psi(\theta) = \exp(c\theta)$$

where θ is the individual heterogeneity that remains constant within each spell and c is the associated coefficient.

Finally, the baseline hazard is parameterized in as general a form as possible. To this end, the Box-Cox formulation is adopted because the most commonly used probability distributions are nested within this general form (Cox, 1972).

$$(5.) \quad \lambda_0(t) = \exp\left[\gamma_0 + \sum_{j=1}^J \gamma_j \frac{(T^{\epsilon_j} - 1)}{\epsilon_j}\right]$$

The baseline hazard captures the time elapsed since embarking on search and T is the duration of search. Here again, the expression $\exp(\cdot)$ ensures the non-negativity of the baseline hazard and, hence, the hazard. Two commonly used distributions in studies on duration, namely the Weibull and Erlang-2, are used in this study. These are nested in the Box-Cox formulation and statistical tests can, therefore, be performed to test their suitability. Table 1 illustrates restrictions on the parameters in Equation (5.) and the resulting probability distribution.

Table 1: Restrictions on Parameters in Equation (5) and the Resulting Probability Distribution			
Restrictions		Baseline Hazard	Corresponding Probability Distribution
1.	$\gamma_k = 0 \quad k^3 1$	$\exp(\gamma_0) = \text{constant}$	Exponential
2.	$\epsilon_1 = 0; \epsilon_k = 0 \quad k^3$ $\gamma_1 = 1; \gamma_k = 0 \quad k^3 2$	$\exp(\gamma_0 + \gamma_1 \ln t)$	Weibull
3.	$\epsilon_1 = 1; \epsilon_2 \in \mathbb{R}; \epsilon_3 = 2$ $\gamma_1 < 0; \gamma_2 = 1$ $\gamma_3 = \gamma_1^2; \gamma_k = 0 \quad k^3 4$	$\exp[(\gamma_0 - \gamma_1 - \gamma_1^2/2) + \ln t + (\gamma_1^2/2)t^2]$	Approximately Erlang-2

ESTIMATION

Defining $Y = (\gamma_0, \gamma_1, \beta, c)$, the method of maximum likelihood is used to estimate Y . The likelihood function of Y for individual i on θ is, therefore, given by:

$$(6.) \quad L_i(Y | \theta) = [f(t_i | \theta)]$$

Substituting for $f(t | \theta)$ into the above equation and assuming the covariates remain constant during the search, we obtain the following conditional likelihood function:

$$(7.) \quad L_i(Y | \theta) = [\lambda(t | X, \theta) \exp(-\int_0^t \lambda(u | X, \theta) du)]$$

By integrating over the distribution of θ , the nuisance term u is eliminated. Therefore, the unconditional likelihood function $L_i(Y)$ is given by:

$$(8.) \quad L_i(Y) = \int_{\theta} L_i(Y | \theta) dG(\theta)$$

Parameter estimates are obtained by maximizing the likelihood function across all N individuals in the sample:

$$(9.) \quad L(Y) = \prod_{i=1}^N \int_{\theta} [\lambda(t | X, \theta) \exp(-\int_0^t \lambda(u | X, \theta) du) dG(\theta)]$$

The specification of $G(\theta)$ is approached in two ways. First, following past research a standard normal distribution is adopted (Massy, Montgomery & Morrison, 1970). Second, a non-parametric approach is used in which the structural parameters and the distribution of the unobserved covariates of the model are jointly estimated. Results for the two approaches will be compared.

Estimates of the parameters are obtained through an iterative maximum likelihood procedure using the CTM (Continuous Time Model) program developed by George Yates at the National Opinion Research Institute (NORI), Chicago, Illinois. Non-parametric estimation of the unobserved heterogeneity requires the joint estimation of Y and the cluster points $\theta_1, \dots, \theta_s$. Estimates obtained through the iterative likelihood procedure are consistent (Amemiya, 1985). To ensure that global optimality is obtained, the iterative program is applied to different sets of starting values. When the final estimates are nearly identical, global optimality is concluded to have been achieved (Yi, Honore & Walker, 1987).

DESCRIPTION OF COVARIATES

Search is defined as the effort directed toward the acquisition of marketer and non-marketer dominated information from the external environment. It begins when need triggers the serious consideration of a purchase and ends with the actual purchase transaction (Beatty & Smith, 1987; Srinivasan & Ratchford, 1991). The hazard rate is modeled as the dependent variable. In essence, the hazard can be thought of as the rate of terminating search and is inversely related to duration.

Based on a general knowledge of the automobile market and from current marketing literature on search behavior, motivational determinants of search that would influence the distribution of the hazard function are identified. The variables included in the study are consumer, product and demographic factors. Variable names are included in parenthesis.

- (1.) *Amount of Experience (AMOUNT, +)* is defined as the number of new automobiles purchased in the last ten years. Consumers who have experience in buying cars are likely to develop simplifying procedures that reduce the amount of time required to reach a decision (Alba & Hutchinson, 1987; Johnson & Russo, 1984; Furse, Punj & Stewart, 1984). By being more efficient, the amount of time spent by the consumer in searching for external information is reduced. Duration of search is, therefore, reduced, and it is posited that the amount of experience is positively related to the hazard function.
- (2.) *Perceived Risk (RISK, -)* is a measure of the consumer's belief of the chance of incurring a physical, financial, performance and convenience loss (Peter & Ryan, 1976; Peter & Tarpey, 1975; Srinivasan & Ratchford, 1991). The higher a consumer's perceived risk of making a wrong choice, the greater is the duration of search. Hence, perceived risk is negatively related to the hazard function.
- (3.) *Evoked Set (EVOKE, -)* is the number of models included in the individual's consideration set. A larger set would require more extensive information search as opposed to a smaller set, thereby leading to an extended duration of search. Evoked set is, therefore, hypothesized to be negatively related to the hazard function.
- (4.) *Perceived Benefits of search (BENFT, -)* is a measure of a consumer's perception of potential gains from search. For example, the consumer may benefit in the form of obtaining a better price or a more satisfactory model. A greater perception of the benefits of search would drive the consumer toward more extensive search.
- (5.) *Interest (INTRST, -)* in the product class would result in more time spent collecting information (Maheswaran & Sternthal, 1990). The rate of terminating search is, thereby reduced. Interest is, therefore, hypothesized to be negatively related to the hazard function.
- (6.) *Knowledge (KNO, +)* is the knowledge and understanding that an individual has of a product within a particular product class. It enables the person to process information more efficiently by excluding irrelevant information (Bettman & Park, 1980; Johnson & Russo, 1984; Beatty & Smith, 1987; Urbany, Dickson & Wilkie, 1989; Brucks & Schurr, 1990). Duration of search is thereby shortened, and product class knowledge is, therefore, posited to be positively related to the hazard function.
- (7.) *Positive experience (EXPER, +)* with the product reflects the quality of past experience with the previous car and the dealer or manufacturer. A positive experience builds feelings of trust and confidence toward the manufacturer and/or dealer and impacts positively on decision making in that product category. Positive experience manifests itself in simplified decision processes often based on simplistic rules (such as purchasing the same brand of car or buying from the regular dealer). This is similar to what Bettman and Zins (1977) refer to as "preprocessed choice." Therefore, we expect greater amounts of positive experience to be accompanied by shorter durations of search. In other words, positive experience is positively related to the hazard function.

- (8.) *Price (PRICE, -)*. This is defined as the net price after taxes. Consumers tend to spend a long time searching for items of higher value (Kiel & Layton, 1981). The higher the price of the automobile, the more extended the duration of search. Price is posited to be negatively related to the hazard function.
- (9.) *Discount (DISCOUNT, +)*. This is the combined total manufacturer and dealer discounts. Discounts act as incentives to purchase. Larger discounts would encourage consumers to terminate search and complete the purchase transaction. Therefore, large discounts are associated with higher rates of terminating search, and the covariate is hypothesized to be positively related to the hazard function.
- (10.) *Age (AGE, +)* reflects the lifestage of an individual. Hempel (1969) and Srinivasan and Ratchford (1991) have shown that older individuals tend to engage in less search. In other words, their duration of search is smaller. Hence, age is hypothesized to be positively related to the hazard function.
- (11.) *Education (EDU, -)* is used as a proxy measure of an individual's ability to collect, process and use external information (Newman & Staelin, 1972; Ratchford & Srinivasan 1993). More educated consumers tend to engage in extended search, thereby, leading to higher durations of search. Education is, therefore, negatively related to the hazard function.

While all attempts have been made to adequately measure and include variables that might account for heterogeneity, it is expected that there remain some factors which are unaccounted for or unmeasurable. The heterogeneity factor, c , captures these unexplained effects and leaves the estimated parameters unbiased.

DATA

The data set used in this study is a subset of a data set obtained through a mail survey of people who registered new cars in a northeastern SMSA. The questionnaires elicited response from the person mainly responsible for buying the new car. After eliminating all cases with any missing data, 1024 usable cases remained representing a response rate of 46%. These were employed in the analysis.

The measure of time spent searching in this data set is the sum of self-reported time spent in the search process on the following categories: talking to friends/relatives, reading books/magazine articles, reading/listening to ads, reading about car ratings in magazines, reading automobile brochures/pamphlets, driving to/from dealers, looking around showrooms, talking to salespersons, test driving cars.

DISCUSSION

Equation (9.) is estimated using the iterative maximum likelihood procedure. While several commonly used distributions for the hazard function were estimated, the Weibull hazard gave the best results. Results for this model are displayed in Table 2. This table reports results for three different specifications of the unobserved heterogeneity factor, namely a specification that does not account for unobserved heterogeneity, another that assumes standard normality, and finally a

non-parametric specification that represents heterogeneity in terms of a discrete distribution of mass points.

In estimating the non-parametric specification, the end points of the interval over which the support points are estimated are fixed at 0 and 1, and other support points between these are determined in estimation. Also, the probability mass associated with each point is estimated. In estimation, support points are added one at a time until two points become clustered at approximately the same location. In the analysis, five support points are required to adequately estimate the underlying probability distribution. The estimated support points are 0, 0.33, 0.55, 0.75 and 1.00 with associated probabilities of 0.0264, 0.1392, 0.3194, 0.3924 and 0.1226 respectively.

Effects of Time on Search Termination

Looking across the columns in Table 2, the duration term (coefficient of $\ln t$) is seen to be significant at the 0.001 level. It takes on the values of 0.25, 0.54 and 3.36 under the no heterogeneity, standard normal and non-parametric specifications respectively.

The hazard is positively related to $\ln t$ in Table 2, implying that the longer the time elapsed while searching, the greater is the likelihood of terminating search. For the non-parametric heterogeneity case, the estimated coefficients of $\ln t$ exceeds one, implying that the second derivative of the hazard with respect to time is positive, which means that the hazard increases at an increasing rate.

Effects of Covariates on Search Termination

The covariates with the strongest effects on the duration of search are perceived benefits of search and size of the evoked set, both of which tend to lower the hazard and lengthen the search. As expected, both amount and type of experience are associated with an increased hazard, and hence a shorter duration of search. The effect of the covariate interest is significant at the 0.001 level. Interest in a certain product class encourages more external search for information. Past research indicate that knowledgeable consumers experience pleasure in collecting and processing information (Maheswaran & Sternthal, 1990). The results are similar to Srinivasan and Ratchford (1991) who have shown that the interest a consumer has for a certain product class is a major motivator of search. It follows, then, that greater interest leads to a lower probability of terminating search or lower hazard values.

Table 2: Parameter Estimates

Variables	(a) No Heterogeneity	(b) Standard Normal	(c) Non-Parametric
Intercept	4.570++++ (0.307)	22.798++++ (0.744)	9.052++++ (0.528)
Int	0.249++ (0.029)	4.426++++ (0.167)	3.356++++ (0.179)
KNO (+)	0.885++ (0.383)	4.921++++ (0.579)	3.688++++ (0.621)
EXPER (+)	1.225++++ (0.336)	1.206++ (0.509)	6.261++++ (0.601)
AMOUNT (+)	1.085++++ (0.309)	0.461 (0.490)	2.695++++ (0.554)
RISK (-)	-0.453 (0.272)	-2.219++++ (0.478)	-1.279++ (0.566)
EVOKE (-)	-2.459++++ (0.329)	-13.913++++ (0.687)	-11.752++++ (0.675)
BENFT (-)	-3.588++++ (0.305)	-16.371++++ (0.684)	-14.438++++ (0.782)
INTRST (-)	-0.830++++ (0.181)	-2.558++++ (0.235)	-1.705++++ (0.376)
PRICE (-)	-1.259+++ (0.392)	-1.054+ (0.548)	-1.437+++ (0.596)
DISCOUNT (+)	0.964++ (0.427)	1.412++ (0.589)	3.009++++ (0.651)
AGE (+)	1.150++++ (0.325)	7.199++++ (0.527)	3.440++++ (0.596)
EDU (-)	0.618+ (0.339)	2.892++++ (0.493)	0.865 (0.524)
HETEROGENEITY FACTOR (c)	-	3.887++++ (0.128)	14.305++++ (0.642)
Negative Log Likelihood	1624.39	1617.64	1606.0

Standard errors are in parentheses.

++++ Significant at the p=0.001 level;

+++ Significant at the p=0.02 level;

++ Significant at the p=0.05 level;

+ Significant at the p=0.1 level.

While these results are in general agreement with past studies of search effort for automobiles, our study has the advantage of controlling for changes in the hazard through time, and for unmeasured heterogeneity. The estimated effect of several of the covariates changes considerably when heterogeneity is taken into account, indicating that it is important to control for unmeasured heterogeneity when studying the determinants of search.

The heterogeneity factor, c , shown in Table 2 is significant at the 0.001 level in both the standard normal and non-parametric specifications, thereby rejecting the null hypothesis of no heterogeneity. This implies that unobserved heterogeneity has a positive impact on the hazard function and if unaccounted for will contaminate the parameter estimates (Heckman & Singer, 1984). While the more flexible non-parametric model yields a higher log likelihood than the model with normal heterogeneity, the two models are not nested, and no formal significance test for their difference was run.

CONCLUSION

This study attempted to model the stochastic nature of search. One of its contributions is to provide a framework within which three distinct effects on the hazard function can be examined. They are the effects of time, the influence of observed product and consumer motivational factors and the significance of unobserved or unmeasured heterogeneity.

The results show significant amounts of duration dependence and point to duration as a major determinant of the rate of terminating search. The effects of time elapsed since commencing search is biased when unobserved heterogeneity is not taken into account.

Another important finding relates to the magnitude and nature of the unobserved heterogeneity. This component is found to be highly significant and exerts substantial impact on the parameter estimates. The results highlight the importance of accounting for unobserved heterogeneity and the sensitivity of parameter estimates to the specification of its distribution. Problems associated with the assumption of standard normality for the unobserved heterogeneity are also presented.

Covariates that exert the largest impact on the hazard function are found to be the perceived benefits of search and the size of the evoked set. Price and amount of discount are also found to be significant. Of the demographic characteristics, age is found to be positively related to the hazard while education is not significant.

Due to the nature of the data, this study restricts itself to a single spell. Assuming that consumers build up an inventory of knowledge and experiences, which impact on future actions and choices, it would be interesting to build and estimate a model incorporating several spells.

REFERENCES

- Alba, J. B. & Hutchinson J. W. (1987). Dimensions of consumer expertise. *Journal of Consumer Research*, 13, 411-454.
- Amemiya, T. (1985). *Advanced econometrics*. Cambridge, MA: Harvard University Press.
- Bayus, B.L. (1991). The consumer durable replacement buyer. *Journal of Marketing*, 55, 42-51.
- Beatty, S. E. & Smith S.M. (1987). External search effort: An investigation across several product categories. *Journal of Consumer Research*, 14, 83-95.
- Bettman, J. & Park C. W. (1980). Effects of prior knowledge and experience and purchase of the choice process on consumer decision processes: A protocol analysis. *Journal of Consumer Research*, 7, 234-248.
- Bettman, J. & Zins M. (1977). Constructive processes in consumer choice. *Journal of Consumer Research*, 4, 75-85.
- Brucks, M. & Schurr P. (1990). The effects of bargainable attributes and attribute range knowledge on consumer choice processes. *Journal of Consumer Research*, 4, 409-419.
- Bucklin L.P. (1969). Consumer search role: Enactment and market efficiency. *Journal of Business*, 42, 416-438.
- Cox D.R. (1972). Regression models and life-tables. *Journal of Royal Statistical Society*, 34, 187-200.
- Flinn, C. & Heckman J. (1982). Models for the analysis of labor force dynamics. *Advances in Econometrics*, 1, 35-95.
- Furse, D. H., Punj G. N. & Stewart D. W. (1984). A typology of individual search strategies among purchasers of new automobiles. *Journal of Consumer Research*, 10, 417-427.
- Heckman, J. & Singer B. (1984). A method for minimizing the impact of distributional assumptions in econometric models for duration data. *Econometrica*, 52, 271-320.
- Jain, D. C. & Vilcassim N. J. (1991). Investigating household purchase timing decisions: A conditional hazard function approach. *Marketing Science*, 10, 1-13.
- Johnson, E. C. & Russo J. E. (1984). Product familiarity and learning new information. *Journal of Consumer Research*, 11(June), 542-550.
- Jones, S. (1988). The relationship between unemployment spells and reservation wages as a test of search theory. *The Quarterly Journal of Economics*, 743-765.
- Kiel, G. C. & Layton R. A. (1981). Dimensions of consumer information seeking. *Journal of Consumer Research*, 8, 233-239.
- Lancaster, T. (1985). Simultaneous equations models in applied search theory. *Journal of Econometrics*, 28, 113-126.
- Lancaster, T. (1990). *The Econometric Analysis of Transition Data*. New York: Cambridge University Press.

-
- Maheswaran, D. & Sternthal, B. (1990). The effects of knowledge, motivation and type of message on ad processing. *Journal of Consumer Research*, 17(1), 66-73.
- Marmorstein, H., Grewal D. & Fiske R. (1992). The value of time spent in price-comparison shopping: Survey and experimental evidence. *Journal of Consumer Research*, 19, 52-61.
- Massey W. F., Montgomery D. G. & Morrison D.G. (1970). *Stochastic models of buying behavior*. Cambridge, MA.: MIT Press.
- Newman, J. W. & Staelin R. (1972). Prepurchase information seeking for new cars and major household appliances. *Journal of Marketing Research*, 9, 249-257.
- Peter, P. J. & Ryan M. J. (1976). An investigation of perceived risk at the brand level. *Journal of Marketing Research*, 13, 186-188.
- Peter, P.J & Tarpey, Sr., L. X. (1975). Comparative analysis of three consumer decision strategies. *Journal of Consumer Research*, 2, 29-37.
- Punj, G.N. & Staelin R. (1983) A model of consumer search behavior for new automobiles. *Journal of Consumer Research*, 9, 366-380.
- Putsis, W. & Srinivasan, N. (1994). Buying or just browsing? The duration of purchase deliberation. *Journal of Marketing Research*, 31, 393-402.
- Ratchford, B. T. & Srinivasan, N. (1993). An empirical investigation of returns to search. *Marketing Science*, 12, 73-87.
- Srinivasan, N. & Ratchford, B. T. (1991). An empirical test of a model of external search for automobiles. *Journal of Consumer Research*, 18, 233-241.
- Urbany, J., Dickson P. & Wilkie W. (1989). Buyer uncertainty and information search. *Journal of Consumer Research*, 16, 208-215.
- Vilcassim, N. J. & Jain D. C. (1991). Modeling purchase-timing and brand-switching behavior incorporating explanatory variables and unobserved heterogeneity. *Journal of Marketing Research*, 28, 29-41.
- Yi K.M., Honore B. & Walker J. (1987). *Program for the estimation and testing of continuous time multi-state multi-spell models, user's manual*, program version 50. Chicago, Ill: National Opinion Research Center.

CELEBRITY ENDORSERS: SPOKESPERSON SELECTION CRITERIA AND CASE EXAMPLES OF FREDD

Robert A. Swerdlow, Lamar University
Marleen R. Swerdlow, Lamar University

ABSTRACT

Famous personalities have been used to endorse products for many years. When considering the choice of using a famous spokesperson, a marketing manager must understand the advantages and disadvantages of using celebrity endorsers. A good celebrity-product association can capture a viewer's attention, increase the public's awareness of the product, and cause consumers to purchase the product endorsed. However, a bad celebrity-product association can be very costly and risky depending on the potentially volatile image, nature, and credibility of the spokesperson used. Marketing research has found several models for evaluating celebrities as potential endorsers. FREDD, developed by Young and Rubicam Agency, is a helpful tool for assessing the best characteristics of a celebrity as a potential product endorser. Cases are presented to develop the FREDD assessment.

INTRODUCTION

Businesses have long sought to distract and attract the attention of potential customers that live in a world of ever-increasing commercial bombardment. Everyday Americans are exposed to thousands of voices and images in magazines, newspapers, and on billboards, websites, radio and television. Ads of all varieties pop up everywhere on streets, in stores and restaurants, and on public transportation. Each of these ads attempts to steal at least a fraction of an unsuspecting person's time to inform him or her of the amazing and different attributes of the product at hand. Because of the constant media saturation that most people experience daily, they eventually become numb to standard advertising. The challenge of the advertiser is to find a hook that will hold the subject's attention and keep them from changing the channel or turning the page.

One well-used approach at differentiating advertisements is the use of celebrity endorsements. Celebrities are seen as dynamic individuals with likeable and attractive qualities. The words and sometimes just the image of a popular person will cause many people to stop and pay attention. For years, professional athletes, famous actors, and musicians have been the traditional favorites to feature in advertisements. As the ad market continues to grow and competition becomes fiercer, marketers have turned to new categories of celebrity spokespersons. Notable ex-politicians,

successful mutual fund managers, and high-profile CEO's are now used with frequency to sell a variety of products. Celebrity endorsers also need not be human. A champion racehorse sells pet food in Great Britain. Cartoon characters like Bugs Bunny and Fred Flintstone sell network television and breakfast cereals in America. Puppets such as Big Bird sell children's vitamins (Miciak & Shanklin, 1994). New categories for celebrity endorsers are opening every day as the reach of the media moves closer to home.

Some advertisers even create their own celebrity to sell their product. Subway Sandwiches made a celebrity out of one of their loyal customers. Their spokesman, Jared whose only claim to fame is consuming mass quantities of Subway sandwiches, has been featured in magazines and on various television shows. Dell Computer has created a fictionalized slacker character to represent their products. After a series of successful television spots, the actor who plays 'Steven' has become a celebrity himself appearing on news and other programs.

Using celebrity fame, bought or contrived, has certain advantages and risks. A celebrity-product association can capture a viewer's attention, increase the public's awareness of the product, and cause consumers to purchase the product endorsed. In contrast, celebrity-products associations can be very costly and risky based on the potentially volatile image, nature, and credibility of the spokesperson used.

Beginning with a review of the literature, we explore the history and the pros and cons of using a celebrity to endorse a manufacturer's product or service. After assessing the advantages and disadvantages of celebrity endorsements, a company will decide whether or not to use a celebrity in their marketing plan. From here the question of which celebrity to use can be answered using several different methods. We discuss different criteria and examine them with several current examples. The choice of the right celebrity can mean the difference between an effective and ineffective advertising campaign.

LITERATURE REVIEW

Kamins (1989) defines a celebrity endorser as "an individual who is known to the public for his or her achievements in areas other than that of the product endorsed". While this statement fits most cases, it excludes some fictional and contrived endorsers (e.g. The Dell Dude) that have gained enough popularity to be classed as celebrities. McCracken (1989) offers a more complete definition: "any individual who enjoys public recognition on behalf of a consumer good by appearing with it in an advertisement".

Celebrity endorsing has been used as a tool for promoting brand awareness for over one hundred years. One of the first signs of the potential marketing power of celebrities was discovered in the late 1800's. Goodwin & Co, who produced Gypsy Queen, Old Judge, and other well-liked cigarette brands, have been credited as the first company to issue tobacco baseball card on a large scale. This New York firm devised this innovative marking strategy in order to gain a competitive

edge on its rivals. They soon realized the potential of inserting baseball cards directly into packets of cigarettes and quickly added other famous celebrities ranging from actresses to boxers. The age of the celebrity endorser was here to stay (Rudd, 2002).

During the past one hundred years, the commercial use of celebrities has evolved from simple cigarette cards to multi-media messages with million-dollar contracts (Agrawal & Kamakura, 1995). The variety of celebrity endorsers has been transformed from a few baseball players and athletes and now encompasses men, women, boys, and girls from the worlds of sports, films, television, radio, music, and obscurity (McCracken, 1989).

There have been numerous reports regarding the effects that celebrity endorsers have on consumer product perception and attitudes (Zollo, 1999; Ohanian, 1991, McCrackan, 1989; Berkowitz, 1995; Wentz, 2002; Papiernik, 2002). Reasons companies use celebrity endorsers to promote a company's product include cognitive product recall (Bonnett, 2002; Rescoe, 1980; Friedman & Friedman, 1979), product credibility (Rescoe, 1980; Kamins et al., 1989; Bonnett, 2002), product image and loyalty (Veltri, 1998), and improve corporate profits (Agrawal & Kamakura, 1995).

With some evidence indicating that consumers are more likely to purchase goods and services that have been endorsed by celebrities than goods and services not endorsed by a celebrity (Dyson & Turco, 1998; Agrawal & Kamakura, 1995), celebrity endorsers are now visible on every advertising medium: television, radio, billboards, and magazines (Redenbach, 1999). Companies are using celebrities to promote a range of goods from mobile phones, video games, to sports drinks. However, due to research results showing that effective product endorsement is directly related to the perceived expertise of celebrity with the product, for example, Tiger Woods and golf clubs, companies are now starting to become more selective in their choice of celebrities (Ohanian, 1991). Simply picking the latest hot celebrity without a thorough understanding of the product target market, celebrity appeal within that market, and in-depth research is a recipe for disaster, as many companies have discovered (McCracken, 1989; Osorio, 2002). There are many variables that companies need to be aware of when they are considering a celebrity endorser. However, it is generally accepted that the celebrity's image should be congruent with the product message (Kamins, 1990; Kahle & Homer, 1995; Ohanian, 1991; Dyson & Turco, 1998).

ADVANTAGES OF CELEBRITY ENDORSEMENTS

Companies can no longer afford to offer a 'one style fits all' approach to their products. With increased competition, differentiation becomes vital to future business. During the 2002 World Cup, Nike aired an advertising campaign that encompassed all of the pros of celebrity endorsements. The Nike World Cup ads can be found at <http://www.nikesoccer.com>. To be considered effective, a celebrity endorser should be able to do the following.

◆	Capture the viewer's attention (Dyson & Turco, 1998; Miciak & Shanklin, 1994; Swerdlow, 1984)
◆	Increase product awareness (Wilson, 1997)
◆	Influence the purchase decisions of the target market (Ohanian, 1991)

As products have become more generic and media clutter has increased, celebrity endorsements have become a favored method of capturing the target market's attention. An easily recognizable figure or team who generates excitement can cut through the clutter and will draw attention to the product more than an unknown person or a faceless ad (Miciak & Shanklin, 1994). Once that attention is captured it is up to the content of the ad, or the charisma of the celebrity, to sell the product. In Nike's ad campaign that ran during the 2002 World Cup series, all of the people in the ad were soccer stars, dressed in Nike soccer apparel, playing in an "underground tournament". This immediately attracted the attention of the target market: soccer players.

The second advantage of celebrity endorsements is to increase product awareness. Awareness is the first step in the purchase process. If the target market is not aware of your product the chances of them buying it are nil. This can be accomplished with any supplemental advertising, however a celebrity attached to your brand name will increase the likelihood of product recall as well as infuse your product with the charisma and success associated with the celebrity (Wilson, 1997). If the audience did not know before seeing the soccer ad that Nike made soccer apparel, they do now. Anytime a 12-year old boy goes to buy a soccer jersey, he will remember that Ronaldo wore a blue Nike shirt in the commercial.

Increasing product awareness has always been a high priority for companies. In a study by Copeland, Frisby, and McCarville (1996), twenty-two companies were asked to select the most important criteria from thirty-seven selections. The results showed that increased product awareness was the second most important reason companies choose celebrity endorsers (Wilson, 1997).

The ability to influence purchase decisions is the third advantage of celebrity endorsements. This is where having a direct correlation between product and the celebrity of the spokesperson is most important. If the spokesperson is not seen as credible or as an expert on the product, the pitch will fall short and not resonate with the target audience. The endorsement will also infuse the product with the charisma and success of the celebrity, inciting the target audience to purchase the product to equate them with the celebrity. Audiences are less likely to buy a product or service from someone who has no relation to the product. Ohanian (1991) found empirical evidence that the perceived expertise of the endorser has a direct effect on the customer's decision to purchase. She states, "consumers are more likely to purchase a product that has been endorsed by a celebrity, especially if the product attributes to the celebrity success." If the Nike ad had used a local high school soccer team on a losing streak, the ad would be less likely to influence purchase decisions.

DISADVANTAGES OF CELEBRITY ENDORSEMENTS

Although the use of celebrities to endorse products has become fairly commonplace and can lead to several advantages for the company, there continue to be hazards that can occur when using a celebrity endorser. The company must be aware of the potential problems when considering the use of celebrities to endorse its products, including:

◆	High costs to secure a celebrity endorser.
◆	Celebrity's image and public reputation.
◆	Multiple product endorsement by a celebrity.
◆	Credibility and effectiveness of the celebrity endorser.
◆	Vampirism.

The high costs to secure a celebrity endorser are of much concern to businesses. Many smaller businesses do not have the resources required to hire a celebrity spokesperson (Dyson & Turco, 1998). In many cases, the costs to have a celebrity endorse a product are far beyond the resources available to the company. For example, Pepsi paid Shaquille O'Neal \$25 million for endorsement of its cola, and Nike paid golfer Tiger Woods \$40 million to help its youth marketing campaign. For a small company, paying any celebrity, not just top-notch celebrities, is a huge financial risk (Dyson & Turco, 1998). If a problem should occur, the smaller company will experience a much greater loss on its investment than would a larger competitor.

Along with the high costs of endorsers, the celebrity's reputation and potential for negative publicity is also on the mind of the company. When the celebrity's image is tarnished by scandal, the company's asset may develop into a liability. In most cases, the negative image of the celebrity will transfer to the product and the company that was endorsed. This transfer of negative information occurs through a network of associative links that are formed by the customer (Till & Shimp, 1998). A customer's feelings of a celebrity are linked to the brand being endorsed through repeated association. This link can be detrimental when negative information about the celebrity goes public. When negative information about a celebrity presents itself, the customer's evaluation of that celebrity is lowered. In turn, this negative perception of the celebrity can lead to a lowered evaluation of the product that was endorsed (Till & Shimp, 1998).

The threat of a negative associative link due to the actions of a celebrity can be most harmful on a small business (Dyson & Turco, 1998). When Dallas Cowboy wide receiver Michael Irving was arrested in connection with drugs, several Toyota dealerships lost substantial amounts of money paid for commercials. Not only did the companies lose their initial investments, they had to expend more resources to replace Irving.

PepsiCo has also been involved with this type of negative association more than once. In 1989, Madonna was an endorser for Pepsi when her controversial "Like a Prayer" video debuted. The video contained images of the singer dancing in a field of burning crosses and stigmata were evident on her palms. Catholic groups had complaints regarding the Christian imagery displayed in the video. Even after Pepsi-Cola spokesman Todd McKenzie claimed that the company had no problem with the video, the company decided to discontinue its Madonna ad campaign in the United States (Haring, 1989).

Again in 1993, Pepsi suffered from more negative association due to celebrity scandal regarding Michael Jackson. Pepsi's association with Michael Jackson began in 1984. At that time, it was reported that the agreement would make Jackson the "richest pitchman on planet Earth" (Giles, 1993). In the early 1990s, the agreement between the cola company and the "King of Pop" cost Pepsi \$50 million to promote Jackson's tour. According to Giles (1993), Jackson had earned tens of millions of dollars for endorsing Pepsi products. However, with only four months of a 10-year commitment remaining, allegations of child sexual abuse were brought against Jackson (Larson, 1993). Pepsi was very cautious to proceed and had a detective agency investigate the allegations, adding more unexpected costs to the endorsement campaign. Given the publicity from early 2003, Pepsi was justified to have changed endorsements.

Hertz, the top car-rental company, is another company familiar with scandal featuring its celebrity endorser. In the 1980s, Hertz used O.J. Simpson as an endorser of its rental car services. Simpson was seen as a good pitchman for Hertz's speedy service because he was known for his speed (Ohanian, 1991). However, in 1989, the company was criticized for continuing to use Simpson after his wife-beating conviction. Hertz did learn from its mistakes, terminating its association with Simpson in June of 1994 after a warrant was issued for his arrest in connection with the murder of his ex-wife and a friend (*Brandweek*, 1994).

Another potential hazard with using celebrity endorsements occurs when the celebrity endorses more than one product (Dyson & Turco, 1998; Tripp, Jensen, & Carlson, 1994). Instead of associating a celebrity with a particular product, consumers may find it hard to identify a product based solely on which celebrity endorsed it (Dyson & Turco, 1998). By endorsing multiple products, a celebrity's image of trustworthiness can be jeopardized, along with the brand's image (Tripp, Jensen, & Carlson, 1994).

In a study conducted by Tripp, Jensen, and Carlson (1994), results showed that being exposed to multiple product endorsements by a celebrity did lead the customer to view the celebrity as "less trustworthy, expert, or likable and evaluate the ads more negatively". Regardless of whether the ad or the products were the same, exposure of the endorser to the consumer led to less favorable perceptions of the celebrity and the ad. For example, in the late 1980s, E.F. Hutton, a brokerage company, used Bill Cosby as a celebrity spokesperson. However, Cosby already represented several other products, and Hutton suffered from Cosby's overexposure (Marshall, 1987).

A lack of perceived expertise or credibility can make a celebrity endorsement less effective (Ohanian, 1991). The target customers must perceive the endorser as being an expert and someone to whom the consumer can relate. If the celebrity does not have a "direct connection" with the product being endorsed, there is less chance that the consumer will view the celebrity as a credible endorser (Ohanian, 1991). According to Tripp, Jensen, and Carlson (1994), a celebrity that endorses four or more products jeopardizes his image as being an "expert" of that product. Moreover, consumers also view the celebrity as less likable when four or more products were endorsed.

Vampirism is becoming another pitfall from which a company can suffer when using a celebrity endorser. Vampirism occurs when the celebrity becomes bigger than the brand that is being endorsed. This problem can be attributed to a limited number of celebrities with whom the consumers are familiar. However, by keeping the endorsements short-term and changing the celebrities who endorse the product, a company can help prevent the risk of vampirism (Jamnalal Bjj Institute of Management Studies, 2001).

CRITERIA FOR CELEBRITY SELECTION

Earlier last century, celebrities were asked to endorse a wide variety of products without much regard for the appropriateness of the relationship. Little research was used to determine an optimal fit between a famous person and the advertised product. At present, competition in most industries is more intense than ever and fees for celebrity appearances are rising. There are many choices of people to represent products. It is most important to the marketer to pick the person that will have the best influence on the buying public. For the last fifty years, marketing scholars and professionals have sought the key to finding the perfect celebrity endorser.

Ohanian (1991) states that source credibility is the most important characteristic in selecting a celebrity endorser. Source credibility breaks down into three dimensions: expertise, trustworthiness, and attractiveness. Expertise is the perceived validity of the assertions made by the celebrity. This connection is often made by a previous association of the person to the nature or aspect of the product. Famous chefs endorse food products, athletes endorse athletic shoes, musicians endorse stereo equipment, etc. Trustworthiness is the confidence that the consumer has in the celebrity regarding honesty and objectivity. Often people are skeptical when someone, especially an unknown person, is trying to sell them something. The more trust they have invested in a public figure, the less suspicious they will be about the qualities of the product being endorsed. Attractiveness, though a very subjective matter, is also important in an effective celebrity endorsement. Beauty is in the eye of the beholder, or target market. Studies have been done that indicate physically attractive people communicate messages better than unattractive people (Chaiken, 1972).

Source attractiveness is another model used to evaluate a celebrity for a fit with a product. The dimensions are: similarity, familiarity, and liking of the person. Similarity is the degree to

which the celebrity resembles the target market. Familiarity is how well the market knows the celebrity. Liking refers to how much the target market likes the celebrity based on looks and behavior (Erdogan, Baker, & Tagg, 2001).

Not all agree that source credibility and source attractiveness are the most important models to determine celebrity effectiveness. Empirical evidence finds the dimensions of trustworthiness and expertise of little importance to the consumer's decision (Swerdlow, 1984). Celebrities are complex individuals and their meaning beyond physical attractiveness within the culture of the target market should be considered most (McCracken, 1989). However, cultural meaning is difficult to rank and categorize and would therefore be hard for a practical marketing manager to utilize.

Miciak and Shanklin (1994) expand the source credibility criteria further than the three-dimensional model. From their study of ad agencies, a "base criteria" was found that should exist in any potential product endorser. The criteria were narrowed to trustworthiness, recognizability, affordability, low risk of negative publicity, and appropriate match with target audience. While these overlap somewhat with Ohanian's dimensions, they provoke more considerations to the choice.

The Young and Rubicam advertising agency conducted a survey of 30,000 people and 6000 different brands to study why brands succeed or fail. Their research results developed into the acronym: FRED (Osorio, 2002; Dyson & Turco, 1998; Miciak & Shanklin, 1994). Familiarity, relevance, esteem, and differentiation apply to the selection of celebrity endorsers as well. Miciak and Shanklin (1994) suggest adding proper decorum or deportment, which would make FREDD. Assessing these characteristics in potential product endorsers is a comprehensive way to find an effective spokesperson and limit the risk of advertising backfires.

<i>Familiarity</i>	The person should be easy to recognize and inoffensive to the target market.
<i>Relevance</i>	The person should "fit" the product in the perceptions of the target market.
<i>Esteem</i>	The person should have value within the target audience. This is usually accomplished by success, winning, or heroism.
<i>Differentiation</i>	The person should be distinct enough from other advertising to catch the eye of the target market.
<i>Decorum</i>	The person's past behavior should indicate that he/she would be an ongoing asset to the product campaign.

Using these celebrity endorser criteria, we follow with a discussion of five current advertising campaigns using different celebrities to highlight each of the characteristics of FREDD. As each of the products represented in these examples are from large, established multinational firms, it is assumed that extensive planning and corporate debate preceded the selection of each of the celebrity

endorsers. Each of the celebrity-product combinations below represents a good example of one of the FREDD dimensions.

FAMILIARITY - BRITNEY SPEARS FOR PEPSI

Britney Spears rose out of a mass of teen pop singers in the late 1990's and quickly become one of the world's most famous faces. Originally, her appeal was only to older children and teenagers. As her fame and record sales grew, she attracted a wider audience for a number of reasons, not just her music. Large record company promotions, movies, and heavy personal publicity have pushed Spears beyond the fame of the average pop singer. Having just been named number one on Forbes' Celebrity 100 (2002), an annual listing of the most powerful celebrities in the world, she is known to most people everywhere.

Spears began promoting Pepsi in 2000, as her fame among people older than 15 was still rising. Pepsi, in a competitive battle for market share with Coke, had targeted a young demographic in the hope that once young people drank Pepsi, they would continue throughout their lives. In frequent flashy print and television ads, especially a highly anticipated Superbowl spot, Spears promoted Pepsi by incorporating the brand into her skimpy outfits and songs. The ads are highly interactive and ask viewers and fans of Spears to vote for their favorite ads and participate in various games online. As Britney Spears is now very well known to the world, many people have become more familiar with the brand of Pepsi (Pepsiworld).

RELEVANCE - BILL FORD FOR FORD MOTORS

Ford is one of the most famous names in business and is also one of the largest companies in the world. Recently, Bill Ford, the great-grandson of founder Henry Ford, became C.E.O. amidst several very public scandals regarding the safety of Ford vehicles. Aside from restructuring the company, he is appearing in several television commercials for Ford. In these ads, Bill Ford talks about the values and reputation of his famous ancestor in relation to the Ford Company. The emphasis here is on his family history and his own interest in and knowledge of his company's products (*No Boundaries*, 2002).

As heads of companies become famous through business magazines and growing financial channels, more executives are becoming celebrity endorsers. From a standpoint of relevance, meaning fit between celebrity and product, they are excellent examples. It is a natural perception that the top person at a firm should embody the image and reputation of the product being promoted. There is another facet to relevance: the fit between the celebrity and the target audience. In this example, Bill Ford speaks to the mass of SUV buyers in the world by telling the story of his great-grandfather driving on camping trips with uncle Harvey Firestone, Thomas Edison, and "whoever was president at the time". Ford recalls his own love of the outdoors and how his

company invented the SUV (*No Boundaries*, 2002). While the actual difference between the C.E.O. of a multi-billion dollar company and the average SUV buyer is probably significant, Bill Ford as an expert and visible promoter of Ford products is particularly relevant.

ESTEEM - MICHAEL JORDAN FOR HANES

Hanes Corporation (<http://www.hanes.com>) calls itself the number one brand of apparel in the world and has recorded sales of over \$2 billion in 2001. Owned by parent corporation Sara Lee and based in Winston-Salem, North Carolina, Hanes brand casual apparel is sold to a wide audience around the world. In 1989, they began an endorsement relationship with an up and coming University of North Carolina basketball player named Michael Jordan.

Highly respected among many demographics for both his amazing athletic talents and for the calm, virtuous way he leads his life, he is certainly one of the most popular celebrity endorsers around. Since his rise in the late 1980's as one of the greatest athletes of all time, he has been sought after to endorse hundreds of products. He is best known for his contracts with Nike, Gatorade, Ray-O-Vac batteries, Warner Brothers, and Hanes underwear. His association with Hanes is now in its tenth year and the company is very pleased with the results of Jordan's endorsement (Hanes Press Release, 2002).

Jordan primarily endorses Hanes underwear, briefs and boxers. Promoting products that people are sensitive about requires a sense of maturity and respectability in the advertisements. The ads with Jordan are tasteful with a sense of humor. One of the reasons for the successful use of Michael Jordan for Hanes underwear is because many people admire his winning records, athletic abilities, personal class, and untarnished respectability. In essence, Jordan is a great endorser because of the high esteem that a wide audience of people have for him (Hanes: Locker Room).

DIFFERENTIATION - STEVEN FOR DELL COMPUTER

In the market for personal computers, the amount of firms has shrunk, but the competition is still fierce. Most firms use low-key advertising that emphasizes the complex features of their products and very little celebrity endorsement. Computers are a technical product with very similar features. As the price of computers comes down, the target market grows and becomes less tech savvy. The less knowledgeable buyer does not know the difference between one computer brand and the next.

Dell Computer, the largest of the remaining PC firms, launched an advertising campaign in early 2001 featuring an unknown actor playing a fictional Austin "slacker" called Steven or the Dell Dude. The television and print ads have been a success as 11 different commercials have been made. Also, the actor that plays Steven has become famous and has appeared on various talk shows and news programs (Dell: Steven's Site).

Dell has created their own celebrity and molded him to fit their specifications. Apparently, they are aiming at a younger market. Perhaps they are using the same strategy as Pepsi, developing loyal buyers at a young age. Dell has saved money by not contracting with a big name celebrity and has differentiated themselves from rivals Gateway and Compaq with a unique spokesman.

DECORUM - MARTHA STEWART FOR K-MART

In Martha Stewart's commercials, she is endorsing not only K-Mart, but also her own company, Martha Stewart Omnimedia's products. For years, Martha Stewart has been the model of success and proper living. Her company is largely an embodiment of herself. Her name is attached to every product her company produces from magazines to television programs to cut flowers to a wide variety of household items for sale at K-Mart. Martha Stewart, in the perception of the public, is the company (Martha Stewart Omnimedia). She is also the celebrity endorser.

As an endorser for Martha Stewart Everyday brand housewares and bed sheets, Stewart satisfied all of the criteria for a good celebrity spokesperson. She is very familiar to many household buyers. She has strong credibility and expertise in decorating and domestic organization. She is well thought of by those who watch her on television and read her magazines. She is unique in what she does and her products stand out over other brands of housewares (Walker, 2001).

By these measures, Martha Stewart is the perfect celebrity endorser for Martha Stewart products sold at K-Mart. However, with a scandal unfolding implicating her to insider trading and a connection to an indicted executive, Stewart's image as a virtuous businesswoman and public figure has been marred. The company is losing value as its spokesperson is losing her reputation. Despite her many positive characteristics, it is becoming clear that because of her decorum, Martha Stewart is no longer the best choice for K-Mart, and possibly Martha Stewart Omnimedia, as a celebrity endorser.

CONCLUSION

Utilizing famous personalities can be an effective method of promoting products. When considering the choice of which celebrity to use as a spokesperson, management must understand the advantages and disadvantages of using celebrity endorsers. If the choice is successful, the celebrity endorser will capture a viewer's attention from the clutter of daily advertising, increase the public's awareness of the product, and ultimately influence consumers to purchase the product. However, if the celebrity is carelessly chosen, the results can be costly and damaging. Associating with a famous person requires the assumption of the risks of poor image, irrational behavior, and questionable credibility of the spokesperson used. Marketing research has found several models to aid the marketing manager in evaluating celebrities as potential endorsers. FREDD, developed by the Young and Rubicam agency, is a helpful tool for assessing the best characteristics of a celebrity

as a potential product endorser. Understanding and being able to assess the familiarity, relevance, esteem, differentiation, and decorum of a famous individual in relation to the product being sold is vital to a successful advertising campaign.

REFERENCES

- Agrawal, J. & Kamakura, W. A. (1995). The economic worth of celebrity endorsers: An event study analysis. *Journal of Marketing*, 59, 56-62.
- Berkowitz, D. (1995). The impact of schemas on perceptions of celebrity endorsers and product affect. Southwestern Marketing Association Conference, spring. Retrieved from <http://www.sbaer.uca.edu/Research/1995/SWMA/95sma109.htm>
- Bonnett, M. M. (1982). *The effect of sports celebrity spokespersons on consumer buying habits*. Unpublished master's thesis, Beaumont, TX: Lamar University.
- Chaiken, S. (1979). Communicator physical attractiveness and persuasion. *Journal of Personality and Social Psychology*, 37, 1387-1397.
- Copeland, R., Frisby, W. & McCarville, R. (1996). Understanding the sport sponsorship process from a corporate perspective. *Journal of Sport Management*, 10, 32-48.
- Dell: Steven's Site. (n.d.). Retrieved June 10, 2002 from http://www.dell.com/us/en/dhs/topics/segtopic_steven_home.htm
- Dyson, A. & Turco, D. (1998). The state of celebrity endorsement in sport. *The Cyber Journal of Sport Marketing*, 2. Retrieved June 23, 2002, from <http://www.cjism.com/Vol2/dyson.htm>
- Ergoden, Z., Baker, M. & Tagg, S. (2001). Selecting celebrity endorsers: The practitioner's perspective. *Journal of Advertising Research*, 41, 39-48.
- Forbes Magazine*. (2002). The celebrity 100. Retrieved June 20, 2002 from http://www.forbes.com/static_html/celebs/2002.html
- Friedman, H. H., & Friedman, L. (1979). Endorser effectiveness by product type. *Journal of Advertising Research*, 19, 63-71.
- Giles, J. (1993, September 6). The risks of wishing upon a star. *Newsweek*, 122, 38.
- Hanes Press Release (2002). Retrieved June 10, 2002, from <http://www.hanes.com>
- Hanes: Locker Room commercial (n.d.). Retrieved June 10, 2002 from http://www.ads.com/ads/adInfo.jsp?ad_id=1523&us=373118&pt=0

-
- Haring, B. (1989, March 18). Amid controversy over 'prayer' video: Pepsi denies pulling Madonna spots. *Billboard*, 101, 4+.
- Hertz pulls O.J. out of the driver's seat. (1994, June 27). *Brandweek*, 35, 5.
- Jamnallal Bajaj Institute of Management Studies (2001, October 5). Celebrity endorsements: A double edged sword. Retrieved June 28, 2002, from http://www.jbims.edu/events_strategym_Edged_%20Sword.htm
- Kafka, P. (Ed.). (2002, July 8). The wages of fame. *Forbes*, 170, 88-145.
- Kahle, L. R. & Homer, P. M. (1985). Physical attractiveness of the celebrity endorser: A social adaptation perspective. *Journal of Consumer Research*, 11, 954-961.
- Kamins, M. A. (1989). Celebrity and noncelebrity advertising in a two-sided context. *Journal of Advertising Research*, 29, 34-42.
- Kamins, M. A., Brand, M. J., Hoeks, S. A. & Moe, J.C. (1989). Two-sided versus one-sided celebrity endorsements: The impact on advertising effectiveness and credibility. *Journal of Advertising*, 18, 4-10.
- Larson, B. (1993, September 13). A Pepsi challenge. *U.S. News & World Report*, 115, 16.
- McCracken, G. (1989). Who is the celebrity endorser? Cultural foundations of the endorsement process. *Journal of Consumer Research*, 16, 310-321.
- Marshall, C. (1987, December 28). It seemed like a good idea at the time. *Forbes*, 140, 98-99.
- Martha Stewart Omnimedia web page. (n.d.). Retrieved June 10, 2002 from <http://www.marthastewart.com/>
- Mathur, L. K., Mathur, I. & Rangan, N. (1997). The wealth effects associated with a celebrity endorser: The Michael Jordan Phenomenon. *Journal of Advertising Research*, 37, 67-73.
- Miciak, A.R. & Shanklin, W. L. (1994). Choosing celebrity endorsers. *Marketing Management*, 3, 50-59.
- No Boundaries: Discovery commercial. (2002). Retrieved June 10, 2002 from <http://media.ford.com/>
- Ohanian, R. (1991). The impact of celebrity spokespersons' perceived image on consumers' intention to purchase. *Journal of Advertising Research*, 31, 46-54.
- Osorio, B. R. (2002, April 16). Celebrity endorsers: Is the huge investment worth the risk and rewards? Philippine Headline News Online. Retrieved June 10, 2002, from <http://www.newsflash.org/2002/04/si/si001214.htm>
- Papiernik, R. L. (2002, March 4). Whopper to go: BK, Diageo split is near; 'Chicken' to fly. *Nation's Restaurant News*, 36, 1-2.
- Pepsiworld. (n.d.). Retrieved June 10, 2002 from <http://www.pepsi.com/current/index.html>

- Redenbach, A. (1998). A multiple product endorser can be a credible source. *The Cyber-Journal of Sport Marketing*, 3. Retrieved June 23, 2002, from <http://www.cjism.com/Vol3/redenbach31.htm>
- Rescoe, J. C. (1980). *Celebrity advertising: Does its usage affect buyer behavior?* Unpublished masters' thesis, Beaumont, TX: Lamar University.
- Rudd, D. (2002). The illustrated history of baseball cards: The 1800's. Retrieved June 30, 2002 from <http://www.cycleback.com/1800s/>
- Swerdlow, R. A. (1984). Star studded advertising: Is it worth the effort? *Journal of the Academy of Marketing Science*, 12, 89-102.
- Till, B. D. & Shimp, T. A. (1998). Endorsers in advertising: The case of negative celebrity information. *Journal of Advertising*, 27, 67-82.
- Tripp, C., Jensen, T. D. & Carlson, L. (1994). The effects of multiple product endorsements by celebrities on consumers' attitudes and intentions. *Journal of Consumer Research*, 20, 535-547.
- Veltri, F. R. & Long, S. A. (1998). A new image: Female athlete-endorser. *The Cyber-Journal of Sport Marketing*, 2. Retrieved June 23, 2002, from <http://www.cjism.com/Vol2/veltrilong24.htm>
- Walker, R. (2001, June 18). Martha unwrapped. *Slate*. Retrieved June 10, 2002 from <http://slate.msn.com/?id=110513>
- Wentz, L. (2002, May 13). Marketers turn to celebrities to lure Hispanic consumers. *Advertising Age*, 73, 20.
- Wilson, G. A. (1997). Does sport sponsorship have a direct effect on product sales? *Cyber-Journal of Sport Marketing*, 1. Retrieved June 23, 2002, from <http://www.cjism.com/Vol1/wilson.htm>
- Zollo, P. (1999). *Wise up to teens: Insights into marketing and advertising to teenagers*. Ithaca, New York: New Strategist Publications

AN ECONOMIC DECISION-MAKING FRAMEWORK FOR PRICE BUNDLING OF RETAIL BANKING SERVICES

J. Bryan Hayes, Mississippi College
Marcelo Eduardo, Mississippi College

ABSTRACT

Price bundling has become an important and widely used cross-selling tactic in retail banking. Service bundling offers a method of cross-selling that places less of the burden on the bank employee and more on the design and promotion of the product. However, bundle design decisions often appear to be based mainly on cost considerations or matching competitive offerings. The authors present an economic framework that can help bank marketers identify the demand conditions under which bundling is most likely to be an effective cross-selling tactic, and choose the appropriate services and bundling methods to use.

INTRODUCTION

The bundling of financial services has become one of the most commonly used and effective means for banks to acquire new deposits, build new business and find new opportunities. The practice is pervasive in the banking industry. Bundled accounts have built up so much momentum over the past few years that they have become a dominant focus of the retail operations at many banks. Nevertheless, increased competition in the financial marketplace along with the significant role that the Internet now plays as a delivery channel is once again forcing financial institutions to focus their attention on the role of cross-selling as a way to increase or at least defend their market share.

The passage of the Gramm-Leach-Bliley Act in November 1999 has brought about greater competition among financial institutions. Once again, it appears clear that financial institutions must be intent on building an organizational structure with a strong sales and cross-selling mentality. The foundation of this new corporate culture is based on an approach that takes the basic current account relationship with the customer and develops it into something much more lucrative by selling the customer a wide range of financial products (Britt, 1990, 30). However, the organizational transformation that leads toward routine cross-selling and developing a "sales culture" remains a

demanding challenge for all financial institutions. Nevertheless, one aspect of successful "sales-culture" banks is an apparent understanding that the key to broadening a customer's relationship is to customize the selection, packaging and functional linkage between products (Moore, 1992, 26).

To the extent that bundled products are structured in a manner consistent with a bank's marketing and profit objectives, they represent a powerful technique for selling to existing customers, as well as attracting new customers from competitors. However, there is little evidence that banks are optimizing the potential economic and customer retention benefits from their bundled services. More often, bundle design decisions are based upon short term objectives such as attracting new customers, increasing fee income, or merely matching competitive offerings. The purpose of this paper is to provide an economic rationale for bundling decisions in retail banking, particularly when the objective is cross-selling. The paper provides a framework that can help bank marketers identify the conditions under which bundling is most likely to be an effective cross-selling tactic, and choose the appropriate products and bundling methods to use.

BANKS AND PRICE BUNDLING

In today's economy, the practice of price bundling is widespread. Sport teams offer season tickets; resorts provide vacation packages that include transportation and meals; fast food restaurants offer "meal deals" that include more than one product (Soamn & Gourville, 2001). Thus, it is no accident that price bundling of financial services has become a widely practiced marketing tactic at banks and other financial institutions in recent years. There are three reasons why banks are a good example of the type of consumer service business for which price bundling is effective. First, banks are characterized by a high ratio of fixed to variable costs. Once an individual establishes an account relationship with a bank, the marginal costs associated with selling and delivering additional services to the individual are generally low compared to the bank's total costs. Second, bank services entail a high degree of cost sharing such that the same facilities, equipment, and personnel are used to provide multiple services to the customer. Third, bank services are interdependent in terms of demand. That is, financial services are designed to satisfy related customer needs so that customers are often potential buyers of a range of financial services (Guiltinan, 1987).

Moreover, if it is assumed that price bundling is effective in creating and maintaining long term relationships, then price bundling becomes a powerful method to exploit profit potential and maximize profits for several reasons: (1) it has been shown that retaining existing customers is less expensive than acquiring new customers and that increased customer retention rates result in increased profitability (Berry, 1983, 25; Reichheld & Sasser, 1990, 105), (2) evidence suggest that the longer individuals remain customers of one financial institution, the more profitable the relationships become (Parente, 1993, 50; Reichheld & Sasser, 1990, 105), (3) bundling potentially

offers the opportunity to increase fee-based income and may facilitate future cross-selling opportunities (Wolfarth & Sullivan, 1988, 20; Sherden, 1989, 12). In addition, price bundling has been shown to reduce competitive rate shopping and is perceived as a way to help banks avoid costly rate wars (Rinella, 1988, 18; White, 1990, 15).

FOCUS ON CROSS-SELLING

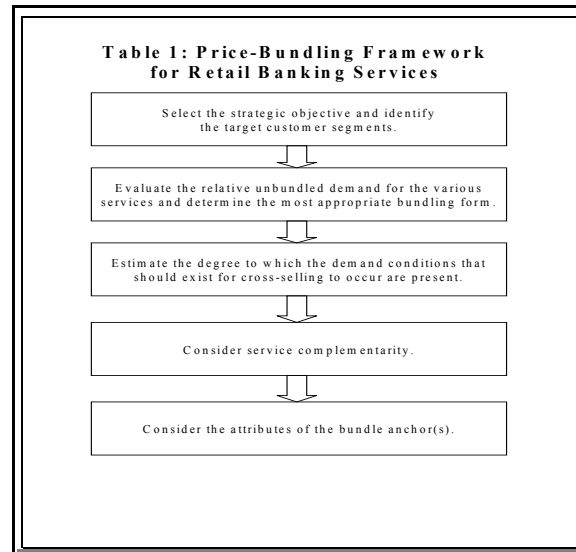
Many bank marketers believe that if banks are to successfully make the transformation from passive, account-holding, transaction-processing institutions to opportunistic, customer-focused, service-oriented organizations, nothing short of top-down organizational change that results in a strong sales and cross-selling mentality will be required (Rosen, 2001, 19; Violano & Van Collie, 1992, 14). Hence, it is not surprising that banks are basing massive investments in training and infrastructure on the cross-selling of financial services. The example of MetLife Bank is typical of this new focus. MetLife Bank envisions itself becoming a financial services company by extending its brand from its insurance base into broader financial services by marketing to its sizable customer base and cross-selling directly through its agents and the Internet (Reich-Hale, 2001, 2).

The emphasis on cross-selling has come about as traditional streams of revenue have vanished. However, progress toward routine cross-selling and developing a sales culture among front-line bank employees has been very slow (Britt, 1990, 30). The checking account is the common denominator in most primary relationships. Bank marketers have found that the further away they try to move from the basic checking account in their marketing appeals, the more obstacles they encounter. Cross-selling is often neglected while employees complain that they are overburdened by routine transactions and paperwork (Moebs, 1989, S16). In addition, bank customers have demonstrated a general unwillingness to purchase additional products and services (Schindler, 1989, 62). Service bundling offers one method of cross-selling that places less of the burden on the bank employee who, despite training, often simply lacks the skills and/or motivation to be an effective salesperson, and more on the design and promotion of the product.

A PRICE BUNDLING FRAMEWORK FOR BANKS

The proposed framework is based upon three basic economics principles, the reservation price (the maximum amount a consumer is willing to pay for a particular service), the consumer's surplus (the difference between what the consumer is willing to pay for a service and the actual price paid) and complementarity (when owning one service enhances the utility, in this case represented by the surplus, of owning another) (Guiltinan, 1987). The framework can be conceptualized as a

series of steps, or decisions, that will lead to a service bundle design that is likely to be effective for cross-selling a particular service or services, as depicted in the following table.



There are two basic forms of bundling, pure and mixed. In *pure bundling*, the products or services cannot be purchased separately. They are available only in bundled form. In contrast, *mixed bundling* allows the consumer to purchase one or more of the services individually or to purchase the bundle (e.g., a checking account and a credit card). Often, there is a price incentive for purchasing the entire bundle. In other cases the customer may purchase a single core service (i.e., a checking account) or may select additional amenities (i.e., overdraft protection) that are sold only with the core service at a single bundled price (Guiltinan, 1987, 74).

Managers can choose from two different forms of mixed bundling. *Mixed-leader bundling* is a form of mixed bundling in which the price of one or more products is discounted when another product is purchased at the regular price. *Mixed-joint bundling* involves setting a single price when two or more products or services are purchased jointly (Guiltinan, 1987, 74). *Pure bundling* is usually employed when a firm exercises monopoly power over one of the components of the bundle (Guiltinan, 1987, 74). Since financial institutions operate in a competitive market and many consumers view financial services as near commodities, this is rarely the case in bank marketing (Radigan, 1992, 42). Hence, mixed bundling is generally the more common approach and the focus of the present framework.

The framework presented here focuses on retail, "packaged" financial services. The framework is general and may be applicable to other explicit or implicit forms of bundling used by financial service marketers, such as relationship pricing and attribute-based pricing. However, these forms are not specifically included in the present treatment because they do not necessarily imply price bundling (e.g., relationship pricing often looks more like quantity discounting), and they are usually just one component of an overall relationship marketing strategy that involves far more than bundling (Thompson, 1987, 58).

CROSS-SELLING GAINS FROM BUNDLING

The purpose and effect of most bundled financial products offered by financial institutions has been to attract new accounts and deposits, as evidenced by the fact that most bundled, retail services utilize the checking account as their primary anchor. However, the previous discussion illustrates the value of bundling as a cross-selling tool. Indeed, the traditional economic perspective was concerned only with potential cross-selling gains from bundling, arguing that the gains for the firm come from customers whose only alternative is to forego purchase of the less-valued product or service (Guiltinan, 1987, 74). Guiltinan's (1987, 74) price-bundling framework is applied below to help bank marketers identify the conditions under which bundling can be most effective and design bundles that are likely to succeed when the strategic objective is cross-selling.

Given that the strategic objective is cross-selling, the first element of the framework involves identifying customer segments for which bundling is an appropriate tactic. Assume a bank is considering developing a bundle of services A and B. There are four sources of customers, or customer segments, for the bundle (Guiltinan, 1987, 77).

Segment 1 - customers who buy A but not B
Segment 2 - customers who buy B but not A
Segment 3 - customers who buy both B and A
Segment 4 - non-customers

When the objective is cross-selling, the effort is targeted at customers in segment 1 or segment 2, or both segments. The following table reproduces Guiltinan's (1987, 74) explanation of two customer segments for unbundled sales of services A and B at the prevailing prices offered by the bank and by the competition among customers in segments 1 and 2.

Explanations of Segments under Unbundled Sales for Services A & B

Buyers of A Only:

$$P_A \leq RP_A \text{ and}$$

$$P_B > RP_{B/A} \text{ or } 0 \geq (RP_{B/A} - P_B) < (RP_D - P_D)$$

Buyers of B Only:

$$P_B \leq RP_B \text{ and}$$

$$P_A > RP_{A/B} \text{ or } 0 \geq (RP_{A/B} - P_B) < (RP_C - P_C)$$

Where:

P_A = Price of Service A

P_B = Price of Service B

P_C = Price of Competitor's Service C which Competes with Service A

P_D = Price of Competitor's Service D which Competes with Service B

RP_A = Reservation Price for Service A

RP_B = Reservation Price for Service B

RP_C = Reservation Price for Competitor's Service C which Competes with Service A

RP_D = Reservation Price for Competitor's Service D which Competes with Service B

$RP_{A/B}$ = Reservation Price for Service A given that Service B is already used by the Customer

$RP_{B/A}$ = Reservation Price for Service B given that Service A is already used by the Customer

Adapted from Guiltinan (1987, 78)

The relationships presented in the preceding table explain why customers purchase only service A and not service B or only service B and not service A. In the case of A-only buyers, the actual price of A is less than or equal to the customer's reservation price for A, so the customer is willing to purchase service A. Conversely, the customer is unwilling to purchase service B because the price for service B is greater than the customer's reservation price for B given that A has already been purchased, or if the customer has already purchased service D from a competitor, he or she does not purchase service B because the surplus for service D is greater than the surplus for service B given that A has been purchased (Guiltinan, 1987). Understanding the explanations of each segment makes it possible to identify the demand responses required to change behavior (Guiltinan, 1987, 74). In the case of the A-only buyers, it is apparent that in order to make the customer who has not purchased service B willing to do so, we must close the gap between P_B and $RP_{B/A}$. If the customer has purchased A from us but D from a competitor, it is necessary to make our service B

more attractive relative to its price than our competitor's service D is relative to its price (Guiltinan, 1987, 74).

The previous explanation assumes that the distribution of reservation prices for each product is known. In reality, it is likely that managers do not know the reservation price distributions for services A and B, but it is possible to estimate the overall demand levels for A and B (in the absence of bundling) within each segment during a specific time period (Guiltinan, 1987, 74). Given the overall demand levels and the prices of competing services, it is possible to estimate a reasonable proxy measure for the distribution of reservation prices. Additionally, regardless of the reservation price distribution, not every customer who owns service A will be a good candidate for service B and vice versa. The efficiency of the cross-selling process is enhanced when a bank is able to identify the best cross-sell candidates and estimate potential sales among those customers. Automated statistical modeling software packages, such as Group 1 Software's Model 1®, are now widely available and can be used effectively for this purpose. These tools attempt to predict the next service a customer is most likely to purchase based on current services owned, demographics, and other variables.

Once the cross-selling segments and prospects have been identified and the conditions necessary to modify the purchasing behavior of the customer segments in the desired direction are known, the next step is to determine the appropriate bundling scheme, either mixed-leader bundling or mixed-joint bundling (Guiltinan, 1987, 74). In examining cross-selling opportunities, an important consideration is the relative unbundled demand levels for A and B. This information is vital in the selection of the appropriate bundling method to be employed (Guiltinan, 1987, 74). Assume that UQ_A represents the unbundled quantity of A sold and UQ_B represents the unbundled quantity of B sold. If UQ_A is substantially greater than UQ_B , then under mixed-leader bundling A will normally be the best leader. For example, if a bank has 10,000 credit card accounts and only 1,000 certificate of deposit accounts (CDs), the credit card will generally be the better leader because the bank would have many more opportunities to develop CD accounts among credit card customers than credit card accounts among CD customers. By tying a credit card with a reduced price (price may reflect fees, the interest rate, or both) to CDs, the bank is able to stimulate a one-directional gain through cross-selling. It is readily apparent from this previous example that the mixed-leader form of bundling, in which one product is offered at a reduced price when the other is purchased at the regular price, is most appropriate when such one-directional gains are desired.

When UQ_A and UQ_B are approximately equal, the volume gains from bundling can be approximately equal in either direction. However, the most desirable outcome occurs when A-only buyers buy B and B-only buyers buy A (Guiltinan, 1987, 74). When bi-directional gains are desired, mixed-joint bundling, where the two services are offered together at one price, is more appropriate. For example, a bank may have a number of customers who have only a checking account and an approximately equal number who have only a credit card. A bundling scheme that offers a reduced

price on the total cost of the two services when purchased together would maximize the number of cross-sell opportunities in this case (Guiltinan, 1987, 74).

The next important element of the bundling framework is to understand the demand conditions that must exist for cross-selling to occur and to estimate the degree to which those conditions are present (Guiltinan, 1987, 74). The demand conditions that are suitable for mixed-leader bundling differ from those that are appropriate for mixed-joint bundling. The following table reproduces Guiltinan's (1987) explanation of the demand conditions that are pertinent for each form.

Demand Conditions for Mixed-leader and Mixed-joint Bundling

Cross-Selling/Mixed Leader

$$\text{Equation 1a: } (RP_{A/B}-RP_A) + (RP_A-P_A) + (P_A-P_A^*) \geq (P_B-RP_{B/A})$$

or

$$\text{Equation 1b: } (RP_{A/B}-RP_A) + (RP_A-P_A) + (P_A-P_A^*) \geq (RP_D-P_D) + (P_B-RP_{B/A})$$

Cross-Selling/Mixed Joint

$$\text{Equation 2a: } (RP_{A/B}-RP_A) + (RP_A-P_A) + (P_A+P_B-P_{A+B}) \geq (RP_D-P_D) + (P_B-RP_{B/A})$$

$$\text{Equation 2b: } (RP_{B/A}-RP_B) + (RP_B-P_B) + (P_A+P_B-P_{A+B}) \geq (RP_C-P_C) + (P_A-RP_{A/B})$$

Where:

RP_A = Reservation Price for A

$RP_{A/B}$ = Reservation Price for A given that B has been purchased

RP_A-P_A = Consumers Surplus A

P_A = Actual Price of A

P_A^* = Price Reduction for A

P_{A+B} = Price of A and B in Bundled Form

RP_B = Reservation Price for B

$RP_{B/A}$ = Reservation Price for B given that A has been purchased

P_B = Actual Price of B

RP_D = Reservation Price for D

P_D = Actual Price of D

RP_C = Reservation Price for C

P_C = Actual Price of C

Adapted from (Guiltinan,1987)

First, considering the mixed-leader case (equation 1a), if we assume that either service A or service B is already purchased by a number of customers and that $UQ_A > UQ_B$, then A is the best leader. By closing the gap ($P_B - RP_{B/A}$) between the price of B and the reservation price of B when A has already been purchased, the likelihood that the customer will purchase B is increased. Next, considering equation 1b, among customers who have already purchased B from another bank (service D), the gap we wish to close is between the actual price of our service B and the reservation price of our service B when service A has already been purchased from us plus the customer's surplus from purchasing service D (competing with our service B) from a competitor (Guiltinan, 1987).

Guiltinan (1987, 79) states that there are four ways in which bundling can close the gap between actual and reservation prices.

1.	Direct transfer of any current consumer surplus ($RP_A - P_A$) from service A to service B.
2.	A price reduction on the leader ($P_A - P_A^*$) that increases the consumer surplus on A.
3.	Selection of B so as to enhance the utility of A so that ($RP_{A/B} > RP_A$).
4.	Selection of B so as to create search economies when it is purchased with A, reducing the real cost of B and thus reducing ($P_B - RP_{B/A}$).

For example, suppose that there are 10,000 bank customers who have a checking account (service A) but only 2,000 who have a line-of-credit (service B). Since there are more checking account customers than line-of-credit customers and unidirectional gains are desired, mixed-leader is the correct bundling scheme and the appropriate leader is the checking account. A price reduction on the checking account ($P_A - P_A^*$) would increase the customer's surplus available on this service. Hence, the odds of generating significant cross-sell activity for the line-of-credit in return for a cheaper checking account are increased because the customer's surplus on the checking account ($RP_A - P_A$) is transferable to the line-of-credit.

This transference of the consumer's surplus may be enhanced if the two services are viewed as compliments. Complementarity implies that the reservation price for one product or service is increased if the other is purchased so that the reservation price for the bundle consisting of both services may *exceed* the sum of the reservation prices for the individual services (Guiltinan, 1987, 74). Complementary relationships may exist when: (1) products/services are complements because purchasing them together saves time and effort (e.g., having all CDs at the same bank), (2) products/services increase the customer's level of satisfaction with other products/services (e.g., buyer protection warranties on products purchased with a checking account), or (3) products/services enhance the overall image of the seller so that the perceived value of all products increases (e.g., private banking facilities for high net-worth customers) (Oxenfelt, 1966, 135).

The preceding example may be used to illustrate the potentially enhancing effect of complementarity. If the line-of-credit is tied to the checking account, the two may be viewed as complimentary products because the checking account enhances the utility of the line-of-credit (easy access) and the line-of-credit does the same for the checking account (overdraft protection) so that ($RP_{A/B} > RP_A$). To the extent that bundling the two services saves the checking account customer time and effort that would normally be spent in selecting and purchasing the line-of-credit individually, the real cost of purchasing the line-of-credit is reduced so that ($P_B - RP_{B/A}$).

Complementarity is one key to an effective demand response to bundling when cross-selling is the objective (Guiltinan, 1987, 74). In the case of financial services, strict complementarity among bundled services may be less important than other considerations, such as the usefulness of the individual services to the targeted market segment. However, the issue of how well the services fit together should at least be considered.

Next, consider equations 2A and 2B from the table above. If A has already been purchased, then equation 2A applies while if B has been purchased, then equation 2B applies. Here it is assumed that there is no obvious leader and bi-directional gains are desired. Further, it is assumed that one of the services (A or B) the bank seeks to cross-sell has been previously purchased from another bank by the customer. The bank hopes to simultaneously cross-sell both segments by offering a reduced price when the two services are purchased together. If the size of the discount is sufficient, it is likely that an increase in sales of both services will result. Assuming that A has been purchased, the gap between the actual price of B and the customer's surplus for B plus her reservation price for B given that A has been purchased must be closed. This is possible if "B enhances A and/or if the price of A + B is sufficiently reduced" (Guiltinan, 1987, 80).

As in the mixed-leader case, the magnitude of the effect will depend to some extent on the degree to which the two services are perceived as complimentary so that $RP_{A/B} > RP_A$ and $RP_{B/A} > RP_B$ (Guiltinan, 1987, 74). This has important marketing implications for the product manager. The potentially enhancing effect of complementarity in the mixed-joint case implies that the success of the bundle will be affected by the extent to which marketing communications are successful in linking the two products in the mind of the customer. For example, suppose that the bank has an approximately equal number of customers who have either a credit card (service A) or a home equity line-of-credit (service B), and desires to cross-sell the two services. Here, a perception of complementarity might be created by informing customers that they need two sources of credit operating in tandem to satisfy different needs, a credit card for convenience and a home-equity line-of-credit for tax-purposes.

The final step in the proposed framework is to consider the attributes of the bundle's anchor(s). This is particularly important when the bundle incorporates more than two financial services, as is often the case in retail banking. Research has shown that people tend to evaluate bundles by first selecting and forming an opinion of the service they consider most important and then evaluating additional services in decreasing order of importance. The overall assessment of

the bundle is adjusted upward or downward as each subsequent item is evaluated (Yadav, 1994, 342). This research has important implications for bundle selection. The findings suggest that evaluations of additional services in a bundle are usually insufficient to outweigh the initial assessment of the anchor (Yadav, 1994, 342). Hence, product managers should not expect to be able to significantly enhance the customer's perception of the value of a bundle by combining an undesirable anchor with a desirable one, or with a range of minor features. In fact, the evidence suggests that individuals are more sensitive to perceived losses than to perceived gains. Therefore, it may be easier to harm the customer's perception of the overall value of a bundle by including inferior services than it is to enhance it with attractive ones (Yadav, 1994, 342). The implication for product managers is that, regardless of the bundling method chosen, great care should be exercised in choosing the services to be included. It is probably better to include fewer services that are known to be valued by the targeted customer segment than to include a larger number of superfluous services.

CONCLUSION

Price bundling is a powerful technique that can be successfully used to cross-sell financial services to existing bank customers. Effective price bundling for cross-selling goes a step beyond designing service bundles for broad market segments such as affluent households, seniors, or baby boomers. Sophisticated product managers take advantage of the immense power of marketing databases that help control the costs associated with identifying and reaching narrowly defined segments within the customer base.

The process begins with an extensive analysis to identify markets and competitive penetration, competitive pricing, and influential product attributes. The bank's customers, products, services, processing capabilities, profit motives, and competitive positioning are then evaluated to determine demand levels, the distribution of reservation prices, and profit potential. Cross-selling opportunities are identified among customer segments that offer current or future profit potential, and specific service bundles are developed for each segment. Bundling decisions are made on the basis of the type of gains desired (one-directional or bi-directional), the prevailing demand conditions, and the degree of complementarity among the services. Profit is maximized by choosing products carefully to minimize destructive cannibalization effects and by considering profit margins in choosing the bundle leader. In some cases, the best bundling strategy may involve foregoing short-term profit maximization to encourage relationship building.

REFERENCES

- Berry, L. L. (1983). Relationship marketing in emerging perspectives on services marketing. In L.L. Berry, G.L. Shostack & G.D. Upah, (Eds.) Chicago: American Marketing Association. 25-28.

- Britt, B. (1990). Custom-made gamble. *Marketing* (Jan), 30-31.
- Guiltinan, J. P. (1987). The price bundling of services: A normative framework. *Journal of Marketing*, 51(2), (Apr), 74-85.
- Moebis, M. (1989). Smart product pricing can boost profits. *Savings Institutions*, 110(9), (Oct), S16-S18.
- Moore, J. (1992). Customizing for each customer. *Bankers Monthly*, 109(3), (Mar), 26.
- Oxenfelt, A. (1966). Product line pricing. *Harvard Business Review*, 44 (July-August), 135-143.
- Parente, G. S. (1993). The royal treatment. *Credit Union Management*, 16(10), (Oct), 50-53.
- Radigan, J.(1992). Bundling for dollars. *United States Banker*, 102(9), (Sep), 42, 44.
- Reich-Hale, D. (2001). MetLife bank pins hopes on cross-selling. *American Banker*, 166(131), (July), 2-3.
- Reichheld, F. F. & W. E. Sasser. (1990). Zero defections: Quality comes to services. *Harvard Business Review* (Sep-Oct), 105-111.
- Rinella, T. J. (1988). Packaging services to create added value. *Bank Marketing*, 20(11), (Nov), 18-19.
- Rosen, T. (2001). Commitment, training crucial to cross-selling. *American Banker*, 166(74), (April), 19-20.
- Sherden, W. S. (1989). Practical strategies for cross-selling. *Bankers Magazine*, 172(1), (Jan/Feb), 12-17.
- Schindler, M. (1989). The FIMA/Raddon survey: Take the lead by tapping market potential. *Savings Institutions*, 110(8), (Sep), 62-64.
- Soamn, D. & J. Gourville. (2001). Transaction decoupling: How price bundling affects the decision to consume. *Journal of Marketing Research*, 38(1), (Feb), 30-45.
- Thompson, T. W. (1987). Relationship pricing. *United States Banker*, 98(4), (Apr), 58-59.
- Violano, M. & S.C. Van Collie.(1992). The revolution in retail banking. *Bankers Monthly*, 109(8), (Aug), 14-18.
- White, D. (1990). Packaged accounts - Panacea for banks?. *Banking World*, 8(1,2), (Jan/Feb), 15-16.
- Wolfarth, J. H &B. Sullivan. (1988). They call it attribute-based marketing. *Bank Marketing*, 20(11), (Nov), 20, 22.
- Yadav, M.S. (1994). How buyers evaluate product bundles: A model of anchoring and adjustment. *Journal of Consumer Research*. 21 (Sep), 342-353.

HOW ACCURATELY DOES THE CPI MARKET BASKET MEASURE RURAL HOUSEHOLD CONSUMPTION? A RESEARCH METHODOLOGY

Thomas A. Dukes, Christian Brothers University
Sarah T. Pitts, Christian Brothers University
Rob H. Kamery, Christian Brothers University

ABSTRACT

The fixed market basket used by the Consumer Price Index (CPI) is designed to measure changes in the prices paid by urban households. Consumption differences between rural and urban households could affect the accuracy of CPI price measurements for rural areas. The objective of this paper is to determine how accurately the CPI market basket measured rural household consumption. The procedures used to collect and to analyze the data needed to accomplish this objective along with the limitations of these procedures are also presented.

INTRODUCTION

The CPI market basket reflects urban household consumption. Before rural consumption could be compared to urban consumption, a means of measuring rural consumption was needed. The Rural Consumer Marketbasket (RCM) was developed to meet this need.

THE RURAL CONSUMER MARKETBASKET

The techniques used to construct the RCM were designed to duplicate the procedures used by the Bureau of Labor Statistics (BLS) to construct the CPI market basket. Duplication was necessary so that accurate comparisons could be made between the two market baskets.

Both market baskets are listings of the average expenditure amounts for various consumption categories. An "average expenditure amount" was defined as the arithmetic mean of the total expense incurred for a given item during the survey period. Thus, an average expenditure amount was calculated for each item consumed.

Over 3,130 individual item codes have been developed by the BLS to measure consumption (Bureau of Labor Statistics, 1977, p. 9). This comprehensive listing, classified by consumption

categories, was used to code the individual expenditure amounts for each household. Although the CPI market basket reflects the eight categories of consumption listed in Appendix A, the RCM was limited to four consumption categories. This limitation was necessary so that data collection could be held to manageable levels. The four categories selected for the RCM were food, clothing, shelter, and utilities. These categories represent basic survival needs (Maslow, 1954).

Both the RCM and the CPI market baskets measured household consumption rather than institutional or commercial consumption. A "household" was defined as: 1. a group of two or more persons who lived together and pooled income for major items of expense, or 2. persons who lived alone and were financially independent and did not pool income or share expenses with others (Bureau of Labor Statistics, 1977, p. 8). The primary difference between the two market baskets was in the location of the households represented. The CPI market basket measured only urban household consumption. The RCM was designed to measure only rural household consumption. Household location, however, is not the only factor that determines consumption.

RURAL HOUSEHOLD CHARACTERISTICS

Many different factors can affect consumption in a household. In addition to rural-urban residence, nine characteristics were used as the basis for classifying and analyzing rural consumption: 1. household incomes, 2. household size, 3. age of the head of household, 4. number of children under age 18 years, 5. number of persons 65 years and older, 6. housing ownership, 7. race of the head of household, 8. occupation of the head of household, and 9. number of household wage earners. These household characteristics and their effect on urban consumption have been studied by the BLS (Bureau of Labor Statistics, 1978, p. v). Therefore, the same characteristics were selected for rural households so that an accurate comparison could be made between the BLS and the data gathered for this paper.

INTERVIEW PROCEDURES

All data were collected over a three-and-a half month period. A combination of personal interviews and household purchase diaries was used to gather the data. All interview sessions were conducted between noon and dusk. Each interview consisted of two sessions. During the initial session, the purpose of the study was explained and cooperation was obtained. The interviewer completed the first page of the questionnaire via personal interview. One week later, the interviewer returned to pick up the diary purchase pages which had been completed by the respondents.

Research was conducted under the auspices of a university in Arkansas. Business cards with the numbers of the College of Business were presented as verification of this affiliation. Respondents were requested to call collect if verification was desired, and six inquiries resulted.

At the time of the second visit, the clothing and food purchase diaries were examined for incorrect or missing information. Illegible writing was decoded, and the respondent was thanked for participating in the study. During both interview sessions, the confidentiality of the respondents' replies was stressed. In no cases were the names of any individuals coded with questionnaire responses. If a respondent refused to answer a question, the response "not reported" was recorded.

QUESTIONNAIRE DESIGN

The three-page questionnaire in Appendix B was designed to gather data concerning rural household consumption. Information on expenditures for food, clothing, shelter, and utilities was obtained. Data were also gathered on nine household characteristics that affect the consumption of these items. The questionnaire was structured and non-disguised.

The questionnaire in Appendix B was designed to be completed by the interviewer during the face-to-face interview. Entries for the address and type of dwelling were designed to aid the interviewer in locating specific households. The race of the head of the household was also entered. A code number was assigned to each questionnaire. This number, which was repeated on each page, was used to keep track of the number and location of the various households surveyed.

The length of time the respondent lived at the present address was obtained by asking question one. Although question one was not needed for analysis, the question was included as a means of "breaking the ice" by asking an easy-to-answer question. The type of housing ownership was determined by question two. Question three was designed to determine the amount spent for shelter each month, and question four determined the amount spent on utilities each month. Utilities included payments for electricity, gas, propane, and butane, but did not include telephone, water, or sewerage payments.

Household income data were gathered by question five. "Household income" was defined as the combined incomes of all household members 14 years and older. Income data covered the 12-month period of January to December. The amount of income before taxes was utilized. Wages, salaries, net income from businesses and farms, retirement payments, and transfer payments were considered as components of income.

The ages, sex, and number of individuals that comprised each household were gathered by question six. Question seven was used to determine the occupation of the head of the household. The categories used to classify occupations were obtained from the 1970 Census of Population (Bureau of the Census, 1970, p. 105). The occupation in which most earnings were received during 1980 was utilized. The number of wage earners in the household was determined by question eight, and the age of the head of the household was determined by question nine.

The clothing purchase diary was designed to be completed by the respondent. The items purchased and the prices paid for each item were recorded under five headings: men's (16 years and older) wear, women's (16 years and older) wear, boys' (2-15 years of age) wear, girls' (2-15 years

of age) wear, and infants' (under 2 years old) wear. The age breakdowns for each category were identical to the breakdowns used for the CPI market basket (Bureau of Labor Statistics, 1978, p. 22). Instructions for completing the clothing purchase diary were given verbally during the initial interview and were also printed on the top of the diary page. Written examples were provided on the clothing diary page to aid the respondent in completing the clothing purchase diary. Additional copies of the clothing purchase diary were left with the respondent to provide additional space for recording clothing purchases.

The BLS has determined that 90 days is the maximum time frame for accurately remembering apparel purchases (Bureau of Labor Statistics, 1978, p. v). This time frame was not exceeded by any of the rural households surveyed. Since January 1 was utilized as the beginning date for the clothing diary, several households reported clothing purchases for shorter time spans. Weighting factors were developed to adjust clothing consumption data for households which reported clothing purchases for fewer than 90 days. The 90-day period January 1 to March 30 was divided into 12 weeks. For example, clothing purchase diaries picked up on January 15 contained only two weeks or one-sixth of a household's clothing expenditures for the entire survey period. Therefore, clothing consumption was weighted by a factor of six. The weighting factors and time frames are shown in Table 1.

Number of Weeks Covered by Diary	Weighting Factor
2	6
3	4
4	3
5	2.4
6	2
7	1.7
8	1.3
9	1.2
10	1.1
11	1.1
12	1

The food purchase diary in Appendix B is an example of the purchase diary used to gather rural consumption data for food. The purpose of the food diary was to record the daily purchases of food bought for home consumption. Food bought for lunches carried to school or work was considered to be part of home consumption.

For each day of a one-week period, all items purchased were recorded. Data determining the number of items, net weight/volume, and total cost were recorded for each item purchased. Blanks were provided to indicate if the items purchased were fresh, frozen, canned, or other. Each of the column headings was explained to the respondents during the initial interview. Examples of entries and instructions were printed on the top of each food diary page. Additional pages were given to respondents to provide adequate space for recording all food purchases.

Department of Labor statisticians have concluded that one week is the optimum time frame for recording food purchases (Bureau of Labor Statistics, 1978, p. v). The same time period was utilized for the food diary in this paper so that accurate comparisons could be made between the CPI and RCM data.

SAMPLE DESIGN

The universe from which the sample was selected was limited to six counties in central Arkansas: Conway, Faulkner, Perry, Pope, Van Buren, and Yell. The geographic area surveyed was restricted by time and cost restraints.

Each county in the universe was subdivided into townships. Any township containing less than 2,500 inhabitants was classified as a rural township. Of the 133 townships in the universe, 128 townships were classified as rural (Bureau of the Census, 1970, pp. 5-99). Approximately 17,717 households were located in the rural townships (Bureau of the Census, 1970, pp. 99-112). A complete and up-to-date listing of all rural households in the universe was not available. A listing of the 128 rural townships was used as the sampling frame. The sampling units were rural townships, and individual households within each township comprised the sampling elements.

In order to make certain the sampling units selected were representative of rural townships in the population, a stratified random sample was selected. All rural townships in the universe were ranked by population and divided into three strata. These strata are listed in Table 2.

Strata	Number of Townships	Rural Population	Proportion
Class I (2,499-901)	14	19,293	35.3%
Class II (450-900)	28	17,464	31.9
Class III (below 449)	86	17,964	32.8
	128	54,721	100.0%

SOURCE: U.S. Census of Population (5), Table 33, General Characteristics for County Subdivisions, 99-112.

The number of inhabitants in a township was used to stratify the sample because the size of place (i.e., rural or urban area) was a major characteristic of interest. Each of the strata listed in

Table 2 contained approximately the same proportion of the total rural population. This procedure reduced bias that could have resulted from selecting a few "large" rural townships or several "small" areas. The number of strata selected was limited to three to help reduce travel time and expense. More numerous strata with smaller class intervals would have required selecting more townships because many of the townships in the universe contained fewer than 200 inhabitants.

Within each stratum, the townships were ranked by population and numbered. A table of random numbers was then used to select townships randomly from each stratum. Once a township was selected, detailed county maps illustrating individual dwellings were used to identify dwelling locations in each township.

Using the southern boundary of each township as a starting point, every third household was marked on the county maps. The number three was chosen randomly from numbers one through nine. By selecting every third house, a data collection procedure for not-at-homes was also devised. If a given house was not occupied at the time of the survey, the house next door on the right was approached. If that house was not occupied, the house on the other side of the original sampling element was approached. If all three houses were unoccupied during the initial survey attempt, the entire procedure was repeated at a different time and date.

If the second attempt at collecting data was not successful, the household was classified as a not-at-home. Abandoned and obviously vacant dwellings were not considered as sampling elements. If individuals refused to cooperate, the questionnaire was tabulated as a refusal and sampling started over with the third following house.

The sampling procedures discussed were used to select 210 rural households. In each of the three strata, 70 households were surveyed. The equal division was utilized because approximately equal proportions of the population were contained in each stratum. The 210 households surveyed accounted for approximately 1.18 percent of the total number of rural households in the universe. This sample proportion is approximately 39 times greater than the .03 percent sample used by the BLS in compiling the nationwide Consumer Expenditure Survey (Bureau of Labor Statistics, 1977, p. vi).

Care was taken to ensure representativeness of the sample. The effects of urbanization on consumption patterns were reduced by selecting counties that had a history of being predominantly rural. In each of the selected counties, the majority of the population lives in rural areas, and rural residents have comprised the population majority for at least 50 years (Bureau of the Census, 1970, pp. 99-112). A preliminary statistical analysis of selected demographic characteristics of the six counties in the universe revealed that a high degree of homogeneity existed within the universe. Based on the statistical analysis, the sample size of 210 rural households was both adequate and representative for the purpose of the research conducted.

DATA ANALYSIS

All data collected by the questionnaires were computer coded using an online terminal. The Statistical Package for the Social Sciences (SPSS) computer programs were utilized to tabulate and to analyze the data. Data analysis was conducted in four stages.

Stage one determined if the sample was representative of the rural population from which it was selected. Sample data on selected demographic characteristics were compared to census data for the universe from which the sample was drawn. Differences between the sample and the universe were analyzed for statistical significance.

Differences between total RCM expenditures and total CPI market basket expenditures were investigated in stage two. Comparisons were based on CPI data published in the CPI Detailed Report for the period January 1 through March 30.

Stage three of the analysis dealt with comparing the component weights of the CPI market basket to the component weights of the RCM. The CPI Detailed Report was also used as the basis for comparison (Bureau of Labor Statistics, 1978, p. 119).

Differences between the individual items contained in the RCM and the CPI market basket were investigated in stage four of the statistical analysis. Data supplied by the BLS was used as the basis for comparison in stage four.

Representativeness of the sample was examined to determine if the sample was an accurate reflection of the population from which it was selected. Nine demographic characteristics were selected for study.

TOTAL MARKET BASKET EXPENDITURE ANALYSIS

Rural household expenditure amounts for food, clothing, shelter, and utilities were used to compute average expenditure amounts for each of the respective components. The food and clothing categories were further subdivided into the classifications listed in Appendix C. The variance for each category was calculated using the SPSS computer package.

By adding together each of the average family expenditure amounts for each component included in the RCM, a total expenditure amount was computed for the RCM. This sum was compared to the CPI total market basket expenditure amount for January 1 to March 30. Differences in the total expenditures of the two market baskets were tested for statistical significance by the T-test.

The RCM sample was drawn entirely from rural areas, and the CPI market basket sample was drawn from urban areas. Therefore, the two samples are independent of one another. Independence and common variance are two assumptions necessary for the T-test to be applicable (Klecka, Nie & Hull, 1975, p. 93). Common variance was tested using the "F" value generated by

the SPSS package. If common variance was not indicated, the T-test with pooled variance estimate was utilized.

If a significant statistical difference was indicated by the test, the cause of the difference was investigated. Total market basket expenditure amounts and variances were again calculated for the item in question based on each of the nine household characteristics. Absence or presence of statistical significance was again determined by use of the appropriate T-test.

COMPONENT WEIGHT ANALYSIS

The average expenditure amounts for food, clothing, shelter, and utilities were each divided by the average income for the rural sample to compute component weights for the RCM. Food and clothing components were not further subdivided for this stage of the analysis.

The procedures used to calculate both the total market basket expenditures and the component weights for the RCM attempted to duplicate the procedures used by the BLS to compute the CPI market basket expenditure data. Duplication of the procedures was necessary so that accurate comparisons could be made between the two market baskets (Bureau of Labor Statistics, 1977, p. xiv).

The component weights for the rural sample were compared to the CPI component weights. Differences were tested for statistical significance using the appropriate T-test. If statistical significance was indicated between the component weights of the two market baskets, the cause of the differences was investigated.

INDIVIDUAL ITEM ANALYSIS

Each item in the RCM was compared to its appropriate counterpart in the CPI market basket. If a counterpart was not indicated, the average expenditure amount was tested against the value of zero. Depending upon the variance, statistical significance was based on either the T-test or the T-test with pooled variance estimate.

RESEARCH LIMITATIONS

Any research study contains limitations, and this study is no exception. Whenever a sample is taken, the possibility of sampling error arises. Although care was taken to ensure representativeness of the sample, the probability techniques used to select the sample did not generate any townships from Van Buren County. Although all townships in the sampling frame exhibited a high degree of homogeneity, the limitation is present.

The use of personal interviews, though effective, was time consuming and expensive. Both time and funds were limited; consequently, the sample size was limited. Much of the data gathered

by the questionnaire in Appendix B was self-reported. These data may or may not have been accurately reported. Because of the confidentiality guaranteed the respondents, there did not exist any means for verifying the data other than observation by the interviewer.

Of the 210 rural households selected for the sample, 36 households refused to participate in the survey. Exclusion of these households from the RCM database could have biased the expenditure data used to compute average amounts for the RCM. Although the refusal rate was considered to be acceptable, this limitation is inherent in the research design.

The statistical analyses used to test hypotheses also contain limitations in that both T-tests assume normal distributions. The assumption of normality means that the distribution of population values from which the sample values were drawn approximated a normal distribution. There were no applicable means of testing the population values investigated by this study. This limitation, however, dealt primarily with determining statistical significance of observed differences. All statistically significant differences may not be substantively different, and a substantive difference may exist that is not statistically significant. This limitation of statistical testing was inherent in this research.

The methodology employed by the BLS to construct the CPI market basket was duplicated whenever possible. The procedures used in this study do differ slightly from the BLS procedures used to compute the CPI. Specifically, BLS clothing purchase data was recorded over a two-year time frame. Eight samples of 90 days each were used to compute average clothing expenditure amounts (Bureau of Labor Statistics, 1978, p. xiii). The RCM clothing expenditure amounts were calculated from one 90-day sample, and those amounts were weighted as previously stated.

CPI market basket data used for comparison were not seasonally adjusted and covered the same time frame selected for constructing the RCM. However, the period selected (January 15-March 30) may not be representative of rural consumption patterns for the entire year. Application of research findings to months other than January through March should be made with this limitation in mind.

The BLS gathered two one-week purchase diaries from each household surveyed (Bureau of Labor Statistics, 1978, p. xiii). The RCM used one one-week diary for computing food purchase amounts. Although the same overall time frames were utilized for comparing clothing and food expenditures, 90 days and one week, respectively, differences in the procedures used to gather the data were an inherent limitation.

The universe from which the sample was selected was limited to the central Arkansas area. Care should be taken in applying the research findings to other rural areas.

CONCLUSION

The methodology discussed in this paper had several purposes. First, data were needed so that rural consumption could be measured and compared to urban consumption. Second, a means

for gathering the needed data had to be devised. Third, procedures for analyzing the data gathered were necessary. The different sections of this paper explained what data were needed, how the data were gathered, and how the data were analyzed. The limitations of the methodology employed were also presented.

REFERENCES

- Klecka, W., N. Nie & H. Hull. (1975). *SPSS primer*. New York: McGraw-Hill.
- Maslow, A.H. (1954). *Motivation and personality*. New York: Harper and Brothers, 38-43.
- U.S. Bureau of the Census (1979). *Statistical abstract of the United States* (One Hundredth Edition). Washington, D.C.: Government Printing Office.
- U.S. Bureau of the Census (1970). *Census of population: 1970*, 1, Characteristics of the population, Part 1, United States summary., Washington, D.C.: Government Printing Office.
- U.S. Bureau of the Census (1970). *Census of Population: 1970*, 5, Arkansas, Table 33, General Characteristics of County Subdivisions: 1970, Washington, D.C.: Government Printing Office, 99-112.
- U.S. Bureau of the Census (1970). *Census user's guide*. Washington, D.C.: Government Printing Office.
- U.S. Department of Labor, Bureau of Labor Statistics (1978). *Consumer expenditure survey: Interview survey, 1972-1973*, Bulletin 1997, Washington, D.C.: Government Printing Office.
- U.S. Department of Labor, Bureau of Labor Statistics (1977). *Consumer expenditure survey: Diary survey, July 1972-June 1974*, Bulletin 1959. Washington, D.C.: Government Printing Office.
- U.S. Department of Labor, Bureau of labor Statistics (1966). *The consumer price index: History and techniques*, Bulletin 1517. Washington, D.C.: Government Printing Office.

Appendix A: Market Basket Components	
CPI	RCM
Food	Food
Clothing	Clothing
Shelter	Shelter
Utilities	Utilities
Transportation	
Medical Care	
Entertainment	
Other Goods and Services	

Appendix B: Questionnaire

Household Characteristics

Address _____ Code _____
 Type of dwelling _____ Race _____

1. How long have you lived at this address? _____
2. Are you renting or buying your home? _____
3. What is your monthly payment? _____
4. How much did you spend this month on utilities? _____
5. What is your yearly family income before taxes? _____
6. How many people reside in this household? _____

Ages _____ Sex _____

7. What is the occupation of the head of the household?

8. How many wage earners are there in this household? _____
9. What is the age of the head of the household? _____

Diary placement ____ / ____ Month/day

Diary to be picked up ____ / ____ Month/day

Clothing Purchase Diary _____ Code _____

INSTRUCTIONS: Under each category listed below, please record all purchases of clothing made since January 1. List each item bought and the price paid.

Examples:									
Men's Wear		Women's Wear		Girls' Wear		Boy's Wear		Infant's Wear	
Item	Price	Item	Price	Item	Price	Item	Price	Item	Price
Shirt	\$4.56	Blouse	\$5.37	Shorts	\$3.89	T-shirts	\$ 2.50	Gown	\$4.50
Socks	\$1.39	Purse	\$6.00	Shoes	\$11.27	Jeans	\$10.30	Hat	\$1.38
Underwear	\$2.50	Slacks	\$12.00	Sandals	\$6.86	Belt	\$ 4.25	Bib	\$.85

Men's Wear	Women's Wear	Boys' Wear	Girls' Wear	Infants' Wear
(Clothing for males age 16 and older)	(Clothing for females age 16 and older)	(Clothing for males 2-15 years old)	(Clothing for females 2-15 years old)	(Clothing for Children under 2 years old)

Item	Price	Item	Price	Item	Price	Item	Price	Item	Price
1.									
2.									
3.									
4.									
5.									

Food Purchase Diary

Code _____

INSTRUCTIONS: Please list purchases of food made each day. List only food which was eaten at home, or which was bought to be eaten at home.

"Item" describes the item purchased, such as whole milk, sausage links, tea bags, etc.

"Number" refers to the number of cans, boxes, bottles, or packages.

"Net weight/Volume" is the size bought, 1 quart, 5 lbs., 19 ounces, 1 liter, etc.

Please indicate whether the item bought was fresh, frozen, canned or other and list the total cost.

Date	Item	Number of items	Net Weight/Volume	Was this item:				Total Cost
		(cans, bottles)		Fresh	Frozen	Canned	Other	

Appendix C: Market Basket Data for January 1-March 30		
Average Monthly Expenditures		
Item	RCM	CPI
Shelter	\$166.99	\$279.25
Utilities	66.72	103.83
Total Clothing	83.32	88.89
Men's Clothes	7.31	7.39
Outerwear	4.89	1.84
Furnishings	1.38	2.61
Underwear	1.36	1.14
Shirts	5.21	3.93
Pants	7.23	6.34
Shoes	6.12	4.54
Women's Clothing	36.81	36.50
Dress Clothes	7.90	13.28
Skirts-Blouses	6.56	2.67
Lingerie	2.30	2.58
Outerwear	5.03	3.11
Pants	6.51	3.50
Shoes	6.52	5.61
Accessories	1.99	5.75
Boys' Clothing	6.39	6.94
Dress Clothes	.33	.50
Pants	1.48	1.67
Shirts	.82	1.84
Outerwear	1.61	.68
Underwear	.78	.42

Appendix C: Market Basket Data for January 1-March 30		
Average Monthly Expenditures		
Item	RCM	CPI
Shoes	1.37	1.83
Girls' Clothing	5.07	7.81
Dress Clothes	.41	2.00
Pants	1.42	1.54
Skirt-Blouses	.56	.85
Outerwear	1.07	.88
Lingerie	.64	.80
Shoes	.97	1.74
Infants' Clothing	1.55	9.85
Total Food	111.80	157.33
Cereal	2.84	1.85
Pasta & Meal	1.96	1.24
Flour & Mixes	1.84	1.40
Bread	3.52	5.49
Crackers	1.04	2.81
Other Fresh Bakery	1.92	5.13
Frozen- Refrigerated Bakery	.24	1.25
Ground Beef	7.28	6.16
Roast	3.68	.32
Steak	3.84	7.99
Other Beef	.68	2.73
Bacon	3.20	2.52
Porkchops	2.32	3.17
Ham	2.16	3.85
Sausage	2.44	1.80
Other Pork	.48	2.85
Hot Dogs	.76	2.05
Lunch Meat	1.88	4.45
Other Meats	.40	1.69
Turkey	3.24	1.56
Fresh-Frozen Seafood	.52	3.04
Tuna	1.60	1.04
Other Canned Seafood	.76	.48

Appendix C: Market Basket Data for January 1-March 30		
Average Monthly Expenditures		
Item	RCM	CPI
Eggs	3.64	4.09
Whole milk	8.04	9.13
Other Milk	1.12	3.17
Cream	.44	.89
Butter	3.32	.92
Solid Cheese	2.24	3.21
Soft Cheese	.16	1.69
Ice Cream	1.12	2.41
Other Dairy Products	.08	2.61
Fresh Fruit	4.60	6.92
Frozen Fruit & Juices	2.48	1.12
Fruits- Canned & Dried	.92	2.13
Fruit Juices-Canned	.08	2.05
Frozen Vegetables	1.44	1.16
Vegetables-Canned & Dried	5.40	3.64
Sugar	1.68	1.24
Candy	.52	2.41
Other Sweets	.92	1.61
Margarine	.44	1.53
Shortening & Dressings	2.00	2.49
Peanut Butter	.80	1.25
Cola	3.24	4.33
Other Carbonated Drinks	.72	2.10
Coffee	2.56	3.45
Tea	.60	1.13
Other Beverages	1.04	1.61
Frozen Prepared Foods	.36	2.25
Soup	1.00	1.01
Canned Prepared Foods	3.64	4.08
Chips & Nuts	2.24	1.92
Condiments& Seasonings	1.92	3.41

MODELING INCREASED REPURCHASE INTENTIONS FOR HIGH-TECH B2B OFFERINGS

Gregory M. Kellar, Penn State University, Delaware County
Michael W. Preis, Long Island University/C.W. Post Campus

ABSTRACT

Overall customer satisfaction for industrial buyers is correlated with repurchase intentions. Components of overall satisfaction include satisfaction with the product (offering), satisfaction with the vendor's performance, and interpersonal satisfaction (satisfaction with the relationship with the salesperson). Research shows that industrial buyers evaluate components of satisfaction non-uniformly across various purchase categories (e.g., components of satisfaction are evaluated differently for capital equipment than for production process items). The same holds true for purchases of differentiated and non-differentiated (commodity) items; satisfaction with high-tech products is evaluated differently than for products with lower levels of technology.

Data collected from a cross section of industrial offerings are categorized according to their levels of technology. Items from industries characterized by high expenditures on R&D are categorized as high-tech. Optimal models are developed and the results suggest that if sellers of high-tech offerings reallocate resources in the manner suggested by the optimal model, their repurchases will be increased by an average of 7.5%. This advances prior research by demonstrating the value of segmenting and treating high-tech offerings separately, rather than aggregating offerings with all levels of technology together. Implications for future research are also discussed.

INTRODUCTION

Customer loyalty (repurchase) is an important factor in the profitability of firms (Fornell, 1992). Product design, quality, performance, price, and delivery are traditional forms of competition, yet, in today's highly competitive markets, with instantaneous worldwide communication and flexible manufacturing, traditional forms of differentiation are declining rapidly (Preis, 2000). Thus, to be competitive, it is important that marketers understand exactly which factors drive customer repurchase decisions and focus on fulfilling those expectations.

Patterson, Johnson, and Spreng (1997), Shapiro, Slywotzky, and Doyle (1997), and Preis (2000) find that increased overall customer satisfaction leads to increased repurchase intentions, making an understanding of customer satisfaction critical to market success. Overall customer

satisfaction is an integrative function of the various components of satisfaction, such as satisfaction with the product itself, satisfaction with the vendor's performance, and satisfaction with the relationship with the salesperson (Patterson, Johnson & Spreng, 1997). While a great deal of research on customer satisfaction has been performed in consumer markets, industrial markets have been largely ignored (Patterson, Johnson & Spreng, 1997; Szymanski & Henard, 2001; Homburg & Rudolph, 2001). The purpose of this study is to model, in B2B sales, the impacts of various components of satisfaction on repurchase intention. In particular, we examine the effects of components of satisfaction on repurchase intention for high-tech offerings.

LITERATURE REVIEW

One early focus of satisfaction research was to discover how satisfaction works. Accordingly, many models of customer satisfaction were investigated, including equity (e.g., Oliver & Swan, 1989a & 1989b), comparison, expectancy disconfirmation (e.g., Bearden & Teel, 1983; Bolton & Drew, 1991; Churchill & Surprenant, 1992), assimilation (Oliver, 1977), assimilation-contrast (LaTour & Peat, 1979), and dissonance (Cardozo, 1965; Oshikawa, 1968). While support for all of these models has been found, the most widely accepted model is the expectancy-disconfirmation paradigm (Patterson, Johnson & Spreng, 1997). In this model, when a consumer's expectation of performance is met, the expectation is said to be confirmed. When actual performance is below the expected level of performance, the expectation is negatively disconfirmed and when actual performance exceeds the expected level of performance, the expectation is positively disconfirmed. Overall satisfaction is considered a multi-attribute model in which overall satisfaction has multiple components.

Early research into satisfaction investigated satisfaction as a uniform construct across all product categories and in all markets. There was an implicit assumption that satisfaction is evaluated in the same way for all types of offerings. As the investigation of customer satisfaction matures, this assumption has begun to be questioned. Yi (1990), in a review of consumer satisfaction, anticipates that satisfaction varies from one product category to another when he questions, "Are the links between the variables different across consumers, products, or situations?" (p. 107). This suggests that the nature of an offering may influence which characteristics consumers use to evaluate their repurchase intentions. For example, repurchase at office stores may be driven by satisfaction with the vendor whereas repurchase of a fork lift may be more influenced by satisfaction with characteristics of the product, such as its reliability (Kauffman, 1994).

Thus, Mittal, Ross, and Baldasare (1998) find that "a consumer can be both satisfied and dissatisfied with different aspects of the product" (p. 34) at the same time. Consequently, a customer might be satisfied overall, even though one or two components of overall satisfaction are dissatisfying. For example, a customer might hypothetically experience high overall satisfaction because the product exceeds expectations even though the vendor might not have shipped the

product on time and the salesperson was irritating. This ability to be both satisfied and dissatisfied with different attributes of the same product simultaneously is important to marketers; with an understanding of the relative importance of attributes, marketers would be able to emphasize those attributes that maximize levels of overall satisfaction while avoiding expending resources on attributes that have little influence on overall satisfaction.

Investigating industrial markets, Patterson, Johnson, and Spreng (1997) find that components of customer satisfaction have different relative weights than in consumer markets and that multiple attributes are considered when making satisfaction judgments. When industrial buyers evaluate overall satisfaction, Kauffman (1994) shows that product attributes such as physical characteristics, nonphysical characteristics (such as warranty), price, and distribution, are more or less important depending on the product application. Product applications investigated by Kauffman (1994) are capital equipment, administrative, and production processes. Thus, for example, price could outweigh all other characteristics when evaluating production items but nonphysical characteristics, such as warranty or reliability, might be more important when evaluating capital equipment where a breakdown could idle an entire assembly line. Kauffman (1994) also finds that differentiated products are evaluated differently than undifferentiated (commodity) products.

High-tech products are highly differentiated (Shapiro, Slywotzky & Doyle, 1997) and differentiated products are evaluated differently than undifferentiated products. This suggests that purchasers evaluate high-tech products differently than low-tech products.

The fundamental question addressed by this study is whether marketers could increase repurchase intentions for high-tech offerings by allocating marketing resources in an optimal manner. We propose to answer this question by using empirical evidence to develop a model of the influence of the various components of satisfaction on repurchase intentions. This model should be useful to managers as a guide to allocating marketing resources to product or company characteristics in proportion to the importance of those characteristics in determining customers' repurchase intentions. Such a model could also be useful to researchers by clarifying relationships, leading to new insights in buyer behavior.

Crosby and Stephens (1987) find that a buyer's relationship with a seller has three principal components: the product, the performance of the vendor, and the salesperson, but they conduct no testing of the weights assigned to each of the components or whether those weights vary depending on the product category. These findings of Crosby and Stephens (1987) from the consumer sector raise the question of whether the same factors are important in the industrial sector and what their relative weights should be. Our research uses these same three factors to model overall satisfaction and repurchase intention for high-tech offerings in industrial markets.

Product satisfaction is the satisfaction that a buyer feels with the offering and its durability, serviceability, and performance. Performance satisfaction is a buyer's satisfaction with the performance of the vendor organization on such things as on-time delivery, invoicing accuracy, and warranty support. Interpersonal satisfaction is the buyer's satisfaction with the relationship with the

salesperson and includes such things as evaluations of the salesperson's trustworthiness, ability to solve problems, communications ability, and personality (Crosby & Stephens, 1987) and is an important component of overall satisfaction (Hempel, 1977; Oliver & Swan, 1989a; Crosby & Stephens, 1987; Crosby, Evans & Cowles, 1990). For services, Bitner, Booms, and Tetreault (1990) find that the quality of customers' contacts with salespeople is critical to overall satisfaction. Widmier and Jackson (2002) find that customer satisfaction ratings of salespeople are influenced by factors perceived as within salespeople's control and not influenced by factors outside salespeople's control. Since the product itself and the supplier's performance are normally outside of a salesperson's control, interpersonal satisfaction is expected to be independent of the other components of satisfaction.

Homburg and Rudolph (2001) state, "many firms producing and marketing industrial goods are strongly technically-minded implicitly assuming that the product is the most important source of customer satisfaction" (p. 30). They then show that customer satisfaction is a function of a proper subset of the three previously identified components of satisfaction. The composition of the subset for each individual depends on the functional role of that individual within the buying organization. Our study builds on this work by examining the importance of the components of overall satisfaction for repurchase intention for high-tech offerings.

DATA COLLECTION AND LEVEL OF TECHNOLOGY ASSIGNMENTS

Using the "URL embedded" design (Bradley, 1999), all members of the National Association of Purchasing Management (NAPM) with e-mail addresses on file with the organization, were contacted by e-mail. The data collection effort was part of a larger more comprehensive study of dyads; each purchasing agent was requested to recruit one salesperson from whom they had already made purchases to participate in the study. Salespeople and purchasers completed different questionnaires on line.

Purchasing agent participants were asked to respond for one product for which they had decision-making responsibility. Single items, each using a seven-point semantic differential scale, were used to assess overall satisfaction, product satisfaction (SAT_PDT), performance satisfaction (SAT_PERF), interpersonal satisfaction (SAT_REL), and intention to repurchase. The salespeople provided generic descriptions of the items being purchased.

Invitations to participate were sent to 7,298 individuals. Messages were undeliverable to 1,787 addresses due to invalid or improper address information. Responses from 141 recipients claiming ineligibility were received. Thus, 5,370 was the size of the sample frame. In all, questionnaires were received from 193 dyads, yielding a response rate of 3.6%; this low response rate was no doubt due to the length of the questionnaires and the requirement that both parties in each dyad had to respond in order to achieve a useable response.

Demographically, 54 percent of the purchasing agent respondents are male and 46 percent are female. The mean age of purchasing agents reporting their ages is 45 years. As a group they are well educated, with 48 percent holding bachelors degrees and an additional 21 percent holding advanced degrees. The mean number of years of professional purchasing experience of the sample is greater than 14 and the mean number of years of tenure with their present employers is 9. Responses come from at least 41 different states. On all characteristics for which comparisons can be made, the demographics of the sample closely match the demographics of the overall membership of the NAPM, from which the sample is drawn.

Bias is a concern in any sample; the low response rate in this survey would be of greater concern if the demographics of the sample did not match the demographics of the NAPM, the population from which respondents are drawn, as closely as they do. The response rate is in line with other e-mail surveys (Weible & Wallace, 1998). Furthermore, in a study comparing mail and e-mail surveys, Bachmann, Elfrink, and Vazzana (1999/2000) find "evidence that nonresponse bias may be less of a problem using e-mail" than using mail surveys.

The determination of what constitutes a high-tech industry is the source of much discussion. Luker and Lyons (1997) quote one analyst as saying, "Everyone knows what [high-tech] is, but no two lists are alike" (p.13). A report from the Congressional Office of Technology Assessment (1982) says that high-tech firms typically devote high proportions of expenditures to R&D activities. Because R&D expenditures as a proportion of sales will normally approximate this definition and because these figures are readily available on an industry-by-industry basis, we use this latter measure to determine the level of technology of industries. While any macro assessment of technology for an industry will find anomalies at the micro level (Luker & Lyons, 1997), this criterion provides an objective means for classifying industries. Furthermore, the results of such a classification are generally in agreement with most people's understanding of what it means to be "high-tech." Table 1 shows the 36 industries and their corresponding aggregate R&D expenditures expressed as a percentage of sales, as determined by the National Science Foundation.

Industry	R&D as a % of sales	Technology Category
Scientific R&D services	32.1	4
Software	16.7	4
Communications Equipment	11.6	4
Computer systems design and related services	11.0	4
Pharmaceuticals and medicines	10.5	4
Navigational, measuring, electromedical, control instruments	9.1	4
Semiconductor and other electronics components	8.3	4

Table 1: Company and other (non-Federal) R&D funds as percentage of net sales in R&D-performing companies for selected industries: 1999

Industry	R&D as a % of sales	Technology Category
Medical equipment and supplies	7.7	4
Architectural, engineering, and related services	6.8	4
Health care services	6.4	4
Computers and peripheral equipment	6.4	4
Management of companies and enterprises	5.7	3
Trade	5.5	3
Resin, synthetic rubber, fibers, and filament	4.2	3
Machinery	3.3	3
Other chemicals	3.2	3
Aerospace products and parts	3.2	3
Construction	3.1	3
Motor vehicles, trailers, and parts	2.9	3
Electrical equipment, appliances, and components	2.3	3
Basic chemicals	2.0	3
Newspaper, periodical, book, and database information	2.0	3
Mining extraction and support activities	1.9	3
Plastics and rubber products	1.9	3
Nonmetallic mineral products	1.5	2
Paper, printing and support activities	1.4	2
Fabricated metal products	1.4	2
Textiles, apparel, and leather	0.7	1
Furniture and related products	0.7	1
Wood products	0.5	1
Finance, insurance, and real estate	0.5	1
Transportation and warehousing	0.5	1
Broadcasting and telecommunications	0.4	1
Food	0.4	1
Primary metals	0.4	1
Utilities	0.1	1

National Science Foundation, Division of Science Resources Studies (NSF/SRS), Research and Development in Industry: 1999, Early Release Tables (Arlington, VA 2001).

Unless a definition allowing product categories to change from high-tech to low-tech is adopted, then once a category is defined as high-tech, it will forever be defined as high-tech. Such an inflexible definition would lead to the unacceptable situation of referring to candles, light bulbs, refrigerators, steel, and railroads as high-tech industries. While these industries were once considered high-tech, we contend that they are no longer high-tech because insufficient amounts of R&D funding have been invested in them recently to provide for sufficient improvement to be classified as high-tech today. Thus, even such products as 486-based personal computers and DC-3 aircraft, which were once considered high-tech, would now be considered low-tech by comparison to present day offerings. Nevertheless, the product categories of personal computers and aircraft are still considered high-tech because R&D expenditures have remained high (as a percentage of sales) and these industries have constantly improved their offerings.

We rely on the NSF analysis of R&D spending shown in Table 1 to determine which industries are high-tech industries. We examined this list and divided it into four categories: high-tech, medium high-tech, medium low-tech, and low-tech. Since there are 36 industries in the table, one methodology for determining the "dividing line" between categories is to simply place 9 (25%) of the industries into each category. Doing this results in "computers and peripheral equipment" being classified as a medium high-tech industry. This is counter to our understanding of high-tech and we believe is counter to most people's understanding of high-tech. Also, literature commonly uses computers as an example of a high-tech product (Zajas & Crowley, 1995; Feenstra & Hanson, 1999). Accordingly, we employ a more appropriate methodology; one that identifies natural breaks or jumps in the percentage of revenues devoted to R&D that form groups of industries with similar R&D expenditures as percentages of sales. Thus, semiconductor and other electronic components, aerospace products and parts, telecommunications equipment, and radiological services are classified as high-tech. The high-tech category industries are ranked "4" in Table 1.

Moderately high-tech industries spend a lower percentage of sales on R&D than high-tech industries, nevertheless, their spending on R&D is significant; these industries are ranked "3" in Table 1. Similarly, moderately low-tech and low-tech categories are grouped by the similarity of their spending on R&D as identified in Table 1. Thus, moderately high-tech industries include electrical equipment, appliances, and components, resins, synthetic rubber, fibers, and filament, and machinery; moderately low-tech industries include paper, printing, and support activities, nonmetallic mineral products, and fabricated metal products; and low-tech industries include food, transportation and warehousing, furniture and related products, and wood products. Moderately low-tech industries are ranked "2" and low-tech category industries are ranked "1" in Table 1.

Product descriptions of the items being purchased by the respondents were assigned to the industry categories shown in Table 1. This was done independently by the coauthors to assure reliability of the designations. When industry assignments of the items purchased were compared, there was agreement on 173 (89.6%) of the observations. On the 20 items for which initial classifications differed, discussions were held and resolution was achieved on 15; the five items on

which agreement could not be reached were not used in the analysis. Of the 15 items on which resolution was obtained, 14 changed by only one category, for example from "3" to "2", while one item changed by 2 categories. None changed from high-tech to low-tech and vice versa. Generic descriptions of items purchased were so vague for 25 responses (e.g., "consulting") that no determination of industry or technology could be made. These observations were not used, leaving a sample size of 163 for further analysis (193 dyads less five on which agreement could not be reached and less 25 on which descriptions were vague). Because the purpose of the study is to examine high-tech offerings, the observations for medium-high, medium-low, and low-tech offerings are not used in this study. This leaves a sample size of 46.

ANALYSIS AND RESULTS

The analysis of data used in this research involves nine steps, as depicted in Figure 1. Each step is described in detail.

Step 1: Determine if High-Tech Offerings Should be Modeled Separately

Optimal regression models are developed for the entire data set using dummy variables to determine the degree of influence of technology on the overall model. In particular, a best variable subset selection methodology is used to identify an optimal regression model using the variables X_1 , X_2 , X_3 , D_1 , D_2 , D_3 where

$$X_1 = \text{SAT_PROD}$$

$$X_2 = \text{SAT_PERF}$$

$$X_3 = \text{SAT_REL}$$

$$D_1 = \text{Dummy1 (assumes value of 1 if datum is high-tech, 0 otherwise)}$$

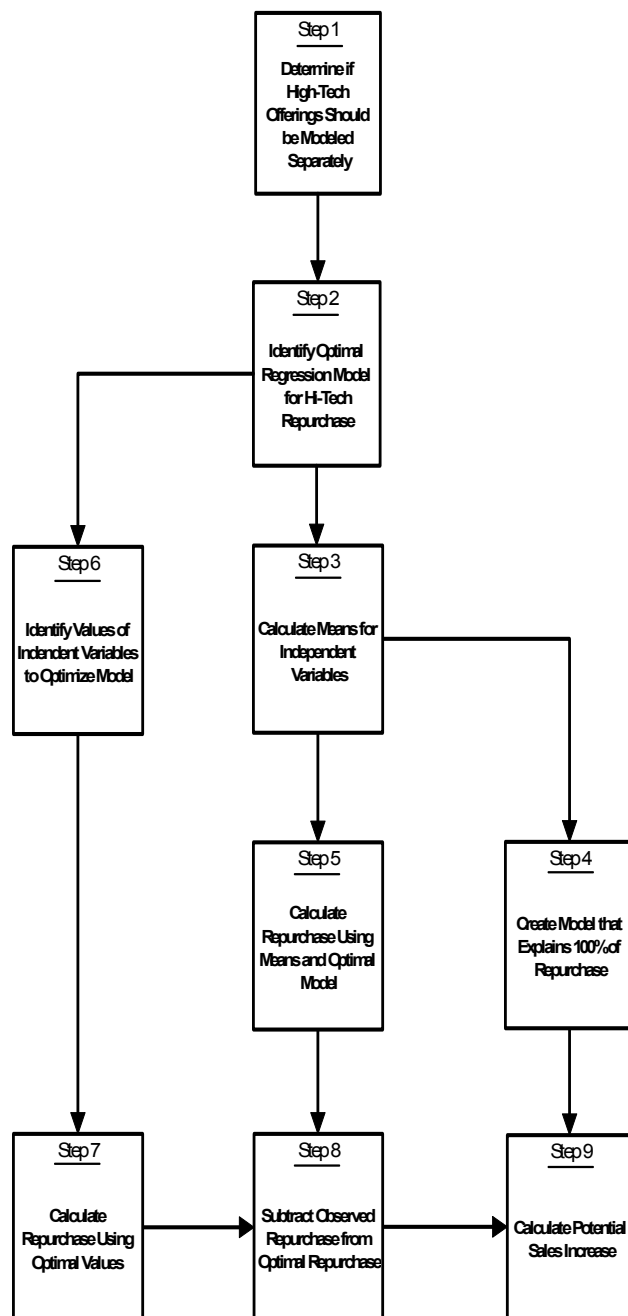
$$D_2 = \text{Dummy2 (assumes value of 1 if datum is medium high-tech, 0 otherwise)}$$

$$D_3 = \text{Dummy3 (assumes value of 1 if datum is medium low-tech, 0 otherwise).}$$

By way of explanation, the full model takes on the form below:

$$\begin{aligned} Y = & B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4D_1 + B_5D_1X_1 + B_6D_1X_2 + B_7D_1X_3 \\ & + B_8D_2 + B_9D_2X_1 + B_{10}D_2X_2 + B_{11}D_2X_3 + B_{12}D_3 + B_{13}D_3X_1 + B_{14}D_3X_2 \\ & + B_{15}D_3X_3 \end{aligned}$$

Figure 1
Sequence of Steps Performed in Data Analysis



The methodology considers and compares all $2^{15} - 1 = 32,767$ models where a unique model (regression equation) is considered for each subset of coefficients. The models are compared using Akaike's Information Criterion Corrected (AICc, described in Step 1). Results provide insufficient evidence to eliminate models containing dummy variables, thus demonstrating the necessity to stratify the data (Wesolowsky, 1976). In other words, when $D_j = 1$ the coefficient of $X_i = B_i + B_{4j+i}$. Notice that the coefficient of each X_i varies with the level of technology. This is equivalent to saying that each level of technology should be modeled independently.

Step 2: Identify Optimal Regression Model for High-Tech Repurchase

Akaike's Information Criterion Corrected (AICc) is used to select an optimal model from among multiple competing models. AICc applies Occam's Razor (Principle of Parsimony) to balance the "goodness of fit" of each model with a penalty factor for the number of variables in order to achieve optimal parsimony (Burnham & Anderson, 2002). Therefore, complex models with large numbers of variables will commonly be dropped in favor of more parsimonious models. AICc has been shown to have advantages over more traditional regression methods such as backward elimination and forward stepwise selection; one of these advantages is that all possible models are compared systematically rather than using a heuristic to guess at an optimal model (Bozdogan, 1990). Another advantage of using AICc is that it balances a model's parsimony against its complexity to avoid overfitting (the inclusion of too many independent variables) (Burnham & Anderson, 2002).

The information theoretic methodologies (such as AICc) assign scores to each competing model and the model with the lowest score is preferred. Models with AICc scores that differ from the lowest score by less than a magnitude of 1 are not differentiated statistically, models with scores that differ from the lowest score by magnitudes of more than 1 but less than 2 are considered to be similar, and scores that differ from the lowest score by magnitudes of more than 3 have diminishing evidence of support (Burnham & Anderson, 2002). This means that the analysis will likely result in a portfolio of good models from which to choose an optimal model. The science of the field is then used to decide which model is considered most useful; the selected model is then considered to be optimal. That the portfolio contains more than one model is not a shortcoming of the methodology but rather emphasizes that the data are inadequate to determine a single best model (Burnham & Anderson, 2002).

The use of AICc is advocated over the use of other information theoretic approaches, such as AIC, when the ratio n/K is small, where n = sample size and K = the number of independent variables in the full model + 2. A common rule of thumb is that AICc should be used when $n/K < 40$ (Burnham & Anderson, 2002). In our study, $n=29$ and $K=4$; therefore, the ratio of $n/K=29/4=7.25$, which is much less than 40. Thus, in this study, AICc is used to select the portfolio of optimal models. Results for all 7 possible models are shown in Table 2.

AICc	Constant	Coefficients			R ²
		SAT_PDT	SAT_PERF	SAT_REL	
87.144	1.559	0.308**		0.457*	0.497
88.929	1.538	0.243	0.082	0.444*	0.505
89.849	1.395		0.189*	0.593**	0.467
91.565	3.429**	0.492**			0.417
92.688	1.335			0.780**	0.402
92.911	3.332**	0.402**	0.106		0.430
100.263	4.300**		0.347**		0.295

* statistically significant at p=0.05
 ** statistically significant at p=0.01
 (As noted in the text, statistical significance is presented here for readers' convenience but has little relevance for information-theoretic paradigms.)

Table 2 contains competing models sorted in ascending order by AICc score. The first model, i.e., the one with the lowest AICc score is necessarily in the portfolio of models to be considered. Notice that the second and the third models are also considered to be in the portfolio of models since their AICc scores differ by a magnitude of less than 2.7 from the lowest score. Arguments could be made to justify the use of any of these models. Notice, however, that SAT_REL is the dominant variable in all models in the portfolio. Also, from the perspective of traditional statistical methods, the first model contains coefficients that are all statistically significant. Since we want to identify a useful model and there is no compelling reason to prefer any model other than the one with the lowest AICc score, we select the first model as the most useful.

Information-theoretic criteria such as AIC and AICc are not tests "in any sense, and there are no concepts such as test power or P-values or α -levels. . . . *It seems best to avoid use of the word 'significant' in reporting research results under an information-theoretic paradigm*" (Burnham & Anderson, 2002, p. 84, emphasis in original). Nevertheless, for the convenience of those readers unfamiliar with information-theoretics, p-values are reported in Table 2.

Also of note, multicollinearity of the data was investigated. For each principal component dimension, multicollinearity begins to become problematic when the condition index exceeds 30 and at least two variance proportions exceed 0.50 for a given root number (Tabachnick & Fidell, 1996; Rawlings, 1988). The full model demonstrates moderate to strong dependencies because the conditioning index is 32.9. Further, the variance decomposition components show that two regression coefficients exceed 0.50, suggesting that collinearity could be a problem in the full model (Rawlings, 1988). No other model had any indication of serious multicollinearity. Since the full

model has the second lowest AICc score, this adds emphasis that the optimal model selected by AICc should be used.

Step 3: Calculate Means for Independent Variables

The second step performed in the analysis is to calculate the means of the observed values of the variables in the sample (restricted to the high-tech group). The observed means are shown in Table 3.

Variable	n	Mean
SAT_PDT	46	6.109
SAT_PERF	46	6.152
SAT_REL	46	6.543
REBUY	46	6.435

Step 4: Create Model that Explains 100% of Repurchase

As shown in Table 2, the selected model explains 49.7% (i.e., $R^2 = 0.497$) of the variance in REBUY and we write the equation for this model:

$$\text{REBUY} = 1.559 + 0.308 \times \text{SAT_PDT} + 0.457 \times \text{SAT_REL} + \epsilon$$

where ϵ is the error term that accounts for unexplained variance. In this case, the error term accounts for 50.3% of the variance of intention to repurchase in the optimal model and when the error term is included, the model explains 100% of the variance of intention to repurchase.

Step 5: Calculate Repurchase Using Means and Optimal Model

From Table 3 the observed mean of SAT_PDT in the sample (restricted to high-tech offerings) is 6.109 and the mean of value of SAT_REL is 6.543. Substituting these values into the model from Step 4 yields:

$$\text{REBUY} = 1.559 + 0.308 \times 6.109 + 0.457 \times 6.543 + \epsilon = 1.559 + 4.872 + \epsilon = 6.431 + \epsilon$$

The observed means of SAT_PDT and SAT_REL in the model are interpreted as the effects of current expenditures of the marketing resources that drive the respective components of satisfaction.

This interpretation is justified since the observed means of the respective components of satisfaction result from the current level of expenditures on marketing resources. While the linear relationship we model above is between components of satisfaction and repurchase intention, no claim is made as to a linear relationship between marketing resource allocations and components of satisfaction or repurchase. The relationship should be positive, however, meaning that as one increases (i.e., expenditures), the other increases (i.e., components of satisfaction). Since our study is cross-sectional in nature, causality cannot be demonstrated, nevertheless, it is reasonable to expect a causal relationship between expenditures on marketing resources and increases in satisfaction, leading to increases in repurchase intention.

Step 6: Identify Value of Independent Variables to Optimize Model

Since the coefficients of SAT_REL and SAT_PDT are positive, we see that the maximum value of REBUY in Step 4 is obtained when SAT_PDT and SAT_REL are maximized. The maximum possible value for SAT_PDT and for SAT_REL is 7 (the highest value on the 7-point semantic differential scale used in the survey to measure each construct).

Step 7: Calculate Repurchase Using Optimal Values

Substituting 7 for SAT_PDT and SAT_REL, REBUY in Step 4 the equation for repurchase intention becomes:

$$\text{REBUY} = 1.559 + 0.308 \times 7 + 0.457 \times 7 + \epsilon = 1.559 + 5.355 + \epsilon = 6.914 + \epsilon$$

Step 8: Subtract Observed Repurchase From Optimal Repurchase

In order to determine the magnitude of the potential increase in REBUY that can be obtained by optimizing SAT_PDT and SAT_REL, we subtract the observed value of REBUY (Step 5) from the optimized value of REBUY (Step 7), thus:

$$\begin{aligned} \text{Potential Increase in REBUY} &= (6.914 + \epsilon) - (6.431 + \epsilon) \\ &= (6.914 - 6.431) + (\epsilon - \epsilon) = 0.483 \end{aligned}$$

Thus, the maximum increase in REBUY that can be obtained by optimizing both SAT_PDT and SAT_REL is 0.483 on the 7-point repurchase intention scale.

Step 9: Calculate Potential Sales Increase

From Table 3 we see that the mean intention to repurchase for buyers of high-tech offerings from sellers using the present allocation of resources is 6.431. If sellers make no changes in their allocations of resources among the factors influencing SAT_PDT, SAT_PERF, and SAT_REL, we expect repurchase intention to remain unchanged. If sellers reallocate resources in order to achieve the highest possible product satisfaction (SAT_PDT) and interpersonal satisfaction (SAT_REL) ratings, i.e., 7 on the 7-point SAT_PDT and SAT_REL scale, then REBUY should increase by 0.483 (from Step 8). This can be calculated as a percentage increase in existing repurchase sales as:

$$\begin{aligned}\text{Increase in REBUY} &= \text{Potential Increase in REBUY} / \text{Existing Mean REBUY} \\ &= (0.483 / 6.431) \times 100 = 7.513\%\end{aligned}$$

Thus, if marketers optimize their allocations of resources among the factors influencing SAT_PDT, SAT_PERF, and SAT_REL, they should cause repurchase to increase, on average, by slightly more than 7.5%.

It should also be noted that if marketers focus on only one of the two factors in the optimal model, the relative improvement to repurchase intention is still large. For example, if SAT_PDT is maintained at its average level but SAT_REL is optimized, REBUY is increased from an average of 6.431 to 6.640 for a 3.25% increase in repurchase intention. This increase emphasizes the value of these findings to managers; in particular, our findings suggest that managers of high-tech offerings can increase repurchase intention by reallocating marketing resources. Marketers may find it easier to reallocate existing marketing budgets rather than to seek increased marketing funds.

MANAGERIAL IMPLICATIONS

Managers work at the attribute level, not at global or overall levels, thus studying customer satisfaction at the attribute level is of greater value to practitioners than studying overall satisfaction (Wittink & Bayer, 1994). The results of this study clearly show that salespeople and sales managers would do well to maximize product satisfaction and interpersonal satisfaction for high-tech offerings. This is not to say that vendor performance can be ignored, but within limits, industrial buyers of high-tech offerings are most influenced by product characteristics and interpersonal relationships. This suggests that sales managers of high-tech offerings would be well advised to select, train, and compensate their salespeople to maintain the highest possible levels of interpersonal satisfaction. Where choices exist between raising satisfaction with vendor performance, salespeople, or product or service attributes, the latter two appear to be the most effective use of resources for increasing repurchase intentions for high-tech offerings.

It is worthy of mention that this study has also demonstrated that many previous attempts to understand relationships between satisfaction and repurchase intention have used aggregated data and consequently achieved reduced accuracy in their modeling efforts. The magnitude of the benefits to managers of high-tech offerings that these results indicate could not have been achieved without disaggregating the data into separate groups of like levels of technology.

It is reasonable to hope that similar analyses applied to other levels of technology will yield results that will be as beneficial in their realms as these findings should prove to be for high-tech offerings. The methodology for such studies is virtually "boiler-plated" in this study.

To understand the magnitude of this research, consider a company selling high-tech products that account for \$20 million revenues annually. Further, suppose that 60% of its sales come from repurchase activities. This suggests that the company will sell \$12 million this year from repurchase activities. An increase in repurchase efficiencies of 7.5% would increase revenues \$900,000. This increase of almost \$1 million would represent almost 5% of total revenues and could come as a result of little or no increase in expenditures, only a more informed and focused use of resources.

Finally, the methodology may prove to be more valuable than the actual results. The methodology takes advantage of three techniques. In particular these techniques include 1) disaggregation of data and focused models based upon the disaggregated data, 2) the identification of optimal models using information theoretic statistics and best variable subset selection methodologies, and 3) the application of resulting models to solve real world problems.

LIMITATIONS

The results of this study should be interpreted with caution. We have made the assumption that buyers will actually perform as they indicated they would perform when they completed the questionnaires. These results should only be accepted to the extent that buyers will actually behave as they said they would. Also, these findings are applicable only to high-tech offerings and application of the findings to medium- or low-tech offerings is not justified.

Goods and services are analyzed together; it may be that differences exist in the ways that buyers evaluate goods and services, both for satisfaction and for repurchase. Furthermore, the sample includes buyers of all manner of offerings; it may be that when buyers of single commodity-types are analyzed, repurchase intention will be a function of different factors than are shown to be important in this study. The study examines only components of overall satisfaction and examines the effect of those same factors on the repurchase decision. In spite of the relatively high amount of variance explained for intention to repurchase, the unexplained variance indicates that significant factors remain to be identified.

Because the sample size for high-tech industries is not large, readers are cautioned against relying exclusively on these results. Replication studies should be performed with larger samples to verify these findings.

The questionnaires used to collect data utilized single items to measure each component of satisfaction; single items may not fully capture the entire range of factors that purchasers include in their judgments of each component of overall customer satisfaction. For example, a purchaser may be extremely satisfied with the technology used in a product but may not be fully satisfied with the reliability of the product; a single-item measure of the satisfaction with the product may not allow respondents the opportunity to fully express their satisfaction judgments. Nevertheless, single-item measures are commonly used in satisfaction research and are reliable (Drolet & Morrison, 2001).

The survey was conducted via e mail and the Internet. Despite widespread use of the Internet by purchasing professionals not all organizations use it nor are all purchasing professionals comfortable with it. In spite of the apparent similarity between the demographics of the sample and the demographics of the NAPM, the sample could be restricted in its generalizability. Because this study was cross-sectional rather than longitudinal in nature, conclusions implying causal relationships are not warranted

IMPLICATIONS FOR FUTURE RESEARCH

The findings of this study should be replicated in other research. In addition, research should be undertaken to determine whether the same factors examined in this study are important to organizational buyers for medium- and low-tech offerings. Other factors may also be important in evaluating repurchase intention; accordingly, research should be undertaken to determine the roles of additional factors, such as price and brand name.

Similarities of some characteristics of satisfaction are shared between high-tech and low-tech products but not medium-tech products (Shapiro, Slywotzky & Doyle, 1997). This introduces the question as to how technology levels should be clustered optimally. Application of multi-sample cluster analysis prior to model building might reveal characteristics that are common across groups. This study has categorized technology into 4 distinct levels. The optimal number of categories should be investigated and the differences between categories should be studied to gain a better understanding of how the level of technology affects industrial buyer behavior.

Finally, This study examines industrial buyers; it would be interesting to model repurchase decisions for consumers. Our study has combined both goods and services under the rubric high-tech offerings; research should be undertaken to examine whether goods differ from services in the factors that are considered when repurchase decisions are made by industrial buyers. Managerially, it would be useful to know whether buyers are aware of the importance they place on product satisfaction and interpersonal satisfaction; if they are, then emphasizing product and interpersonal satisfaction in advertising would be beneficial. However, to the extent that buyers believe they place greater emphasis on vendor performance, such advertising may have reduced effectiveness.

CONCLUSION

Overall satisfaction is often considered when examining repurchase intention. This study builds on this previous research and examines distinct components of overall satisfaction to determine their effects on repurchase intention. The findings suggest that marketers of high-tech offerings can increase sales as much as 7.5% to existing buyers by reallocating resources in a manner that maximizes two components of satisfaction, satisfaction with the product and interpersonal satisfaction. The application of these findings has the potential of not only maintaining current customers but also increasing their repurchase activity. As it costs five times more to acquire a new customer than it does to retain an existing customer (Kotler & Armstrong, 2001), marketers of high-tech offerings should be very interested in taking advantage of these results to increase sales more efficiently than growing their markets through new customer acquisition. Marketers of non high-tech offerings also should be interested in these findings and should find a methodology that will allow them to calculate parallel results for their own industries, companies or offerings.

REFERENCES

- Bearden, W. O. & J. E. Teel. (1983). Selected determinants of consumer satisfaction and complaint reports. *Journal of Marketing Research*, 20 (February), 21-28.
- Bachmann, D.P., J. Elfrink & F. Vazzana. (1999/2000). E-mail and snail mail face off in rematch. *Marketing Research*, 11(4) (Winter/Spring), 10-15.
- Bitner, M. J., B. H. Booms & M. S. Tetreault. (1990). The service encounter: Diagnosing favorable and unfavorable incidents. *Journal of Marketing*, 54 (January), 71-84.
- Bolton, R. N. & J. H. Drew. (1991). A longitudinal analysis of the impact of service changes on customer attitudes. *Journal of Marketing*, 56 (January), 19.
- Bozdogan, H. (1990). On the information-based measure of covariance complexity and its application to the evaluation of multivariate linear models. *Communications in Statistics*, 19(1), 221-278.
- Bradley, N. (1999). Sampling for internet surveys. An examination of respondent selection for internet research. *Journal of the Market Research Society*, 41(4) (October), 387-395.
- Burnham, K.P. & D.R. Anderson. (2002). *Model Selection and Multimodel Inference: A Practical Information-Theoretic Approach*, (2nd Ed.) New York: Springer.
- Cardozo, R. N. (1965). An experimental study of customer effort, expectation, and satisfaction. *Journal of Marketing Research*, 2 (August), 244-9.
- Churchill, G. A. & C. Surprenant. (1982). An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, 19 (November), 491-504.

- Congressional Office of Technology Assessment (1982). Technology, Innovation, and Regional Economic Development. Sept. 9, 1982, quoted in D. Hecker (1999). High-technology Employment: A Broader View. *Monthly Labor Review*, (June), 18-28.
- Crosby, L. A., K. R. Evans & D. Cowles. (1990). Relationship quality in services selling: An interpersonal influence perspective. *Journal of Marketing*, 54 (July), 68-81.
- Crosby, L. A. & N. Stephens. (1987). Effects of relationship marketing on satisfaction, retention, and prices in the life insurance industry. *Journal of Marketing Research*, XXIV (November), 404-11.
- Feenstra, R.C. & G.H. Hanson. (1999). The impact of outsourcing and high-technology capital on wages: Estimates for the United States. *The Quarterly Journal of Economics*, 114(3), 907-40.
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing*, 56(January), 6-21.
- Hecker, D. (1999). High-technology employment: A broader view. *Monthly Labor Review*, (June), 18-28.
- Hempel, D. J. (1977). Consumer satisfaction with the home buying process: Conceptualization and measurement. In H. K. Hunt (Ed.), *Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction* (pp.275-299). Cambridge, MA: Marketing Science Institute.
- Homburg, C. & B. Rudolph. (2000). Customer satisfaction in industrial markets: Dimensional and multiple role issues. *Journal of Business Research*, 52, 15-33.
- Kauffman, R. G. (1994). Influences on industrial buyers' choice of products: Effects of product application, product type, and buying environment. *International Journal of Purchasing and Materials Management*, (Spring), 29-38.
- Kotler, P. & G. Armstrong. (2001). *Principles of Marketing* (9th Ed.). Upper Saddle River, NJ: Prentice Hall.
- LaTour, S. A. & N. C. Peat. (1979). Conceptual and methodological issues in consumer satisfaction research. In W. F. Wilkie (Ed.), *Advances in Consumer Research*, 6. (pp. 431-7), Ann Arbor: Association for Consumer Research.
- Luker, W., Jr. & D.Lyons. (1997). Employment shifts in high technology industries, 1988-96. *Monthly Labor Review*, 120(6), (June), 12-25.
- Mittal, V., W. T. Ross & P.M. Baldasare. (1998). The asymmetric impact of negative and positive attribute-level performance on overall satisfaction and repurchase intentions. *Journal of Marketing*, 62(1), 33-47.
- Oliver, R. L. (1977). Effects of expectation and disconfirmation on postexposure product evaluations: An alternative interpretation. *Journal of Applied Psychology*, 62 (4), 480-86.
- Oliver, R. L. & J. E. Swan. (1989a). Consumer perceptions of interpersonal equity and satisfaction in transactions: A field survey approach. *Journal of Marketing*, 53 (April), 21-35.

-
- Oliver, R. L. & J. E. Swan. (1989b). Equity and disconfirmation perceptions as influences on merchant and product satisfaction. *Journal of Consumer Research*, 16 (December), 372-383.
- Oshikawa, S. (1968). The theory of cognitive dissonance and experimental research. *Journal of Marketing Research*, 5 (November), 429-30.
- Patterson, P. G., L. W. Johnson & R.A. Spreng. (1997). Modeling the determinants of customer satisfaction for business-to-business professional services. *Journal of the Academy of Marketing Science*, 25(1), 4-17.
- Preis, M. W. (2000). Effects of Temperaments and Value Systems on Customer Interpersonal Satisfaction and Repurchase Intention in Dyadic Sales Relationships. Unpublished doctoral dissertation, The George Washington University.
- Rawlings, J.O. (1988). *Applied Regression Analysis: A Research Tool*, Pacific Grove, CA: Wadsworth & Brooks/Cole Advanced Books & Software.
- Shapiro, B. P., A. J. Slywotzky & S. X. Doyle. (1997). Strategic sales management: A boardroom issue. *Strategy & Business* (Booz-Allen & Hamilton), (3rd Quarter), 29-47.
- Szymanski, D.M. & D.H. Henard. (2001). Customer satisfaction: A meta-analysis of the empirical evidence. *Journal of the Academy of Marketing Science*, 29(1), 16-35.
- Tabachnick, B.G. & L.S. Fidell. (1996). *Using Multivariate Statistics* (2nd Ed.). New York, NY: HarperCollins.
- Weible, R. & J.Wallace. (1998). Cyber research: The impact of the internet on data collection. *Marketing Research*, Fall 10(3), 19-24.
- Wesolowsky, G.O. (1976). *Multiple Regression and Analysis of Variance: An Introduction for Computer Users in Management and Economics*. New York, NY: John Wiley & Sons.
- Widmier, S. & D.W. Jackson, Jr. (2002). Examining the effects of service failure, customer compensation, and fault on customer satisfaction with salespeople. *Journal of Marketing Theory and Practice*, 10(1) (Winter), 63-74.
- Wittink, D. R. & L. R. Bayer. (1994). The measurement imperative. *Marketing Research*, 6(4), 14.
- Yi, Y. (1990). A critical review of consumer satisfaction. In V. A. Zeithaml (Ed.), *Review of Marketing 1990* (68-123). Chicago: American Marketing Association.
- Zajas, J. & E. Crowley. (1995). Commentary: Brand emergence in the marketing of computers and high technology products. *The Journal of Product and Brand Management*, 4(1), 56-63.

GENERATION Y: A BRIEF SYNOPSIS AND THEIR REACTION TO THE EVENTS OF SEPTEMBER 11th

Robert D. Montgomery, University of Evansville
M. Gale Blalock, University of Evansville
Graham T. Paxton, University of Evansville

ABSTRACT

While members of a generation have different characteristics and values than their peers, they often share similar values that are rooted in the times in which they grew up. The purpose of this manuscript is to explore how family, occupational, financial and societal values of Generation Y have changed since September 11, 2001. The results indicate that community service and family are more important. Regarding careers, the results indicate that income is less important while job independence is more important.

INTRODUCTION

Generations are quite difficult to define. Not every member of a generation shares the same characteristics as his or her peers. With that being said, generations with the strongest degree of cohesiveness are due in large part to the times in which they grew up. The Great Depression, WWII, and Vietnam affected the entire nation, and thus, young people growing up at these times formed strong beliefs and sentiments based upon their own experiences of handling these dilemmas.

Before September 11th, 2001, the Vietnam War was the last major issue to grab the attention of the entire nation. AIDS was a major issue of the 1990s, but many people failed to pay attention to it because they had not been directly affected by it. The consequences of September 11th were and are unavoidable. This catastrophic event has re-shaped the values and beliefs of many Americans.

Young people are generally impressionable and prone to change because they are not yet sure what they believe in - September 11th has unquestionably altered the values and reorganized the priorities of many young Americans. The purpose of this manuscript is to explore how family, occupational, financial, and societal values of Generation Y have changed since 9/11. But before we can examine how they have changed since this tragedy, we must look at the group as a whole.

GENERATION Y

Born during a baby bulge between 1979 and 1994, Generation Y is 60 million strong which is three times bigger than the preceding generation, Generation X (born 1965-1979). They are the second largest generation in American history, trailing only their parent's generation, the Baby Boomers, whose population size is 72 million. They are as young as 8 and as old as 23, with the largest slice still a decade away from adolescence.

With monikers including Nexters, Echo Boomers, the Net Generation, and Millennials, Generation Y has never known a world without cellular phones, computers, compact discs, and video games (Hatfield, 2002). In fact, roughly half of Gen Y consider themselves 'regular cell phone users' (PC Magazine).

Generation Y is not afraid or intimidated by the rapid pace of technological innovation. Recently, DVD players have replaced VCRs, and audio compact discs have been outmatched by the simplicity and cost-effectiveness of downloading music off of the Internet.

While Baby Boomers mistrust advertising, Gen Y embraces it - if it's witty and not condescending (Khermouch, 2002). To them, advertisements can be a form of entertainment, as long as they do not feel as if they're being patronized.

Gen Y has more discretionary income than any generation before it, and marketers today are constantly trying to keep up with the latest trends and fashions in an effort to keep Y happy (and loyal) to their brand. Y spends in excess of \$600 billion annually and is currently forming brand preferences that could endure for decades. Their tastes have begun to 'shape' the marketplace (Christian Century).

A fact that mustn't be overlooked is the reality that Generation Y is the most multicultural, diverse generation ever (Halliday, 2002). Kids today have more tolerance - and are less bigoted - than the generations before them. Their worlds are broader and their minds more open to foreign ideas and customs. Meanwhile, after their schooling, the current plethora of international business ventures has opened the door for eager American graduates to seek employment overseas or for 'international' corporations.

Basically, Gen Y is walking, talking and acting like adults far sooner than previous generations did. They have style, individuality, and attitude (Sewell, 2002). They don't 'play telephone'; they purchase a Cingular and call their best friends from the GAP store at the mall. They're independent and they know what they want. They seek relationships with brands, people, and ideas that cater to their changing interests (Colkin, 2001). As mentioned earlier, they have money and are very influential in household purchasing decisions.

Concerning income and spending, research conducted by the U.S. Labor Department on teenagers has led to the following figures:

Where teens get their money:
81% receive allowance or ask parents
54% have savings accounts
44% do chores or odd jobs
36% have after school or part-time jobs
Teens monthly spending per category:
\$300 on food
\$200 on clothes
\$50 on video games
\$40 on movies
\$25 on music
\$15 on movie rentals (Thomaselli, 2002)

UPON ENTRANCE INTO THE MARKETPLACE

Today, the oldest members of Gen Y are coming of age. Presently, following the natural progression of our society, 18 to 21 year olds are either in the throws of initial employment or sitting in their college classrooms, itching to get out. By outside observers, Gen Y has been described as 'Gen X on fast-forward, with self-esteem.' Y shares many of the same characteristics as X - they are ambitious, technologically savvy, and protective of maintaining a healthy balance between their personal and professional lives. However, members of Generation Y are more likely to be blessed with a spirit of altruism, schooled in teamwork and fairness, and interested in renewing the lost sense of decorum in the American workplace (Lovern, 2001).

Like Gen X, Gen Y is sensitive to how a job improves and adds to their personal portfolios of skills and capabilities. But unlike their predecessors, Gen Y has been primed for healthy relationships with older, more experienced advisors. Gen X felt alienated and preferred to be given a job and be left alone to accomplish it. Y 'will drain their mentors dry' (Lovern, 2001). Having grown up in an era of 'group work' in their classrooms, Y has formed strong teamwork and networking skills. They are very good at using other people as resources, and vice versa.

Gen Y has been marked by an increased sense of self-worth and optimism, but it does come with a price. These newest entrants to the workforce are more likely to unabashedly express and act on their concerns. Though they are comfortable with authority, that authority must be competent and have integrity. Y's inherent altruism includes the interest that peers are taken care of as opposed to being ignored or run over (Lovern, 2001).

THE INTERNET - KNOWLEDGE BREEDS POWER

Gen Y is tech-smart. Born into the Internet Age, today's teenagers embrace Internet technology the way Boomers did television (Colkin, 2001). They appreciate clever ways of promoting a product, but they're assertive consumers and skeptical of marketing that seems 'too good to be true.' They prefer to independently research products (often times on the internet) once they hear promises made in ads.

Gen Y has cash, but its power goes beyond its spending. Napster showed how young people who aren't tied to old business models and values can take control of what's marketed to them and exploit the Internet to change the rules of commerce (Colkin, 2001). The whole record industry had to change because of what these 'kids' were able to do.

THE FINANCES OF THE FUTURE

People under the age of 35 - a fat chunk of Generation X plus the older members of Gen Y - are the likeliest to turn to banks for nontraditional products and services, according to the 2002 American Banker/Gallup Consumer Survey (Gjertsen, 2002). More than 80% of the respondents expressed interest in obtaining at least one nontraditional product offering from their commercial banks. In order of interest, the services they named include:

Stocks, Bonds, or Mutual Funds	54%
Brokerage Services	45%
Annuities	38%
Life Insurance	34%
Property/Casualty Insurance	34%

Not surprisingly, Gen Y and Gen X are also more likely to use computers to track their financial accounts and bank online. More than 57% of the under-25 respondents have done so (Gjertsen, 2002).

Industry insiders and analysts say banks that ignore these younger people are making a big mistake. Some banks have seen the light recently and have begun to target different products to different age groups and develop new products for the younger audience. But on the whole, this is not the industry standard. 'It's not that banks are rude to them,' one expert said. 'They are basically waiting for them to turn 45 or 50.' Banks generally focus mostly on high-net worth customers, but, as baby boomers pass their wealth on, the need to attract the younger generations will become clear

(Gjertsen, 2002). Failure to do this could come back to haunt banks in future years, when Generation Y turns to other sources of financial products and advice.

The under-35s are much more willing to appreciate the benefits of technology and not be so focused on the risks - they feel more secure making online transactions. Experts agree that E-Trade and other financial companies that have latched on to younger people's interest in online transactions are poised to become the financial providers of choice for Generation Y (Gjertsen, 2002).

Another reason younger customers have more interest in financial planning and technology is their concern about the future of Social Security and the realization that they will be responsible for the bulk of their retirement savings. 'Necessity is the mother of invention' (Gjertsen, 2002).

BUT ARE THEY READY??

Younger customers are probably less scared about the intricacies of American finance because they have no memory of problems with the banking system. 'If you look at, for example, the financial holdings of people who have a memory of the Depression, it's not uncommon for them to have accounts in 10 or 12 different banks. They remember when banks failed and you couldn't get your money' (Gjertsen, 2002). Financial decisions are based largely upon the times in which we are living.

Some authorities in the field say that, although Generation Y is rolling in the cash and willing to do business online, many of them might not be well...um...like...smart enough to do it.

We live in the largest capitalist nation in the world, and our children graduate from high school without a clue about finances. Bankruptcies (in the under-25 sector) have increased over the last couple of years, and much of the blame can be attributed to the fact that many college students are misusing their college loans and credit cards (Godfrey, 2002).

Federal Reserve chairman Alan Greenspan recently said that America's children are ill-equipped to inherit the global economy unless the private business sector partners with educational institutions to begin financial literacy education in primary schools (Godfrey, 2002). Mr. Greenspan makes a compelling point - and this sounds like a wonderful program... for Generation Z. Meanwhile, the bulk of Generation Y is left to fend for itself.

EFFECTS OF SEPTEMBER 11TH, 2001

No one needs an explanation of what happened on this date. The consequences from the disaster that occurred that day will be felt for many generations to come.

METHODOLOGY OF OUR SURVEY

A survey was conducted on respondents born between 1981 and 1986 in Evansville, Indiana one year before and one year after 9/11/01 to see if their values and/or priorities have changed since the attacks of 9/11/01.

The survey consisted of attitudinal statements where the respondent provided the relative level of agreement or disagreement for each. The following scale was used:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Indifferent or Neutral
- 4 = Agree
- 5 = Strongly Agree
- n/a = not applicable

FINANCIAL WEALTH AND OCCUPATION

The results of a series of ANOVAs that were performed on financial wealth and occupations can be found in Tables 1 and 2. The questions that yielded significant differences between the pre 9/11 and post- 9/11 samples include:

Question FW #8 ----- 'Society will pay for the government's budget deficit by paying higher taxes in the future.'

For this question, the mean difference was significant at the .046 level. The results indicate that Gen Y believes this statement to be MORE true than it was 2 years ago. Apparently, Gen Y currently feels that our government should be more responsible in their spending. Defense spending has increased since the attacks, and it's possible that America's youth is worried about paying the price for this when they begin to pay their annual taxes. The results of this question indicate that Gen Y has less faith in the government than it did in the year 2000. September 11th (obviously) could have been a major factor in lessening the confidence that America's youth has in the government's ability to work with a balanced budget.

Question FW #9 --- 'I expect social security and a company retirement plan to adequately meet my retirement income needs.'

For this question, the mean difference was significant at the .000 level. The results indicate that Gen Y believes this statement to be MUCH LESS true than it was 2 years ago. Apparently, Gen Y has less confidence in America's social security system and, thus, will be taking other measures to ensure a stable retirement income. Gen Y will invest heavily in the stock market and other investments, and saving will be much more prevalent than it was in previous generations. September 11th surely made it evident to Gen Y that our nation is imperfect and vulnerable and, as mentioned before, defense spending has and probably will continue to increase to prevent further such events from happening. Coupled with the retirement of their parents (the Baby Boomers) social security will take a hard hit if this happens and, by the time Gen Y would be reaping the benefits of this service, there is a strong possibility that it will not even exist. In addition, company retirement plans may have to take a back seat to wage increases, etc. Whatever the case may be, America's youth does not feel secure about relying on outside sources to provide for them in the future.

Question FW #10 --- 'Parents have a responsibility to provide a financial foundation for their children (e.g., inheritance, gifts).'

For this question, the mean difference was significant at the .005 level. The results indicate that Gen Y believes this statement to be MUCH LESS true than it was 2 years ago. This question relates closely to question FW #9, and, accordingly, so do the explanations for its results. The youth of America (post-Sept. 11th) wants responsibility, and providing for themselves satisfies them internally.

Question O #4 ----- 'My job/career must provide a high level of income.'

For this question, the mean difference is significant at the .021 level. The results indicate that Gen Y believes this statement to be LESS true than it was 2 years ago. Because of Sept. 11th, Gen Y's occupational priorities may have shifted from financial rewards to intrinsic rewards such as satisfaction or helping society. The terrorist attacks showed that life can end abruptly, without warning. It doesn't matter how much money a person has/saves if they are not alive to enjoy it. Gen Y is making sure that they save for the future, but they are not disregarding happiness in their employment. After all, people save money to ensure future gratification - Gen Y says 'Why not try to be happy today?'

Question O #5 ----- 'My job/career must provide a high degree of independence.'

For this question, the mean difference is significant at the .032 level. The results indicate that Gen Y believes this statement to be LESS true than it was 2 years ago. This might be explained by a shift in occupational priorities as well. Independence is often correlated with instability in a job/career, and it is highly possible that Gen Y is now more concerned about the security of their jobs.

SOCIETY AND FAMILY

The results from a series of ANOVAs on society and family is reported in Tables 3 and 4. The questions that yielded significant differences between the pre 9/11 and post- 9/11 samples include:

Question S #5 ----- 'Involvement in community improvement activities is my responsibility.'

For this question, the mean difference was significant at the .032 level. The results indicate that Gen Y believes this statement to be MORE true than it was 2 years ago. The overwhelming support from the American people following the disaster of September 11th likely inspired many people in this country to help out in their own communities. Sept. 11th was a wake-up call to the entire nation, and Generation Y is no exception. Maybe they also want to 'reconnect' with the natural world that they've been taking for granted and taking advantage of for so long. Whatever the case may be, the tragedy of 9/11 has opened our eyes to the situations in our own communities that could greatly use our help. Gen Y has definitely seen this and, hopefully, this attitude will not fade anytime soon.

Question S #6 ----- 'My generation is less likely to 'give something back' to society than our parents and grandparents.'

For this question, the mean difference was significant at the .041. The results indicate that Gen Y believes this statement to be LESS true than it was 2 years ago. Basically, the result for this question is such because of the high possibility that many Gen Y members have already (and recently) partaken in volunteer activities.

Question F #5 ----- 'My parents have been through a divorce.'

For this question, the mean difference was significant at the .000 level. The results indicate that Gen Y believes this statement to be MUCH LESS prevalent than it was 2 years ago. Frankly, there is no strong conclusion that can be drawn from this result. A large number of the persons we surveyed this year simply (yet coincidentally) have different family backgrounds from those persons surveyed 2 years ago.

Question F #6 ----- 'Divorce is an acceptable way to end a marriage if the couple elects to do so.'

For this question, the mean difference was significant at the .000 level. The results indicate that Gen Y believes this statement to be MUCH LESS true than it was 2 years ago. Although the result for this question relates strongly to the result from question, F #5, a fairly solid conclusion can be drawn from this data. Divorce has lost much of its acceptability. The post-Sept. 11th Gen Y that we surveyed seems to care much more about finding true love and maintaining a healthy relationship with their spouses.

CONCLUSION

September 11th could have been a major factor in lessening the confidence that America's youth has in its government. Civil rights have been sacrificed for the sake of security - (airline searches, bugged phones, etc.). Due in part to the attacks and consequent war/war threat, consumer spending was slowed to a halt and confidence was, and still is, shaky at best. 9/11 has undeniably altered the principles and reorganized the priorities of Generation Y.

Gen Y currently feels that our government should be more responsible in their spending. Defense spending has increased since 9/11, and it's possible that Y is worried about paying the price when they begin to pay their annual taxes. Y has very little confidence in America's social security system and, thus, will be taking other measures to ensure a stable retirement income. They will likely invest heavily in the stock market and real estate and saving will be much more prevalent than it was in previous generations. Y does not feel secure about relying on outside sources to provide for them in the future. They feel that they will have to provide for themselves.

Gen Y values happiness and inner satisfaction as well as money as a key factor in determining employment. Y is comfortable with less independence in their careers as long as they're happy with their jobs. September 11th likely inspired many people in this country to help out with their own communities. Gen Y seems to care much more about finding true love and maintaining a healthy relationship with their spouses since 9/11.

Generations with the strongest degree of cohesiveness are due in large part to the times in which they grew up. September 11th clearly and visibly affected us all, and in the end, Gen Y will

be a strong generation because of the togetherness they've experienced and the value-shifting they've inevitably undergone.

CAVEAT

Despite the priority shifting that has been noted since 9/11, interpretation of these results should be guarded. First, the recession, high unemployment, a return to deficit spending, and the crash of the stock market all confound these results. This is the first bad economy in Gen Y's life and is probably at least partially responsible for some of the shifting in values. Secondly, these respondents are now two years older and hopefully two years more mature. This increased maturity may be the cause of value-shifting. Some researchers doubt that the observed differences are due to the terror attacks. Ebenkamp argues that it has had surprisingly little impact on (supposedly impressionable) young adults. In fact, Sept. 11th's most significant impact on Gen Y could be its role in solidifying Y's core traits - including having a civic purpose, possessing grand ambitions, and feeling optimistic about the future. According to expert William Strauss, major public events such as the terrorist strikes tend to crystallize a generation's developing characteristics rather than direct them down a different path (Ebenkamp, 2002).

When the Twin Towers fell, the adult world rocked, but a prior event foreshadowed this violence for Gen Y, thus molding them before Sept. 11th had a chance to do so. Strauss argues, 'The Millenials (Y) had a Sept. 11th before the rest of us, and it was called Columbine.' The 1999 school shooting had a major impact on young peoples' day-to-day lives, and, while they were already the most watched-over generation of children, they endured anxiety over post-Columbine safety and threats to their carefully constructed worlds. Schools sacrificed freedoms and creativity for the sake of security just as Americans have watched homeland security trample their civil liberties (Ebenkamp, 2002). As a result, Gen Y may have been the most able to deal with the blow of 9/11 and, thus, was not as affected by the events as other generations were.

Table 1: Analysis of Variance, Dependent Variable = Financial Wealth

Variable	Attitudinal Statements	F-Value	P-Value
FW1	Personal financial security is an important goal for everyone	.871	.352
FW2	I will be wealthier than my parents	.002	.965
FW3	I will reach financial independence by the age of sixty-five	.097	.755
FW4	My generation is less fearful of debt than our parents and grandparents	.877	.350
FW5	I am taking steps now to plan for my future well-being	.969	.326
FW6	I trust others to make financial decisions that affect my future financial well-being	2.649	.105
FW7	Society will pay for the government's budget deficit by consuming fewer government services in the future	2.856	.0902
FW8	Society will pay for the government's budget deficit by paying higher taxes in the future	4.031	.046
FW9	I expect social security and a company retirement plan to meet my retirement income needs	20.060	.000
FW10	Parents have a responsibility to provide a financial foundation for their children	7.870	.005
FW11	I can manage my own financial affairs (e.g., taxes, investments, savings)	1.628	.203

Table 2: Analysis of Variance, Dependent Variable = Occupation

Variable	Attitudinal Statements	F-Value	P-Value
O1	A balance between my personal life and professional life is an important one	.723	.396
O2	My job/career must provide a high level of self-satisfaction	.196	.658
O3	My job/career must provide a high level of social status	1.137	.287
O4	My job/career must provide a high level of income	5.372	.021
O5	My job /career must provide a high degree of independence	4.644	.032
O6	My generation will be more willing to assume risk in order to achieve professional goals than our parents or grandparents	.006	.940
O7	My generation possesses an entrepreneurial spirit that is greater than that of our parents or grandparents	.010	.921

Variable	Attitudinal Statements	F-Value	P-Value
S1	I do volunteer work because I am forced to	.292	.589
S2	I do volunteer work because I want to	1.128	.289
S3	Societal norms (i.e., what others are doing) influence my consumer choices	.036	.849
S4	My generation will be successful in addressing some of societies problems (e.g., deficits, poverty) facing the U.S. today	2.169	.142
S5	Involvement in community improvement activities is my responsibility	4.672	.032
S6	My generation is less likely to 'give something back' to society than our parents or grandparents	4.206	.041
S7	Today, people are becoming more reliant on the government and less reliant on themselves than previously in our history	.623	.431

Variable	Attitudinal Statements	F-Value	P-Value
F1	I expect to marry in the next 10 years	1.320	.252
F2	I expect to become a parent in the next 10 years	1.327	.250
F3	I expect to share household work with my spouse	.064	.801
F4	I want to establish my career before having a family	2.552	.111
F5	My parents have been through a divorce	21.815	.000
F6	Divorce is an acceptable way to end a marriage if the couple elects to do so	15.670	.000
F7	Divorce rates will decrease in the future	.625	.430
F8	I expect my employer to provide assistance to help me meet my family and childcare needs/extended sick leave	.563	.454

REFERENCES

- Anonymous. (2000). Generation to generation, *The Christian Century*, 8 Nov, 1139.
- Anonymous. (2001). Pipeline - Back to basics, *PC Magazine*, 6 Mar, 71.
- Colkin, E. (2001). Kids these days, *Information Week*, 12 Feb, RB1.
- Ebenkamp, B. (2002). Why aren't they worried? *Brandweek*, 9 Sept, 29.
- Gjertsen, L. A.(2002). Young seem hot prospects for nonbank products, *American Banker*, 23 July, 4A.
- Godfrey, N. (2002) The 'duh' generation, *ABA Banking Journal*, Apr, 47.
- Halliday, J. (2002). Headlights shine on younger buyers, *Advertising Age*, 8 July, ps-6.
- Hatfield, S. L. (2002). Understanding the four generations to enhance workplace management, July/Aug.
- Khermouch, G. (2002). Didja C that Kewl Ad? *Business Week*, 19 Aug.
- Lovern, E. (2001). New kids on the block, *Modern Healthcare*, 29 Jan.
- Sewell, C. (2002). Understand that you will never understand, *Wireless Review*, Jun.
- Thomaselli, R. (2002). Keeper of the flame, *Advertising Age*, 23 Sept, 16.

THE EFFECT OF CULTURAL DIFFERENCES ON EFFECTIVE ADVERTISING: A COMPARISON BETWEEN RUSSIA AND THE U.S.

Danny L. Rhodes, Anderson College
Charles R. Emery, Lander University

ABSTRACT

An important first step to successful global marketing is to understand the similarities and dissimilarities of values between cultures. This task is particularly daunting for companies trying to do business with Russia because of the scarcity of empirical data on their value system. This study uses updated values of the Hofstede's (1980) cultural model to compare the effectiveness of Pollay's advertising appeals between the U.S. and Russia. Only six of the 19 culturally-based hypotheses correctly predicted the Russian consumers' notion of effective advertising appeals. The Hofstede dimensions may lack the currency and fine grain necessary to effectively predict the success of the various advertising appeals. Further explanations are offered by a Delphi panel of Russian professors and students. In short, these findings suggest that it would be unwise to use Hofstede's cultural dimensions as a sole predictor for developing advertising campaigns.

INTRODUCTION

Increased competition is forcing companies to seek export opportunities for their sheer survival (Gupta & Govindarajan, 2000). Particularly notable is the increasing rush to gain first-mover advantage in developing markets. Exports to developing nations in 2001 were 32% of the value of world trade which represents a 120 percent increase over the last five years ("World Imports," 2002). A key question is which of these developing markets has the greatest, near to mid-term, potential as an export target (i.e., highest benefits and the lowest costs and risks). The answer is generally a function of the market environment (political, economic, and legal), market size, and the purchasing power parity of its consumers. An important factor, however, to sustaining exporting success is advertising. In turn, the effectiveness of advertising is dependent on the country's educational system (e.g., literacy rate), media sources (e.g., TV and Internet access), censorship/regulations, and culture (i.e., consumer behavior) (Leonidou, et al., 2002).

After considering the aforementioned factors, one might easily conclude that Russia offers the greatest near to mid-term potential as an export target. Although a great deal is known about

most of the factors affecting Russia's market environment and advertising capabilities, there has been little empirical research on the cultural context of its consumer behavior. Most cultural research conducted outside the United States and Western Europe has been primarily in the Far East (Maheswaran & Shavitt, 2000). A review of cross-cultural advertising and marketing studies published in 13 empirically-based advertising and marketing periodicals between 1980 and 2001 found that only two studies examined the differences of US-Russian cultural values and none examined the relationship between the Russian culture and advertising appeals (Emery & Rhodes, 2002). As such, the purpose of this study is threefold: (1) examine the differences in effectiveness of advertising appeals in the United States and Russia, (2) determine whether an understanding of Russia's cultural dimensions offers an insight to effective appeals, and (3) recommend various advertising appeals to those companies wishing to export their goods and services to Russia.

THEORETICAL BACKGROUND

Russia as an Export Target

Russia is the developing nation receiving the most attention of exporters on a dollar per capita basis (World Imports, 2002). Further, attention appears to be accelerating. In 2001, Russia increased its value of imports by 20%; the highest increase in the world (World Imports, 2002). This should not come as a surprise. President Putin is doing everything within his power to make Russia more attractive to foreign imports, including cutting tariffs, cutting government red tape and lobbying to get Russia accepted into international trade organizations (Belton, 2002). Further, the Russian economy has enjoyed a boom the last two years because of high world prices for its oil and a rise in domestic production, (Indicators Good, 2002). The purchasing power parity (PPP) of Russia is the highest among the developing nations (e.g., Russia has a PPP of \$8,030 as compared to \$3,940 and \$2,390 of China and India respectively) (World Bank, 1999). The World Bank liberalization index based on three separate indicators-the extent of domestic market liberalization, foreign trade liberalization, and enterprise privatization and banking reforms-gives Russia a healthy index rating of .83 compared to China's index of .66 (International Monetary Fund, 2000). The Heritage Foundation's index of economic freedom based on 10 indicators, such as the extent to which the government intervenes in the economy, suggests that Russia is the most favorable for exports of the most populous developing nations (Heritage Foundation, 2001). Further, the United Nation's Human Development Index based life expectancy, educational attainment, and standard of living indicates that Russia is the most suitable target of the developing nations for a broad range of exports (Human Development Index, 2000). Lastly, Russia has the strongest educational system and literacy rate of the developing nations (e.g., Russia has a literacy rate of 98%, while China and India have rates of 82% and 52% respectively) (CIA World Factbook, 2002).

Marketing/Advertising in Russia

Advertising in Russia can be traced to the opening of the first advertising office in Moscow in 1887 (Andrews, et al., 1994). However, after the 1917 Revolution, censorship severely limited advertising. There was a revival, to some degree, from the 1960's until the mid-1980's, when advertising was focused primarily on industrial products for organizational buyers. The rebirth of competitive advertising occurred in 1985 when the leadership of the Soviet Union transferred to the reform-minded Mikhail Gorbachev and controls on the media were loosened (Yergin & Gustafson, 1993). For the first time ads began to appear on billboards, in newspapers, and in magazines (Dabars & Vokhmina, 1996). In 1987-1988 the Soviet Union Central Committee allowed joint venture agreements and direct negotiation for products and services, including advertising, among Soviet and Western firms. In the last ten years, foreign advertising expenditures in Russia have gone from \$8 million to \$2 billion ("Research Report," 2001).

Cultural Values

The first step to successful cross-cultural marketing is to understand the cultural differences (Keegan, 1989). Consumers grow up in a particular culture and become accustomed to that culture's value systems, beliefs, and perception processes. Consequently, they respond to advertising messages that are congruent with their culture, rewarding advertisers who understand that culture and tailor ads to reflect its values (Cheng & Schweitzer, 1996; Chandy, et al., 2001; Culter & Javalgi, 1992; and Wells, 1994). Albers-Miller's (1996) study of 55 country pairs indicates that similar cultures have similar advertising content and dissimilar societies have dissimilar advertising content. Hofstede's (1980) seminal study regarding the relationship between national culture and work-related values is the most frequently cited benchmark for cross-cultural understanding (Tian, 2000). He considered that a country's value system could be depicted along four dimensions: individualism (IDV), power distance (PDI), uncertainty avoidance (UAI), and masculinity (MAS).

Hofstede (1980) explained that the dimension of individualism was the degree to which individual decision-making and actions are encouraged by society. This dimension reflects the way people live together. In a collectivist society, the lower end of the individualism-collectivism continuum, individualistic behavior may be seen as selfish. As such, it appears logical to conclude that appeals highlighting individualism will be less effective.

The power distance dimension indicates the degree to which power differences are accepted and sanctioned by society. In other words, it indicates how different societies have addressed basic human inequalities in social status and prestige, wealth, and sources of power. The societal norm in a country with a high score on the PDI dimension is for powerful people to look as powerful as possible. People with power are considered to be right and good. Powerful people are expected to have privileges. In countries with large power distance, the exercise of power gives satisfaction, and

powerful people try to maintain and increase power differences (Hofstede, 1980). As such, appeals that reinforce the culture's sense of power distance (e.g., prestige) will be effective.

The uncertainty avoidance dimension represents the degree to which society is unwilling to accept and cope with uncertainty. People use law, religion, and technology to address uncertainty. This dimension is related to anxiety, need for security, dependence on experts, and the application of information (Hofstede, 1980). As such, appeals that address new ideas, change or adventure will be considered as less desirable by societies high in uncertainty avoidance.

The masculinity dimension indicates the degree to which traditional male values (assertiveness, performance, ambition, achievement, and materialism) are important to a society. The opposite end of this continuum has been labeled femininity. The societal norm in a country with a high score on the MAS dimension is to try to be the best while valuing achievement, productivity and "machismo" (Hofstede, 1980). In these countries, big and fast are considered beautiful. As such, effective advertising in masculine cultures must reinforce the notions of assertiveness, competitiveness and winning.

While Hofstede's research has been instrumental in furthering an understanding of cross-cultural consumerism, his 1980 study did not report cultural indices for the communist block countries. Fernandez, Carlson, Stepina, and Nicholson (1997) updated the original Hofstede study and included the dimensional values for Russia. It is important, however, to note that they used undergraduate and graduate students in their study rather than adult workers and that their data is from 1990. In 2000, Naumov and Puffer performed a two-country comparative study of Russian and U.S. cultures using the Hofstede dimensions and instruments on undergraduate students. By and large, their findings were similar to those of Fernandez, et al. and suggest that the U.S. is relatively similar to Russia on the dimension of masculinity and considerably different on the dimensions of uncertainty avoidance, individualism and power distance. The relationship between Russian and U.S. cultural dimensions is presented as a standardized score in Table 1.

Both Fernandez, et al. (1997) and Naumov and Puffer (2000) suggest that Russia should be considered as a masculine society that exhibits its masculinity slightly more than the United States. Both countries favor a strong military, a relative unwillingness to compromise, and a separation of the male and female roles in the family and society in general. These studies, however, indicate that the U.S. is becoming slightly more feminine than reported by Hofstede (1980). The United States is increasingly supporting more feminine appeals and issues such as, environmental protection, charitable spending, and equality of gender roles.

Both studies (Fernandez, et al., 1997; Naumov & Puffer, 2000) rate Russia extremely high in uncertainty avoidance and very different from the United States. Decades of communist rule programmed the Russian people with an ideology of one truth, the importance of security and a suppression of deviant ideas and behaviors. Risk taking and innovation were foreign concepts. While Hofstede (1980) reported the United States as relatively low in uncertainty avoidance (e.g., 43rd of 53 nations), recent studies indicate that the U.S. is moving more toward the median. Studies

(Hofstede, 1991; Fernandez, et al., 1997; Naumov & Puffer, 2000) speculate that this movement might be caused by anxiety associated with the increasing potential for war and economic instability. The studies by Fernandez, et al. (1997) and Naumov and Puffer (2000) confirm that Russia and the United States are vastly different on the dimension of individualism-collectivism. Although these studies indicate that Russia is exhibiting a slight movement toward individualism, it remains one of the most collective cultures in the world. This is not surprising given its communist history where loyalty to the group was rewarded by the protection of its members. On the other hand, the United States has historically had the highest score for individualism of any country in the world and it does not appear to be relinquishing this position (Hofstede, 1991).

Lastly, the studies (Fernandez, et al., 1997; Naumov & Puffer, 2000) offer notable differences in Russia's position on the power distance dimension. The Fernandez, et al., (1997) study indicated that Russia scored the highest power distance score of the nine countries studied. This seems logical since the Russian communistic society readily accepted the unequal distribution of power between the government and its citizens and it consistently suppressed venues for protest. Further, this willingness to live with an unequal distribution of power (i.e., Czarist Russia) is consistent with its beliefs prior to the Revolution. Naumov and Puffer (2001), however, found that Russia scored much lower on power distance and statistically identical to that of the United States. One might speculate that this decrease in power distance might be attributable to perestroika, the recent economic reform and growing individual freedoms.

Table 1. Comparison of Hofstede Dimensions (Standardized Scores)

Dimension	Russia	U.S.
MAS	0.17	-0.58
UAI	2.05	0.59
IDV	-1.89	1.52
PDI	2.15	-0.01

Note: 1990 data excerpted from Fernandez, Carlson, Stepina, & Nicholson (1997)

Advertising Appeals

The second step to successful cross-cultural marketing is to understand a society's sensitivity to advertising appeals. Advertising appeals are the specific approaches advertisers use to communicate how their products will satisfy customer needs by embedding a culture's values, norms, and characteristics (Arens & Bovee, 1994). The appeals are typically carried in the illustration and headlines of the ad and are supported and reinforced by the ad copy. Researchers have argued that cultural values are the core of advertising messages and typical advertisements endorse, glamorize, and inevitably reinforce cultural values (Pollay and Gallagher, 1990). Evidence

indicates that different cultures seem to emphasize different advertising appeals. For example, Japanese ads have been found to contain more emotional and fewer comparative appeals than American ads (Hong, et al., 1987). Ads in China have been found to contain more utilitarian appeals that focus on state of being and promise a better life (Tse, et al., 1989).

Combining Cultural Values and Advertising Appeals

Research on cross-cultural advertising appeals is generally conducted by pairing countries to test for differences in several values portrayed in advertising to determine the most effective methods (Zinkhan, 1994). Albers-Miller and Gelb (1996) conducted perhaps the largest and most referenced test of cross-cultural advertising appeals using Hofstede's (1980) four cultural dimensions and Pollay's (1983) list of common advertising appeals on 11 countries. Pollay (1983) developed a list of 42 common appeals by drawing on previous advertising literature and values research in other disciplines. Albers-Miller and Gelb, however, did not examine Russia because of the lack of Hofstede dimensional measures.

Albers-Miller and Gelb (1996) used six coders from various countries (i.e., Taiwan, India, France, Mexico, and two from the United States) to relate Pollay's appeals to Hofstede's dimensions. The coders were instructed to relate each appeal to one end of a single cultural dimension or to indicate that the appeal related to none of the dimensions. Appeals retained for their research were ones for which at least four of the six coders indicated the same hypothesized relationship. Subsequently the list was reduced to 19 benchmark appeals because 23 of 42 appeals consistently failed to support the hypothesized dimensional values at $p < .10$. The hypothesized relationships between these benchmark appeals and the Hofstede dimensions are summarized in Table 2.

Hypotheses

The Hofstede dimensional values from the Fernandez, et al. study (Table 1) were used rather than those from the Naumov and Puffer study because their values had been derived from a multinational study and their results had been converted to z-values. In turn, directional hypotheses were created for each of the 19 appeals based on the notion that a country's value system (i.e., Hofstede dimensions) would be reflected by the importance their citizens placed on the appeals (Table 2). For example, the Russian culture is considered very collectivist (Fernandez, et al., 1997). As such, one would expect the Russians to rate the individualism appeal of independence as not very important. Conversely, one would expect that they would rate collectivist appeals as very important.

For the purpose of developing comparative hypotheses, the value systems were considered significantly different, if the cultural dimensions between countries differed by more than 1.96 standard deviations ($p = .025$ in each tail). For example, the difference between Russia and the U.S. on the IDV dimension is 3.41 standard deviations (Table 1) or a significance of $p < .01$. As such, we

hypothesize that Russian consumers would consider appeals associated with individualism (e.g., independence and unique) to be significantly less important than U.S. consumers (i.e., $R < US$). Additionally, because Russia and U.S. differed by 2.16 standard deviations, we posited that Russian consumers would consider appeals associated with power distance (e.g., attractiveness, value, and prestige) to be significantly more important than US consumers (i.e., $R > US$). Lastly, because the differences between the Russian and U.S. consumers on the importance of appeals associated with uncertainty avoidance and masculinity dimensions were less than 1.64 standard deviations, we hypothesized that the differences between the two cultures would be indistinguishable or non-significant (i.e., $R = US$).

Table 2. Relationships of Appeals to Hofstede's Dimensions and Hypotheses

Appeals	MAS	UAI	IDV	PDI	Hp
Effective	+				$R = US$
Handy	+				$R = US$
Natural	-				$R = US$
Modesty	-				$R = US$
Civilized		+			$R = US$
Adventure		-			$R = US$
Primitive		-			$R = US$
Miraculous		-			$R = US$
Independence			+		$R < US$
Unique			+		$R < US$
Family			-		$R > US$
Popular			-		$R > US$
Succorance			-		$R > US$
Design				+	$R > US$
Attractiveness				+	$R > US$
Product Value				+	$R > US$
Prestige				+	$R > US$
Economical				-	$R < US$
Down-to-earth				-	$R < US$

Note: Plus and minus symbols indicate convergence or divergence between Pollay's appeals and Hofstede's dimensions.

METHOD

This study uses the 19 advertising appeals employed in the Albers-Miller and Gelb study (1996) that were found to be the most highly correlated with the Hofstede dimensions (coder inter-rater reliabilities $>.77$ and correlation values above $.40$ at $p<.10$). Using Pollay's list (1983) of appeals and synonyms, the Russian and American researchers selected several descriptive words from each of the 19 appeal categories that were most likely to have the same meaning within each culture. For example, the terms beautiful and detailed are often used cross-culturally to represent the ornamental appeal. In turn, these descriptors were refined by a focus group of two English-speaking Russian students and one U.S. student until there was an agreement on which descriptor would be used to represent a particular appeal. Each descriptor was translated into the Russian language and dialect of the participating university students. The translated descriptor was then placed on questionnaires administered by the U.S. and Russian researchers.

All items were measured on a 7-point Likert-type scale ranging from (1) "extremely important" to (4) "important" to (7) "not important". Different bilingual translators translated the scales into Russian and then back-translated into English. Again, scale variances were subsequently resolved by the focus group of students to ensure equivalency between versions. The country scores were calculated by summing the responses for each appeal across individuals within a given country and calculating the means of those individuals' scores. The significance of differences between the means of the appeals was determined by a t-test. The probability, however, of finding a significant difference by chance alone increases rapidly with the number of tests. One solution to this multiple testing problem is to make a Bonferroni correction to the probability associated with each test by multiplying it by the number of tests executed (SPSS Base 10.0). For example, we wish to test 19 hypotheses at a level of significance of $p<.05$. As such, we can only consider those values less than $p=.002$ to be supportive.

The study used undergraduate college students in an attempt to capture the perceptions of new consumers as they begin to integrate their view of appeals with their value system. Although this group does not have years of purchasing experience, it was hoped that their perceptions might be predictive of future trends, i.e. the consumers of tomorrow. Lastly, we used managers and faculty members in this study to ensure that the test subjects were parallel to those of the Fernandez, et al. (1996) and the Naumov and Puffer (2000) studies.

Data from a randomized (gender, age, socio-economic class, marital and minority status) sample was collected between May and September 2002. The sample consisted of 149 undergraduate college students, staff, and faculty at a state university in Russia and 157 undergraduate students, staff and faculty at a state university and a private college in the United States. Fifteen minutes of training on advertising appeals using a selection of ads and on the questionnaire's scale was provided the students. The response rate was 96 percent in Russia and 76 percent in the United States.

RESULTS

The results of the hypothesis testing are summarized in Table 3. A Levene's test indicated that equal variances could be assumed for each of the appeal items. Overall, the findings appear to suggest that the Hofstede dimensions offer very little value in predicting the importance of various advertising appeals in Russia. For example, the results failed to support three of the four hypotheses that posited that Russian consumers would have relatively the same preferences for masculine/feminine appeals as the American consumers. Specifically, the U.S. consumers found the appeals of "effectiveness" and "modesty" to be more important than the Russian consumers ($p < .001$) and the Russians consumers found the appeal of "natural" to be more important than the U.S. consumer ($p < .001$). Interestingly, U.S. consumers rated "effectiveness" as the most important of the 19 appeals and the Russians found it to be the second most important. Further, it is noteworthy that the Russian consumers gave their highest rating to the appeal of "natural", which is considered as a highly feminine appeal. Also, it is noteworthy and not unexpected that the Russian sample considered "modesty" to be the second least important of the 19 appeals. Russian consumers tend to live in close conditions, which tends to reduce the importance of modesty.

Support was moderate for the proposition that the U.S. and Russian consumers would react similarly to appeals associated with uncertainty avoidance. Three of the four hypotheses were supported, i.e. "civilized", "adventure", and "miraculous". Interestingly, the appeal of "primitive" was not only found to be significantly less important to Russians than the U.S. consumers, it was considered a very unimportant influence in purchasing products. In general, the means of the appeals associated with the uncertainty avoidance dimension indicate that the consumers of both countries lean slightly towards uncertainty avoidance.

There was nonsupport for the hypotheses suggesting that there would be significant differences in appeals associated with individualism. Only one of the five hypotheses (i.e., "uniqueness") was significantly supported at $p = .002$. The appeal of "succorance" (e.g., expressions of gratitude and pats on the back) which is normally associated with a collective society was unpredictably supported in the opposite direction as hypothesized ($p < .001$). In general, the Russian consumers placed much less emphasis on the appeals associated with collective societies than was expected. Interestingly, the difference between Russian and U.S. consumers on the appeal of "independence" was insignificant ($p < .763$) and tilted slightly toward the individualistic end of the dimension. Further, the insignificant difference between Russian and U.S. consumers is particularly noteworthy on this dimension because the U.S. has been considered as the most individualistic country in the world in past studies (e.g., Hofstede, 1980; Fernandez et al., 1997).

Similarly, there was nonsupport for the notion that appeals associated with high power distance would be much more effective in the Russian marketplace. Only one of the six hypotheses (i.e., "down-to-earth") supported this proposition. In fact, two of the appeals hypothesized were supported in the opposite direction (i.e., "design" and "product value"). Remarkably, there was no

significant difference between the consumers on appeals of "attractiveness", "prestige", and "economical". Further, the Russian consumers indicated that the appeal of "prestige" was less than important (i.e., mean score less than 4). This is particularly surprising for a country with a non-representative style government and a small middle class.

Dimension	Appeal	Mean		SD		P-value	Hp
		Russia	USA	Russia	USA		
Masculinity	Effective	2.89	2.17	1.75	1.35	.001	NS
	Handy	3.12	3.36	1.63	1.47	.164	S
	Natural	2.71	3.97	1.73	1.50	.001	NS
	Modesty	5.61	3.97	1.37	1.70	.001	NS
Uncertainty Avoidance	Civilized	4.46	4.30	1.64	1.60	.408	S
	Adventure	4.93	4.51	1.64	1.47	.021	S
	Primitive	5.46	4.46	1.68	1.76	.001	NS
	Miraculous	4.39	4.16	1.82	1.66	.256	S
Individualism	Independence	3.87	3.81	1.86	1.51	.763	NS
	Unique	4.10	3.53	1.85	1.59	.002	S
	Family	3.16	3.17	1.65	2.15	.980	NS
	Popular	4.93	4.48	1.73	1.47	.016	NS
	Succorance	4.41	3.99	1.63	1.47	.001	S-O
Power Distance	Design	3.95	3.42	1.51	1.44	.002	S-O
	Attractiveness	3.77	3.96	1.75	1.57	.316	NS
	Product Value	3.60	2.85	1.70	1.48	.001	S-O
	Prestige	3.82	3.90	1.88	1.62	.698	NS
	Economical	3.23	3.21	1.61	1.55	.933	NS
	Down-to-earth	5.62	4.26	1.62	1.50	.001	S

Notes: S=support, NS=nonsupport, and S-O=support in the opposite direction
Survey used a 7-point anchored Likert scale with poles as 1=extremely important and 7=unimportant

Lastly, an examination of demographic differences (i.e., age, gender, marital status, and socio-economic status) within the groups of Russian and US. consumers indicated almost no significant correlation between the appeals and the demographic factors. Specifically, there was no correlation between the appeals and the demographic factors among the Russian respondents and only four instances among the U.S. respondents at $p < .002$ (Table 4). Differences in the relationship between the appeals and demographic variables would suggest the need for segmented advertising.

Table 4. Correlation Between Appeals and US Demographics

Appeal	Age	Gender	Marital Status	Class
Economical Value	-	-	.001	-
Miraculous	.001	-	.001	-
Civilized	.001	-	-	-

DISCUSSION

Clearly our results did not support the notion that Hofstede's cultural dimensions could be accurately used as predictors of appeal effectiveness as well as the Albers-Miller and Gelb (1996) study. Only six of our 19 hypotheses were supported. There could, however, be several explanations for difference in predictability beyond the validity and translation of the instrument. First, the eleven countries (e.g., Japan, Taiwan, India, South Africa, Israel, France, Finland, Brazil, Chile, Mexico, U.S.) used in the previous study (Albers-Miller & Gelb, 1996) have significantly different market economies, political-legal and advertising systems than Russia. As such, the significance of individual appeals might vary considerably. Second, the values (i.e., 1990 data) of the Hofstede dimensions might be too old to use in predicting the effectiveness of appeals. Third, the appeals-culture relationship may have significantly different validities from one age group to the next. The Albers-Miller and Gelb (1996) study was conducted using an adult population. Fourth, the product usage visualized by the respondents may have a moderating effect on the importance of appeals. Fifth, cultural dimensions may not be fine grained enough to predict the effectiveness of appeals. In other words, changes in the perceived importance of advertising appeals may take place much more quickly than changes in cultural values.

To supplement these explanations, we formed a Dephi panel of two Russian professors, sixteen Russian undergraduate and graduate students, and an American professor living in Russia. Many of the Russian panel members had traveled and studied in the United States, so their responses were based on personal knowledge of both countries. Additionally, the Russian respondents were from a wide cross-section of Russian culture (e.g., Moscow and the four separate CIS republics of Bashkortostan, Belarus, Tatarstan, and the Ukraine). The panel members were ask to specifically comment on the four hypotheses that were significantly not supported (i.e., $p < .002$) and the three hypotheses significantly supported in the opposite direction. Comments were gathered from each panel member, synthesized and redistributed through three rounds of analysis. The following paragraphs represent a summary of their insights.

Our study hypothesized that Russian and U.S. consumers would be equal in their consideration of "effectiveness" as an important advertising appeal. The Russians, however, considered this appeal significantly less important than the American consumers. (It is important to note, however, that Russian respondents rated "effectiveness" as the second most important

appeal.) Our panel of experts suggests that Russians generally lack consumer sophistication. They have a reduced availability of products from which to make choices, and their buying decisions are based on limited experience. Additionally, Russian consumers have experienced several years of false claims in advertisements, disappointments in what they were told about products and services, and failed pyramid schemes. As such, there is a resultant tendency to question any claims of product effectiveness. In other words, most Russian consumers take a "doubting Thomas" approach to unsolicited testimonials. Russians are willing to wait and see the effects of a remedy, while Americans tend to believe research claims and prefer a quick remedy.

It was hypothesized that Russian and US consumers would indicate the same level of effectiveness or importance of an advertisement that demonstrated or gave testament to a product as "natural". Russians considered this appeal as significantly more important than the Americans. Our panel indicates that Russian consumers have a low trust for the artificial: fat-free, pesticide-treated, pre-packaged, and genetically modified foods. There are frequent incidents where cheap cosmetics have created allergic reactions. Additionally, most Russians believe that they have little influence over negative environmental factors such as pollution, difficult economic conditions, and stress. Chemical and nuclear disasters such as the Chernobyl incident have had lasting impacts on the Russian people. Use of natural products is seen as a way to offset the perceived negative influence of unnatural or artificial products.

It was hypothesized that the consumers would view the appeal of "modesty" the same across both cultures. The Russians, however, considered it to be far less important than the Americans did. Young Russians consider that self-promotion is a key to getting ahead and are not bashful in heralding personal achievements. Also, Russians are less physically modest. Russians have much closer living conditions than Americans, often with several generations living together in just a few rooms. They are more relaxed with nudity and, as such, are accustomed to showing more of their bodies. This is evident in the preponderance of mini-skirts and extremely tight fitting clothes among girls and young women, speedo-type bathing suits among men, and erotic films on public channel TV and at movie theaters. An interesting perspective of the Russians is that Americans have a stricter standard of personal morality and ethics. Russians, on the other hand, associate modesty with restriction and forbiddance and therefore are not positively influenced by this appeal.

It was hypothesized that Russian and US consumers would assess the same level of effectiveness or importance to an advertisement that demonstrated a product as "primitive". The Russian consumers, however, considered this appeal far less important than the American consumers did. This is a perhaps a matter of semantics. To Russians, primitive connotes old fashioned or out-of-date. Historically, Russians may think 1,000 years, while the Americans may think 100 years. Russians want to distance themselves from the past. They consider that they have been "primitive" long enough and long for "modern" products. Additionally, in Russia, primitive is synonymous with poor quality. Given a choice, Russians would prefer advanced and improved products rather than throwbacks to the past.

It was hypothesized that Russian consumers would consider the advertising appeal of "succorance" to be relatively more important to the success of sales than would U.S. consumers. This appeal was significantly supported in the opposite direction. In other words, Russians considered it significantly less important than Americans. However, support in the opposite direction may be a semantics problem. Russians interpret succorance as supporting others in their time of want rather than something that might support them personally in a time of need. Russia's restrictive economy focuses primarily on necessities. Purchases seem to follow a pattern based (in order of priority), on need, availability and affordability. Non-essentials, like gifts or products that offer support to others are considered trivial.

It was hypothesized that Russian consumers would consider the advertising appeal of "design" to be relatively more important to the success of sales than would an American consumer. This appeal was significantly supported in the opposite direction. In other words, Russians considered it significantly less important than Americans. Our panel of experts indicated that, except for a growing class of business elite, most Russians have lower standards of living compared to the United States. As a result, consumer decisions are driven by the means available at the time of purchase. Economic hardships cause them to be more concerned about survival than choices of design. In other words, functionality outweighs interest in design. Suggestions or claims of unique design seem to translate as more expensive.

It was hypothesized that Russia consumers would consider the advertising appeal of "product value" to be relatively more important in purchasing decisions than would US consumers. Again, this appeal was significantly supported in the opposite direction. Russians considered it significantly less important than Americans. Our experts suggest that the concept of competitive advertisements is relatively new in Russia. The matter of choice is hardly a decade old, and consumer sophistication is low. Russian ads provide considerably less information about the product than do ads in the United States, and there have been many false claims in advertisements. As a result, Russians do not trust the ads, thus claims of the product's value are not important. Consumers perceive emphasis on the value of a product as an indicator of a high price. In other words, Russian consumers cannot afford the luxury of considering the appeal of "value".

Lastly, we considered the notion of that changes in the perceived importance of advertising appeals might take place much more quickly than changes in cultural values. In fact, changes in the importance of advertising appeals may mimic current societal trends and may be precursors to cultural changes. As such, we reversed the logic by using our data on appeals to indicate the dimension magnitudes relative to the previous studies. The findings indicate that the Russian culture may be changing more rapidly than other societies. Perhaps this should not be surprising for a country undergoing such political, economic, and technological changes. Although Russia is still a predominately masculine country, the mean scores of the appeals suggest a trend toward femininity. Further, the appeal data from our study supports Naumov and Puffer's (2000) findings that uncertainty avoidance is lower, particularly among full-time students, and university faculty

members and administrators. Additionally, our study supports the conclusion by Naumov and Puffer's (2000) that power distance has significantly decreased; Russians are becoming increasingly insistent on equality. Lastly, our data supports the Naumov and Puffer notion that the Russian culture is moving further away from collectivism and more toward a society of individualistic values. Although one would normally discount the suggestion that a culture might show visible changes within a decade, our findings seem to indicate a continuation of the trends posited by Naumov and Puffer (2001). The following table indicates the magnitude of Hofstede's dimensions for Russia from three data points. The Fernandez, et al., (1997) study collected data in 1990, the Naumov (2000) study in 1995-1996, and our study in 2002.

	MAS	UAI	INV	PDI
Fernandez, et al.	Med-high	High	Low	High
Naumov & Puffer	Med-high	Med-high	Med-low	Med-low
Rhodes & Emery	Med	Med	Med-low	Med-low

CONCLUSIONS

This study examined the differences in advertising appeals between the United States and Russia in hopes of providing some recommendations to organizations that desire to advertise in Russia. As Keegan (1989) points out, the first step to successful cross-cultural marketing is to understand the cultural differences. Findings indicate that Russia has experienced, and continues to experience, considerable cultural change since perestroika in the late 1980's and early 1990's. The same may be true in other fast developing countries. The results of this study, however, appear to suggest that the Hofstede dimensions offer very little value in predicting the importance of various advertising appeals in Russia. As a result, using heuristics such as Hofstede's cultural dimensions may be too broad an approach to capture the detailed differences required in launching an effective advertising campaign.

While the findings do not provide explicit recommendations for developing advertising, they do provide some general information for marketing practitioners seeking to conduct business in Russia. For example, one may consider the appeals with means less than 3.5 (natural, effective, handy, economical, and family, in descending order of importance) to be influential in selling a product. Conversely, those appeals whose means were greater than 4.5 (down-to-earth, modesty, primitive, popular, adventure, and prestige, in descending order of unimportance) might be avoided. Although we concur with the findings of Wells (1994), Kanso and Nelson (2002), and others that the culture of the target market must be considered when developing advertising, the appeals need to be validated through focus groups.

It appears that some respondents had difficulty interpreting some appeals (e.g., effectiveness and succorance). Future researchers may need to provide instruction using examples, pictures, and discussion with feedback prior to or during the application of the surveys. In addition, only students and university faculty and administrators were used in this study, so the findings are not generalizable across the entire Russian population. Further research is necessary to determine if our findings are true for all subgroups.

REFERENCES

- Albers-Miller, N. D. & B. D. Gelb. (1996). Business advertising appeals as a mirror of cultural dimensions: A study of eleven countries. *Journal of Advertising*, 25(4), 57-71.
- Albers-Miller, N. D. (1996). Designing cross-cultural advertising research: A closer look at paired comparisons. *International Marketing Review*, 13(5), 59-76.
- Andrews, J. C., S. Durvasula. & R. G. Netemeyer. (1994). Testing the cross-national applicability of U.S. and Russian advertising belief and attitude measures. *Journal of Advertising*, 23(1), 71-82.
- Arens, W. F. & C. L. Bovee. (1994). *Contemporary Advertising* (Fifth Edition). Boston: Richard D. Irwin.
- Belton, C. (2002, June 17). A gleam of hope for Russia inc. Productivity is exploding, and foreign capital may follow. *Business Week*, 48.
- Chandy, R. K., G. J. Tellis, D. J. Macinnis & P. Thaiwanich. What to say when: Advertising appeals in evolving markets. *Journal of Marketing Research*, 38(4), 399-415.
- Cheng, H. & J. C. Schweitzer (1996). Cultural values reflected in Chinese and U.S. television commercials. *Journal of Advertising Research*, 36(3), 27-45.
- CIA World Factbook: Literacy Rates 1990-2002*. (n.d.) Retrieved January 20, 2003, from <http://cia.gov/cia/publications/factbook>.
- Culter, B. D. & R. G. Javalgi (1992). A cross-cultural analysis of the visual components of print advertising: The United States and the European community. *Journal of Advertising Research*, 32, 71-80.
- Dabars, Z. & L. Vokhmina. (1996). *The Russian way*. Lincolnwood, IL: Passport Books.
- Emery, C. R. & D. L. Rhodes. (2002). [Advertising over the last two decades in Russia]. Unpublished raw data.
- Fernandez, D. R., D. S. Carlson, L. P. Stepina & J. D. Nicholson. (1997). Hofstede's country classification 25 years later. *The Journal of Social Psychology*, 17, 21-18.
- Gupta, A. K., & V. Govindarajan (2000). Managing global expansion: A conceptual framework. *Business Horizons*, (March/April), 45-54.

- Heritage Foundation. (2002). *2001 Index of Economic Freedom* (n.d.) Retrieved January 10, 2003, from <http://www.heritage.org:so/index/countries/maps&charts/list1.gif>.
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Value*. Beverly Hills, CA: Sage Publications.
- Hofstede, G. (1991). *Cultures and Organizations: Software of the Mind*. London: McGraw-Hill Book Company.
- Hong, J. W., A. Muderrisoglu & G. M. Zinkhan. (1987). Cultural differences and advertising expression: A comparative content analysis of Japanese and U.S. magazine advertising. *Journal of Advertising*, 16(1), 55-62, 68.
- Human Development Index. (2001). *Human Development Report*. New York: United Nations.
- Indicators good. (2002, May). *Russian Life*, 45(13), 7.
- International Monetary Fund. (2000). *World economic outlook: Focus on transition economies* (October). Geneva: IMF.
- Kanso, A. & R. A. Nelson. (2002). Advertising localization overshadows standardization. *Journal of Advertising Research*, 42(1), 79-90.
- Keegan, W. (1989). *Global Marketing Management*. Englewood, NJ: Prentice Hall.
- Leonidou, L., C. S. Katsikeas & S. Samiee. (2002). Marketing strategy determinants of export performance: a meta-analysis. *Journal of Business Research*, 55(1), 51-68.
- Maheswaran, D. & S. Shavitt (2000). Issues and new directions in global consumer psychology. *Journal of Consumer Psychology*, 9(2), 59-68.
- Naumov, A. I. & S. M. Puffer (2000). Measuring Russian culture using Hofstede's dimensions. *Applied Psychology*, 49(4), 709-718.
- Pollay, R. W. (1983). Measuring the cultural values manifest in advertising. In J. H. Leigh & C. R. Martin, Jr., (Eds.), *Current Issues and Research in Advertising* (pp. 72-92). Ann Arbor: Graduate School of Business, Division of Research, University of Michigan.
- Pollay, R. W. & K. Gallagher. (1990). Advertising and cultural values: reflections in the distorted mirror. *International Journal of Advertising*, 9, 359-372.
- Research report reveals Russian ad-sales boom (2001, December 7). *The St. Petersburg Times*.
- SPSS Base 10.0 (2001). *Applications Guide*. Chicago, IL: SPSS, Inc.
- Tian, R. G. (2000). The implications of rights to culture in transnational marketing: An anthropological perspective. *High Plains Applied Anthropologist*, 20(2), 135-145.

- Tse, D. K., R. W. Belk & N. Zhou. (1989). Becoming a consumer society: A longitudinal and cross-cultural content analysis of print ads from Hong Kong, the People's Republic of China, and Taiwan. *Journal of Consumer Research*, 15 (March), 457-472.
- Wells, L. G. (1994). Western concepts, Russian perspectives: meanings of advertising in the former Soviet Union. *Journal of Advertising*, 23(1), 83-95.
- World Bank (1999). Knowledge for development. *World Development Report, 1998/1999*. Oxford: Oxford University Press.
- World imports by region and selected economy 1991-2001. Retrieved January 20, 2003, from http://www.wto.org/english/res_e/statis_e/its2002_2/
- Yergin, D. & T. Gustafson. (1993). *Russia 2010---and what it means for the world: the Cera Report*. New York: Random House.
- Zinkhan, G. M. (1994). International advertising: a research agenda. *Journal of Advertising*, 23(1), 11-16.

DIFFERENCES IN CHARISMA, ETHICS, PERSONALITY, AND MACHIAVELLIAN CHARACTERISTICS OF MALE AND FEMALE MARKETING STUDENTS

J. Mike Rayburn, The University of Tennessee at Martin
John Overby, The University of Tennessee at Martin
Kevin Hammond, The University of Tennessee at Martin

ABSTRACT

Developing a corporate culture that encourages ethical behavior and discourages unethical behavior has become a major concern for organizations. However, in discussing business ethics, the sex of the offender is often ignored. This paper explores the relationship between gender and the willingness to engage in unethical business behavior. If females tend to be more ethical, this has important ramifications for placing them in executive positions in organizations. Determining an ethical profile of marketing majors will also suggest how much emphasis to place on ethics in the classroom.

Because of the growing trend for females to assume top executive positions, this study compares academic achievement, Machiavellian levels, Type A or Type B personality traits, ethical orientation, and charisma of female and male students. Female students report higher academic achievement, but male students are statistically more charismatic than female students. However, female respondents are more ethical. There is no significant difference in the Machiavellian score and Type A/B personality between female and male respondents. Higher academic achievers have higher Machiavellian scores while Type A personalities are more ethical, but are less charismatic.

INTRODUCTION

Developing a corporate culture that encourages ethical behavior and discourages unethical behavior has become a major concern for organizations. However, in discussing business ethics, the sex of the offender is often ignored. This paper explores the relationship between gender and the willingness to engage in unethical business behavior. If females tend to be more ethical, this has important ramifications for placing them in executive positions in organizations. Determining an ethical profile of marketing majors will also suggest how much emphasis to place on ethics in the classroom.

Because of the growing trend for females to assume top executive positions, this study compares academic achievement, Machiavellian levels, Type A or Type B personality traits, ethical orientation, and charisma of female and male students. Female students report higher academic achievement, but male students are statistically more charismatic than female students. However, female respondents are more ethical. There is no significant difference in the Machiavellian score and Type A/B personality between female and male respondents. Higher academic achievers have higher Machiavellian scores, Type A personality are more ethical, but are less charismatic.

One of the most significant trends in the last two decades has been the increase of women in the workforce. With the population of female marketing students growing, it is also important to study whether they differ in personal characteristics from their male counterparts. The majority of past studies have focused on the personal characteristics of male executives because of the small number of females in corporate positions. However, this single gender approach is no longer relevant. It is important to study the impact of more females assuming managerial roles and the implications on the image of the organization.

To assess this impact, this paper also investigates the correlation between gender and Machiavellian orientation, Type A or B personality, and level of charisma. Employees having a high Machiavellian orientation have the potential for disrupting an entire organization. These individuals see what they can get away with but not to the point of becoming obvious to others who are in a position to retaliate. The Machiavellian personality has no loyalty to the organization and mainly approaches all situations from a self-interest perspective. Thus, Machiavellian orientation represents a significant variable that affects an organization and the people interacting with individuals possessing that orientation.

Marketing has traditionally been considered a high stress profession because of its up-or-out environment and time pressures for financial reports, audits, and tax returns. Type A individuals continually feel the need to prove themselves and often channel their ambitions into an area that is important to them at the moment. These individuals set increasingly more difficult goals; ambitions are pushed higher and higher, always beyond their reach. Increased competition places a premium on charismatic accountants who have enhanced ability to attract and keep clients. Thus, there appears a strong correlation between Type A traits, charisma, and professional accountants.

ETHICS

The Bartels model (1967) explains how ethical standards are determined and how decisions are made in compliance with these ethical standards. The four matrix models identify general cultural influences of society and their influence on organizations; the non economic influences on economic behavior; the sets of economic relationships where expectations affect behavior; and the decision bases in management role relationships. Bartel's theory indicates the determinants of

ethical decisions in organizations and the various publics; further, it stresses the overall role of culture in influencing ethics.

The Hunt and Vitell model (1986) develops a general theory of ethics from a positive, descriptive perspective rather than the normative model. Almost all previous theoretical works have focused on developing guidelines or rules for ethical decision making. Their general theory indicates an individual's personality is a major factor in ethical decision making and directly influences the manager's perception of the ethical problem. The Bommer et al. model (1987) describes and identifies various factors that affect both ethical and unethical behavior in an organization. The Bommer et al. model includes the decision maker's social, governmental, legal, work, professional and personal environments with the mediating effects of individual decisions. This represents a first attempt to identify and relate the environmental factors and influences in individual decision making. The ethical decision making process is particularly important to divisions of an organization which relate to the environment. The Ferrell and Gresham (1983) research develops a general framework contingency approach to individual decision making. The contingency framework indicates that multifaceted factors affect the ethical actions of decision makers. Their model describes ethical actions as a function of the interactive effects of organizational and individual factors.

The Ferrell and Fraedrich (1989) study describes, evaluates, and compares the current models of ethical decision making. From their analysis an integrated model is developed which combines both cognitive-affect and social-learning theory. This model provides a more complete perspective of the ethical decision making process which acknowledges both the external and internal process.

An organization which is interested in improving its ethical decision making process needs an organizational mandated sequence of ethical reasoning (Laczniak & Murphy, 1991). With top management commitment to an ethical culture, the question sequence model of ethical reasoning developed in this study can be used.

EMPIRICAL ETHICAL STUDIES

The Weaver and Ferrell (1977) study indicates that the existence and enforcement of a corporate ethical policy influences its employees' beliefs about ethical behaviors. This research found that a corporate code of ethics enhances more ethical beliefs, but that enforcement is necessary to change ethical behavior.

The personal beliefs of managers toward their internal organizational relationships with peers and top management have been studied by Ferrell and Weaver (1978). This research focuses on why managers think and act ethically or unethically. In this study the respondents believe that their peers and top management have lower ethical standards than their own and that the existence and enforcement of corporate policy does not encourage more ethical conduct than their personal beliefs.

The Metzger et al. study (1993) found that existing ethical codes of an organization, oversight surveillance procedures, and statements about the code's importance are not sufficient to assure that the firm's ethical standards will be followed. Rather, to assure the creation of an ethical internal environment, companies must conduct a rigorous study of existing systems, the incentive reward system, and employees' current perceptions about the ethical climate. Most large companies have written codes of ethics to guide activities (Hite et al. 1988). The Hite et al. study determines the frequency and specific topics covered in the ethics policy statements of large companies in the United States. They found that the topics most often covered are: misuse of funds, conflicts of interest, political contributions, and confidential information.

Hunt and Vasquez-Parraga (1993) developed an experimental design to study ethical issues. Their findings suggest that a manager's decisions to either discipline or reward the behavior of salespeople are guided by whether the salesperson's behavior was right or wrong and only secondarily by the consequences of that behavior to the organization. Having a code of ethics in itself does not foster ethical behavior or prevent unethical behavior. Employees must believe that the organization's ethical code and norms are important enough to be enforced.

Ethics of Business School Students

Gelb and Brien (1971) suggest that education process may be partially responsible for the personal and organizational value systems that influence future managers. Hawkins and Coucanougher (1972) found that business majors as a group have a more tolerant frame of reference when evaluating the ethics of business practices and that this tolerance of questionable ethical practices may occur in their junior and senior years. They further found that increased exposure to a business school's curriculum will increase the students' level of tolerance toward questionable business practices and that the occupation of a student's father is not a significant factor in their frame of reference.

The Fritzsche and Becker study (1982) found that where students as a group possess no hard or fast rules for dealing with specific ethical problems, they respond to the ethical vignettes on an individual basis. They found that each problem will likely be dealt with on an individual basis depending on the values of the student at that point in time.

Lane et al. (1988) found that business students believe they must engage in unethical behavior in order to succeed in business school. The study also found that business school programs do not reinforce positive ethical perceptions by students but instead they may have a negative effect on certain ethical actions and perceptions. Family income, father's occupation, and university type are the variables examined by Grant and Broom (1988). Their findings indicate that low family income makes one think strictly ethical or unethical with no compromise; a high family income makes one think ethics in terms of immediate monetary return; and coming from a middle income family makes one think strictly ethical or compromise. They also found that where the occupation of the respondent's father is managerial, they tend to think ethics in terms of immediate monetary return; those whose father's occupation is labor tend to think strict ethical or compromise; and, those

from families where the father's occupation was professional tend to think ethical compromise. The analysis by university type indicates that students graduating from a small state university tend to have a more strict set of ethical attitudes, and those students from large state universities and private religious universities appear to have the full spectrum of ethical attitudes. Harris's (1988) research found that the ethical values of the university's faculty are not that much different from the students.

A comparative study by Jones (1990) has students assume two different organizational roles, as president or as employee when answering ethical situations. The study found that the situation/role that the students are asked to assume did affect the pattern of their ethical responses. When students respond as employees, their ethical attitudes are more liberal in the use of company resources; when students respond from the president's viewpoint, their ethical attitudes are more protective of company resources.

Seventy-eight percent of the students report that they had cheated at least once during their college career in the Garner et al. (1991) study. Regression analysis indicates a significant relationship between students' ethical attitudes and cheating, but not between cheating and attitude toward grades.

The Kraft and Singhapakdi (1991) study investigates the differences in perceptions between business students and service-sector managers regarding the role of ethics and social responsibility in organizational effectiveness. The study found a difference in the perception of students and managers with students rating the importance of ethical conduct and some dimensions of social responsibility lower than managers. The Peterson et al. (1991) study replicates an earlier research effort and found trends of increasing concern by college students about business ethics and a slightly higher level of concern by females than the previous study conducted ten years earlier.

MALE AND FEMALE ETHICAL BELIEFS

Davis and Welton (1991) found lower and upper division business students have different perceptions of ethical behavior and that formal ethics training is not a significant factor for the difference. The study also found that gender is not a critical factor in differentiating the ethical perceptions of business students. Research conducted by Whipple and Wolf (1991) indicates that students show greater sensitivity to social responsibility issues than practitioners. They also found that male students are less critical than the female students of questionable business practices.

The Akaah study (1989) found female respondents using higher research ethical judgment than their male counterparts. These results support the viewpoint that ethical decision making in organizations will improve as the ratio of women to men in executive positions increases. Similar results in the Chonko and Hunt (1985) study found female managers perceive more ethical problems in management activities than do their male counterparts. The study also found that compared to their male counterparts, females appear less likely to ask for a bribe but more likely to pay one. They also found that females are much more likely to participate in conflicts of interest.

The Betz et al. study (1989) found that more female than male students want to help people. Also, males indicate that they would more frequently skirt company rules. However, few respondents in this study are willing to break laws for personal gain. The study found that on questions relating to work-related values and interest, men are more concerned with money and advancement and women are more interested in relationships and helping others.

The Kidwell et al. (1987) study found that male and female managers generally do not differ in their perception of what is ethical and what is unethical. However, male respondents are more willing to conceal their errors. Male and female managers are asked to estimate the ethics of the opposite sex in decision situations. Almost universally each sex views the opposite sex as being more unethical than themselves.

The Tsalikis and Ortiz-Buonafina study (1990) found that females are more ethically sensitive than their male counterparts. Females also indicate a lower probability that they might act in a similar way if faced with the same problems and that male and female students use similar processes to evaluate ethical situations.

The Galbraith and Stephenson study (1993) found that no particular decision rule appears to be applied all or almost all the time by either male or female students. They also found that female students seem to more readily invoke different decision rules for different ethical situations while male students exhibit less diversity in their use of ethical decision rules.

MACHIAVELLIANISM

Since the publication of *The Prince* in 1532, the term, Machiavellian, has been used to designate a particular type of personality orientation. To be identified as Machiavellian is an indication of an unsavory, amoral if not immoral reputation for dealing with others so as to accomplish one's objectives. Traditionally, the Machiavellian individual is thought to manipulate others for his or her own purpose (Christie & Geis, 1970). Machiavellianism is defined as an individual's general strategy for dealing with other people and the degree to which they feel they can manipulate others in interpersonal situations (Robinson & Shaver, 1973). The needs, feelings, or rights of others in the organization are secondary.

A twentieth century definition of a Machiavellian personality is "an individual who employs aggressive, manipulative, exploiting, and devious moves to achieve personal or organizational objectives" (Calhoun, 1969, p. 211). The major characteristics of a "high Machiavellian" orientation are: deceitful, manipulatory (but not obvious), suspicious of others, emotionally detached, impersonal and opportunistic, ambitious and consequently impatient, appears unresponsive to personal or ethical concerns of others, has little concern for conventional morality and are not opposed to dishonesty (Christie & Geis, 1970). There is no difference in IQ between high and low Machiavellian individuals (Calhoun, 1969).

A pervasive but very significant reason for studying Machiavellianism in today's organizations centers around the issue of loyalty. Loyalty refers to the dedication or commitment to a person, a task, or the organization where the loyalty to one results in being at odds with the others. Self interest is the most powerful force affecting loyalty and influences both those who employ Machiavellian tactics and also the recipients. Since Machiavellian characteristics exist in individuals in differing degrees, professors need to know more about the students' characteristics and ethical attitudes. Also, an understanding of this type of aggressive personality and leadership style can help in understanding organizational behavior. By understanding high Machiavellian characteristics, employees can make counteractions to prevent damage to themselves or the organization. This information can help the socialization process of hiring new employees in the workplace, in structuring university ethic's courses, and in understanding Machiavellianism in the workplace.

EMPIRICAL MACHIAVELLIAN STUDIES

Siegel (1973) has studied managers and managers-to-be, MBA students, and faculty members as to the extent to which these groups exhibit the manipulative interpersonal dispositions and the extent to which a Machiavellian relates to the dimensions of leadership. Siegel uses the MACH scale and the Theory X and Theory Y leadership scale. The study found that managers are less and MBA students are more Machiavellian than the norms, and that faculty are the most Machiavellian of all. They found Machiavellianism tends to be negatively related to participative leadership attitudes for both students and managers.

Touhey (1973) found the greatest intergenerational mobility in occupational status is reported by individuals who made the highest scores on both IQ measures and the Machiavellian scale. The study concludes that intelligence aids the deployment and concealment of Machiavellian tactics.

Heisler and Gemmill (1977) determined that Machiavellianism is consistently related to job satisfaction and job strain across a variety of organizational settings. This study also found that Machiavellianism demonstrates a consistent directional trend related to organizational success and satisfaction and is significantly associated with a manager's upward mobility as determined by their current salary. Hegarty and Sims (1978) identify Machiavellianism as one of the personality variables which is a significant covariate in graduate business students' ethics studies. Their findings indicate that individuals identified as high Machiavellians have less ethical behavior than other study participants.

Singhapakdi and Vitell (1990) report that a Machiavellian orientation and an organization's ethical policy is a significant predictor of the outcome of a manager's ethical decision process. Their study also indicates that high Machiavellian-oriented managers are less ethically sensitive than low

Machiavellian managers. Further, high Machiavellian-oriented managers will agree less with ethical policies or rules of behavior.

The Singhapakdi study (1993) found that high Machiavellian-oriented managers tend to perceive ethical problems as less serious than will low Machiavellian-oriented managers. The study also found that high Machiavellian-oriented managers tend to agree with "say and do nothing" as a possible course of action more than low Machiavellian-oriented managers. Also, this research found that Machiavellian managers appear reluctant to punish unethical behavior and that enforcement of an ethical code is essential. The implication for management is to make it in the best interest of the Machiavellians to behave ethically. The study's results indicate severe punishments for unethical behavior and significant rewards for ethical behavior are what a Machiavellian will respond to the most.

TYPE A VERSUS TYPE B PERSONALITY

In 1973 two cardiologists correlated the traits of hard-driven individuals that they termed Type A and Type B personalities. The Type A individual is intense, ambitious, competitive, restless, and has a sense of urgency. Type B's are more relaxed and easy going, less hostile and less overly competitive and seem subdued. Type B's are not necessarily free of stress, but rather they confront challenges and external threats less frantically. Unlike Type A's, Type B's show little evidence of multiphasic thinking and seldom experience a frustrated sense of wasting time when not actively engaged in productive activity (Applebaum, 1981).

Type A behavior is a life-style or general orientation to life. Society often glamorizes Type A individuals because of the corresponding success attributed to this behavior. This behavior fits the desired male stereotype with rugged masculinity and need to control. Type A individuals will compete even with themselves when there is no one else in the immediate environment with whom to compete.

Speed is another dominant characteristic of Type A individuals, who move quickly or may appear tense and energetic. They tend to be in a chronic hurry; to wait in line becomes an intolerable task. A predominant feeling among these individuals is that they should use each moment to its fullest advantage and not waste any time. The primary characteristics of the Type A behavior pattern are a chronic sense of urgency, free-floating or easily aroused hostility, ambitiousness, and immoderation. Secondary behaviors implied by this description include impatience, competitiveness, and aggressiveness, all of which appear to represent interaction among the primary behavior components.

Previous studies suggest that an individual's negative emotions such as anger, hostility, and cynicism are the critical toxic components of the Type A personality. While a cause-and-effect relationship between Type A behavior and coronary artery disease is controversial, some effects of Type A stress are definitely known. Stress causes an increase in blood pressure; if the stress is

constant, the heart and arteries begin to show signs of damage. Some project that 14 to 18 percent of sudden heart attacks occur immediately after an emotional stress and can increase with high levels of anger (Ferrol, 1996).

Type A individuals believe they are struggling against others in a fight for the top grades. The more difficult the class, the harder Type A students work to meet the challenges. These students struggle to have enough time for their university studies, jobs, and other activities. They often gauge their success by the number of achievements to their credit. The Type A individual is competitive, aggressive, hard-driving, hostile, time-urgent, tense, preoccupied with deadlines, work and study oriented, impatient when no task progress is being made, and eager to control the environment (Matteson & Ivancevich, 1987).

At most universities, students compete with each other for a limited amount of top grades. Rees and Segal (1984) studied how groups manage the problems generated by competition for status; specifically, they are interested in the extent to which group members view each other as competitors. They found that when members perceive justice in the assignment of unequal status, high morale can be maintained and that frustration may not lead to aggression if the frustration is expected by the group members because of the situation. Students are less likely to indicate aggressive response toward other students as long as they perceive the competitive status as fair and impartial; if students believe the inequities are fairly distributed, stress may be minimized. Because Type As are achievement oriented, they demonstrate higher educational attainment and occupational prestige than Type Bs (Applebaum, 1981).

CHARISMA

Charisma is a Greek word meaning magical gift. Charisma is used in two letters of St. Paul in Romans and in I Corinthians in the Christian Bible to describe the Holy Spirit. Charisma is a gift to individuals to take action, gain power and use it. (Conger & Kanungo, 1987; Wareham, 1995). The effectiveness of some individuals depends on their personality and charisma and not on their control over bureaucratic structures (House et al. 1991). Charismatic individuals appear to be knowledgeable and experts in their area of influence with demonstrated expertise (Conger & Kanungo, 1987). Charismatic individuals have a remarkable ability to distill complex ideas and information into simple messages (Sellars, 1996).

The power of charisma may be derived from an individual's observable talents such as his or her skill, academic and monetary achievements, status, style or overall life experiences. Frequently, charismatic personalities are differentiated from the ordinary person and treated as if they are endowed with supernatural powers. Charismatic individuals differ from others in that they have the capacity to inspire personal loyalty which is separate and apart from the organizational structure. Kets de Vries and March (1988) found that charismatic leadership seems to emerge at periods of uncertainty and unpredictability.

Charismatic leaders are those rare individuals who can fill people with a new sense of purpose and encourage them to reach further than they have reached before. While charismatic leaders can be of real benefit to an organization, they also can create some problems. Charismatic leaders generally have a hard time sustaining their momentum over an extended period. Because they are more self-centered and less group-oriented than most individuals, they are not likely to concentrate on developing the capabilities of other team members. Also, when it comes to delegating, they often pass on the responsibility without relinquishing the authority. Charismatic leaders also seem more interested in moving their own ideas forward instead of developing a collaborative environment (Greenberg & Greenberg, 1990).

Charisma is considered to vary by profession. For example, medical doctors have traditionally been viewed as charismatic, god-like figures in their patients' eyes. Gone are the days, however, when patients unquestioningly follow their physicians' dictates. Patients have changed and are becoming more involved in their own health care and are more willing and financially able to maintain good health. Currently, many physicians feel their patients no longer respect them for their knowledge based on years of hard work and training. In turn, many patients feel that physicians are in the profession only to make money, are arrogant, and in collusion with insurance carriers to keep the costs of medical care high (Samra, 1993).

HYPOTHESES AND METHODOLOGY

The data for this study was obtained from 58 undergraduate marketing majors at two medium-size universities located in the mid-west and mid-south. Completing the questionnaire was voluntary and anonymous; it took approximately twenty-five minutes to complete.

The survey instrument included 77 questions. The degree of Machiavellianism is measured using the MACH IV scale developed by Christie and Geis and included 20 questions (1970; Hunt & Chonko, 1984). The 27-item ethical scenarios section of the questionnaire was adopted and expanded from the 1991 Whipple and Wolf study. The 20-item Type A/B personality section of the questionnaire was taken from the Jenkins Activity Survey. The 10-item charisma section of the questionnaire was developed by Jay Conger (Sellers, 1996). For both the MACH IV and the ethical questionnaire scale items, the respondents were asked to answer in a Likert format. The A/B personality section of the questionnaire was answered by choosing one of three different responses and then putting the value for that response in the appropriate blank. The charisma section of the questionnaire was answered by choosing one of two responses for each question and summing the responses.

Formally, the following hypotheses stated in null form are tested in the study:

H ₀ 1:	There is no difference between male and female students as to their academic achievement, Machiavellism, Type A/B Personality, ethics, and charisma.
-------------------	--

H ₀ 2:	Marketing students who have a high level of academic achievement will have no difference in their Type A/B Personality, Machiavellism, ethics, and charisma than marketing students who have a low level of academic achievement.
H ₀ 3:	Marketing students who have a high level of Machiavellism will have no difference in their academic achievement, Type A/B Personality, ethics, and charisma than marketing students who have a low level of Machiavellism.
H ₀ 4:	Marketing students who have a Type A personality will have no difference in their academic achievement, Machiavellism, ethics, and charisma than marketing students who do not have a Type A Personality.
H ₀ 5:	Marketing students who are highly ethical will have no difference in their academic achievement, Type A/B Personality, Machiavellism, and charisma than marketing students who have a low level of ethics.
H ₀ 6:	Marketing students who have high charisma will have no difference in their academic achievement, Type A/B Personality, Machiavellism, and ethics than marketing students who have a low level of charisma.

To test these hypotheses, the Mann-Whitney U test was used. Based on the previous research, we predict females to have higher GPAs and to be more ethical. It is also expected that more male respondents to be Type A individuals because a high degree of ambition characterizes Type A behavior. We predict no difference in Machiavellian orientation or charisma characteristics between male and female students.

A subject's Machiavellian score is calculated by summing the responses on the 20 Machiavellian questions. A cut-off score of 75 is used to divide the subjects into low Machiavellian and high Machiavellian groups. The subjects' self-reported GPA is used as a proxy for academic achievement. Subjects with a GPA of 3.0 or higher on a 4.0 scale are classified as high academic achievers; those with a GPA of less than 3.0 are classified as low academic achievers. Ethical orientation is measured using the responses from the 27-item ethical scenarios. Respondents having a total of 252 or more on the Type A/B personality section are classified as Type A personality and those respondents having a total less than 252 are classified as Type B personality. Respondents having a total of 5 or more on the charisma section are classified as charismatic and those respondents having a total of 4 or less are classified as having no charisma. The next section presents the results.

RESULTS

There were 32 female students and 26 male students, for a total 58 respondents included in the survey results. The results for the test of hypothesis 1 are shown in Table 1. The statistics indicate a significant difference in the academic achievement (GPA) for female and male students ($p= 0.005$) with females reporting higher GPAs. There is no significant difference in the

Machiavellian score and Type A or B personality between female and male students. There is a significant difference ($p=0.0015$) in the ethical perceptions between female and male students with females being more ethical. However, male students are statistically more charismatic than female students ($p=0.055$).

Variable	Z Score	P-Value
Academic achievement	-2.7810	0.0054
Machiavellianism	1.4833	0.1380
A/B Personality	-1.2395	0.2152
Ethics	-3.1814	0.0015
Charisma	1.9171	0.0552

Table 2 illustrates the results for the test of hypothesis 2. The statistics indicate that respondents who are higher academic achievers (GPA = 3.00) have a higher Machiavellian score, have a Type A personality, and are more ethical. There is no statistical difference in charisma score between low and high academic achievers.

Variable	Z Score	P-Value
Machiavellianism	1.9171	0.0552
A/B Personality	1.9395	0.0524
Ethics	3.6529	0.0003
Charisma	-0.7108	0.4772

The statistics for the test of hypothesis 3 shown in Table 3 indicate that students with high Machiavellianism scores achieve more academically and tend to have a Type A personality are not statistically significant different at the 0.1 level. However, students with high Machiavellian scores

are more ethical at the $p=0.001$ level. There is no difference in charisma between marketing students with low and high Machiavellian.

Variable	Z Score	P-Value
Academic achievement	-1.4528	0.1463
A/B Personality	-1.4967	0.1345
Ethics	-3.2295	0.0012
Charisma	1.0139	0.3106

The results for the test of hypothesis 4 are shown in Table 4. The statistics indicate that students which have a Type A personality have achieved more academically ($p=0.072$), have higher Machiavellianism scores ($p=0.013$), and are more ethical ($p=0.073$). There is no difference in charisma between marketing students having Type A or Type B personalities.

Variable	Z Score	P-Value
Academic achievement	-1.7964	0.0724
Machiavellianism	2.4499	0.0143
Ethics	-1.7950	0.0726
Charisma	-0.5228	0.6011

Test results of hypothesis 5 are shown in Table 5. Individuals which are more ethical have achieved more academically ($p=0.001$), have higher Machiavellian scores ($p=0.002$), and tend to have a Type A personality ($p=0.015$). Also, individuals which tend to be more ethical ($p=0.023$) are less charismatic.

Variable	Z Score	P-Value
Academic achievement	3.3453	0.0008
Machiavellianism	3.0499	0.0023
A/B Personality	2.4192	0.0156
Charisma	-2.2648	0.0235

Table 6 illustrates results for the test of hypothesis 6. Individuals which scored low on the charisma scale tend to have achieved more academically ($p=0.067$). Also, students which scored high on the charisma scale tend to have Type A personality ($p=0.057$). There is not any statistically significant difference in the level of Machiavellian score and ethical scores between those individuals who scored low or high on the charisma scale.

Variable	Z Score	P-Value
Academic achievement	1.8329	0.0668
Machiavellianism	0.0466	0.9629
A/B Personality	-1.9003	0.0574
Ethics	1.0424	0.2972

LIMITATIONS OF STUDY

The data being reported came from a questionnaire survey. Thus, the following limitations usually associated with survey research apply: general issues of questionnaire understandability and readability, scaling issues, common method measurement errors, and "halo" effect. The exploratory nature of the study and its sensitive ethical questions require a cautious interpretation or generalization of the results of this study. There is no assurance that the students' responses are a

true reflection of their ethical judgments. Some of the respondents could have provided socially desired answers. Also, this is only one sample of students from two universities.

CONCLUSIONS

This study has corroborated previous research reporting that males and females may differ in the characteristics of ethical behavior, levels of Machiavellianism, Type A or B Personality, and charisma. The results of this study indicate that female marketing students possess higher ethical judgment than their male counterparts. Previous research supports this finding. Also, females have achieved more academically as indicated by their GPA. It was expected that male respondents would have Type A personalities; however, there is no difference in the Type A or B personality between female and male respondents. Male marketing students in this study are more charismatic than their female counterparts.

As more women enter the workforce, there may be conflicts between the females and males over ethical issues. However, when soliciting or keeping clients, male accountants may have the advantage because of their charisma.

The study also found that the higher achievers were more Machiavellian oriented. This finding supports the Machiavellian theory and previous research. Also, as expected, the higher academic achievers tend to have a Type A Personality. However, there was no difference in charisma between high and low achievers. In the marketing field, it is frequently necessary to work accurately for long hours under intense pressure; this may fit the Type A profile.

A surprise finding of the study is that the more Machiavellian-oriented marketing students were the more ethical. Previous theory on Machiavellianism does not support this finding. Machiavellian managers are theorized to be deceitful, manipulative, detached, but not ethical. This area of the study needs to be further studied.

The Type A Personality orientation is more Machiavellian, which was an expected result. This is an important finding because Type A individuals are easier to identify in organizations but the Machiavellian-oriented individual is hard to identify. Also, the Type A orientation is more intelligent, which is supported by previous research. In most organizations, the Type A Personality will be promoted to higher organizational positions due to their work ethic. If this individual is also more Machiavellian, then he will have less loyalty to his subordinates and an overall cool detachment to the management process.

This study identified important differences between male and females marketing students. With the number of women rapidly increasing in the marketing field, studies of this nature will assist in understanding the differences which will occur between employees. These differences could result in disputes in the workplace. Marketing managers need to be aware of these differences in order to respond in an appropriate positive manner when conflicts arise.

REFERENCES

- Akaah, I. P. (1989). Differences in research ethics judgments between male and female marketing professionals. *Journal of Business Ethics*, 8(5), 375-81.
- Applebaum, S. H. (1981). *Stress management for health care professionals*. Rockville, MD: Aspen Publications.
- Bartels, R. (1967). A Model for ethics in marketing. *Journal of Marketing*, 31, January, 20-26.
- Betz, M., L. O'Connell & J. M. Shepard. (1989). Gender differences in proclivity for unethical behavior. *Journal of Business Ethics*, 8(5), 321-24.
- Bommer, M., C. Gratto, J. Gravander & M. Tuttle. (1987). A Behavioral model of ethical and unethical decision making. *Journal of Business Ethics*, 4(6), 265-80.
- Calhoon, R. P. (1969). Niccolo machiavelli and the twentieth century administrator. *Academy of Management Journal*, 2(12), June, 205-12.
- Chonko. L. & S. D. Hunt. (1985). Ethics and Marketing management: An empirical examination. *Journal of Business Research*, 13, 339-59.
- Christie, R. & F. L. Geis. (1970). *Studies In machiavellianism*. New York: Academic Press.
- Conger, J. A. & R. N. Kanungo. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review*, 4, October, 637-47.
- Davis, J. R. & R. E. Welton. (1991). Professional ethics: Business students' perceptions'. *Journal of Business Ethics*, 6(10), June, 451-463.
- Ferrell, O. C. & K. M. Weaver. (1978). Ethical beliefs of marketing managers. *Journal of Marketing*, 3(42), July, 69-73.
- Ferrell, O. C. & L. Gresham. (1985). A contingency framework for understanding ethical decision making in marketing. *Journal of Marketing*, 3(49), Summer, 87-96.
- Ferrell, O. C. & L. Fraedrich. (1989). *Business ethics*. Boston: Houghton Mifflin Company.
- Feroli, C. (1996). Anger could be a fatal fault. *The Saturday Evening Post*, January/February, 18-19.
- Fritzsche, D. J. & H. Becker. (1982). Business ethics of future marketing managers. *Journal of Marketing Education*, Fall, 2-7.
- Galbraith, S. & H. B. Stephenson. (1993). Decision rules used by male and female business students in making ethical value judgments: Another look, *Journal of Business Ethics*, 12, 227-233.

-
- Garner, S. J., T. A. McGlone, V. L. McGlone & C. F. Siegel. (1991). Marketing students and cheating: Ethical attitudes do affect behavior, Southern Marketing Association Proceedings: Marketing: Toward The Twenty-First Century, November, 173-177.
- Gelb, B. D. & R. H. Brien. (1971). Survival and social responsibility: Themes for marketing education and management. *Journal of Marketing*, 35, April, 3.
- Grant, E. W., Jr. & L. S. Broom. (1988). Attitudes toward ethics: A view of the college student. *Journal of Business Ethics*, 8(7), August, 617-619.
- Greenberg, J. & H. Greenberg. (1990). Charisma isn't always enough. *Sales & Marketing Management*, 12, October, 10,12b.
- Harris, J. R. (1988). A comparison of the ethical values of business faculty and students: How different are they? *Business and Professional Ethics*, 1(7), Spring, 41-44.
- Hawkins, D. & A. B. Cocanougher. (1972). Student evaluations of the ethics of marketing practices: The role of marketing education. *Journal of Marketing*, 36 April, 65-66.
- Hegarty, W. H. & H. P. Sims, Jr. (1978). Some determinants of unethical decision behavior: An experiment. *Journal of Applied Psychology*, 63(4), 451-457.
- Heisler, W. J. & G. Gemmell (1977). Machiavellianism, job satisfaction, job strain, and upward mobility: Some cross-organizational evidence. *Psychological Reports*, 2(41), October, 592-594.
- Hite, R. E., J. A. Bellizzi & C. Fraser. (1988). A content analysis of ethical policy statements regarding marketing activities. *Journal of Business Ethics*, 10(7), October, 771-776.
- House, R. J., W. D. Spangler & J. Woycke. (1991). Personality and charisma in the U.S. Presidency: A psychological theory of leader effectiveness. *Administrative Science Quarterly*, 3, September, 364-396.
- Hunt, S. D. & A. A. Vasquez-Parrage. (1993). Organizational consequences, marketing ethics, and salesforce supervision. *Journal of Marketing Research*, 1(30), February, 78-90.
- Hunt, S. D. & L. B. Chonko. (1984). Marketing and machiavellianism. *Journal of Marketing*, 48, Summer, 30-42.
- Hunt, S. D. & S. Vitell. (1986). A General theory of marketing ethics. *Journal of Macromarketing*, 1(6), Spring, 5-16.
- Jones, W. A., Jr. (1990). Student views of ethical issues: A situational analysis. *Journal of Business Ethics*, 3(9), March, 201-205.
- Kets de Vries, M. & F. R. March. (1988). Prisoners of leadership. *Human Relations*, 41(3), 261-280.
- Kidwell, J. M., R. E. Stevens & A. L. Bethke. (1987). Differences in ethical perceptions between male and female managers: Myth or reality? *Journal of Business Ethics*, 6(6), August, 489-493.

- Kraft, K. L. & A. Singhapakdi. (1991). The role of ethics and social responsibility in achieving organizational effectiveness: Students versus managers. *Journal of Business Ethics*, 9(10), September, 679-686.
- Laczniak, G. R. & P. E. Murphy. (1991). Fostering ethical marketing decisions. *Journal of Business Ethics*, 4(10), April, 259-271.
- Lane, M. S., D. Schaupp & B. Parsons. (1988). Pygmalion effect: An issue for business education and ethics. *Journal of Business Ethics*, 7, 223-229.
- Matteson, M. T. & J. M. Ivancevich. (1987). *Controlling Work Stress*. San Francisco, CA: Jossey-Bass Publishers.
- Metzger, M., D. R. Dalton & J. W. Hill. (1993). The organization of ethics and the ethics of organizations: The case for expanded organizational ethics audits. *Business Ethics Quarterly*, 3, January, 27-43.
- Peterson, R. A., R. F. Beltramini & G. Kozmetsky. (1991). Concerns of college students regarding business ethics: A replication. *Journal of Business Ethics*, 10(10), October, 733-738.
- Rees, C. R. & M. W. Segal. (1984). Intragroup competition, equity, and interpersonal attraction. *Social Psychology Quarterly*, 47, December, 328-336.
- Robinson, J. P. & P. R. Shaver. (1973). *Measures of social psychological attitudes*. Ann Arbor, MI: Institute for Social Research.
- Samra, R. J. (1993). The image of the physician: a rhetorical perspective. *Public Relations Review*, Winter, 19(4), 341-348.
- Sellers, P. (1996). What exactly is charisma? *Fortune*, 133(1), January 15, 68-75.
- Siegel, J. P. (1973). Machiavellianism, mba's and managers: Leadership correlates and socialization effects. *Academy of Management Journal*, 3(16), September, 404-412.
- Singhapakdi, A. (1993). Ethical perceptions of marketers: The interaction effects of machiavellianism and organizational ethical culture. *Journal of Business Ethics*, 5(12), 407-418.
- Singhapakdi, A. & S. J. Vitell. (1990). Marketing ethics: Factors influencing perceptions of ethical problems and alternatives. *Journal of Macromarketing*, 10, Spring, 4-19.
- Touhey, J. C. (1973). Intelligence, machiavellianism and social mobility. *British Journal of the Society of Clinical Psychologist, Part 1*, (12), 34-37.
- Tsalikis, J. & M. Ortiz-Buonafina. (1990). Ethical beliefs' differences of males and females. *Journal of Business Ethics*, 6(9), June, 509-517.
- Wareham, J. (1995). Eight steps to charisma. *Across the Board*, 32(4), April, 49-50.

Weaver, K. M. & O. C. Ferrell. (1977). The impact of corporate policy on reported ethical beliefs and behavior of marketing practitioners. *Contemporary Marketing Thought*, B. A. Greenberg & D. N. Bellenger, (Eds.), American Marketing Association, Chicago, IL, 477-481.

Whipple, T. W. & D. D. Wolf. (1991). Judgments of marketing students about ethical issues in marketing research: A comparison to marketing practitioners. *Journal of Marketing Education*, Spring, 56-63.

Allied Academies

invites you to check our website at

www.alliedacademies.org

for information concerning

conferences and submission instructions