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# **A HUMAN CAPITAL MODEL FOR CONSUMER KNOWLEDGE AND CONSUMPTION**

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## **ABSTRACT**

*This paper lays out the theoretical foundation for the development of a structural relationship between consumer knowledge and consumption efficiency using a human capital model and the household production function. Consumers' acquisition and use of knowledge is considered a household commodity, produced and consumed outside the traditional scope of the market, to reduce the costs, and eventually, increase the efficiency of household consumption.*

## **INTRODUCTION**

In the fields of marketing and consumer behavior, there has been a substantial body of research on consumer knowledge and its influence on individual differentials in consumer behavior, and the consequences of those differentials on the behavior of the firm. However, there has been a noticeable shortage of studies, there and even in the field of economics, to link consumer knowledge to consumption cost within a consumer unit, especially in the context of the human capital model despite its increasing credibility and popularity since Becker ushered this area of economic theory about four decades ago (Becker, 1964, 1976; Stigler and Becker, 1977; Becker and Murphy, 1988, Becker, Grossman, and Murphy, 1994). Recently, a single significant study (Ratchford, 2001) has brought up the theoretical and empirical investigations of the human capital interpretation in consumer behavior in a hope to revive the interests of economists and consumer researchers, and underscored the importance of the role of consumer knowledge in the efficiency of consumption. Human capital basically refers to the accumulation of knowledge, expertise and skills embodied in people, and acquired through investments in formal or informal education, training, or learning by doing (Ratchford, 2001). Using the household production theory, and both human capital and allocation of time models, and guided by the empirical evidence from related research in consumer behavior and consumption patterns, this paper provides an analytical framework to explore the feasibility of the human capital interpretation of how consumption can be optimized by reducing the cost of search due to the qualitative accumulation of consumer knowledge.

## **HUMAN CAPITAL AND THE HOUSEHOLD PRODUCTION FUNCTION**

According to Deaton and Muellbauer (1987), the household production theory is an integration of the theory of the consumer with that of the firm. This characterization illustrates that in the context of the decision-making process, a consumer unit such as a household may behave in a manner analogous to the behavior of the firm in terms of the efficient use of resources to produce utility-yielding commodities. In his original model, Becker (1964, 1976) considered these

commodities as the “primary objects of consumer choice”, which, as a vector of outputs have real and positive value, and from which consumer utility can directly be derived.

$$U = u(Z_1, Z_2, \dots, Z_n) \dots\dots\dots 1.$$

where  $Z_i$  ( $i = 1,2,3\dots n$ ) represents the quantity and service of the commodity. These commodities are produced in the non-market sector where the household uses a vector of market goods and services ( $x_i$ ), a vector of household members’ time ( $t_i$ ), and a vector of other environmental variables (E) which reflect the state of the art of production or the technology level of the production process.

$$Z_i = z_i(x_i, t_i, E) \dots\dots\dots 2$$

A household would maximize its utility function (U) subject to two types of constraints: the usual income constraints brought up by the Neoclassical theory of consumer choice, and a new constraint of the household time. The income constraint describes that the cost of all goods and services ( $x_i$ ) purchased at the market price ( $p_i$ ) should not exceeds household income (I):

$$I = \sum x_i p_i \dots\dots\dots 3$$

While time constraint describes that a household’s total time (T) would be equal to time spent in the production of household commodities  $t_i$ , in addition to time spent in the labor market  $t_w$ .

$$T = t_w + \sum t_i \dots\dots\dots 4$$

The two constraints can be combined to reflect what Becker called a “full income constraint, S” to reflect the household’s time and money budgets independently from the household’s part of time devoted to its earning activities:

$$S = wT + V = \sum (w t_i + x_i p_i) \dots\dots\dots 5$$

where  $w$  is the market wage rate, and  $V$  is the household’s non-wage income. Another way to look at full income is to assume that total household income (I) is equal to wage income, calculated by evaluating time spent in the labor market  $t_w$  by market wage  $w$ , plus the household non-wage income  $V$ :

$$I = \sum w t_w + V$$

Substituting the value of  $t_w$  from equation 4, we obtain:

$$I = \sum w (T - \sum t_i) + V$$

which can be rearranged as:

$$I + \sum w \sum t_i = \sum wT + V \equiv S$$

To maximize the household's utility function (U) in equation 1, the Lagrangian method can be used:

$$L = u(Z_1, Z_2, \dots, Z_n) - \lambda [ \sum ( w t_i + x_i p_i ) - S ]$$

If we consider any couple of the household commodities such as  $Z_i$  and  $Z_j$ , the first order conditions for the maximization of the utility function with respect to such commodities reveal that the ratio of the marginal utilities of the commodities  $MU_i / MU_j$  must equal the ratio of their marginal costs  $\mu_i / \mu_j$  which, in turn, represents the ratio of the shadow prices of the commodities as determined by, not only the market prices of goods and services used in the production of the household commodities, but also by the productivity of these goods and services as inputs in the production process of  $Z_i$ :

$$MU_i / MU_j = w(dt_i / dZ_i) + p_i (dx_i / dZ_i) / w(dt_j / dZ_j) + p_j (dx_j / dZ_j)$$

$$\text{If } w(dt_i / dZ_i) + p_i (dx_i / dZ_i) = \mu_i \text{ and } w(dt_j / dZ_j) + p_j (dx_j / dZ_j) = \mu_j \text{ then} \\ MU_i / MU_j = \mu_i / \mu_j$$

## THE HUMAN CAPITAL APPROACH

It is variable E in equation 2 that can represent the human capital component contributing to the production of the household commodities. Human capital as the stock of potential physical and mental attributes such as knowledge and intelligence, talents and skills, motivations and energy which can be invested in through health, education and training where economic, social and time resources are spent to increase the individuals' productivity and enhance their performance. Traditionally, human capital studies focused on activities related to improving people's productivity in the labor market such as the return to investment in formal education, formal or informal training programs, and on-the-job learning. Within the economics of the household, human capital studies focused on the investment in children, where parents' monetary, psycho-social, and time resources are spent to increase the quality of children in terms of their health, education, and upbringing environment. Aside from a few pioneering studies which provided the basic theoretical framework to apply human capital to consumption (Stigler and Becker, 1977; Becker and Murphy, 1988; and Becker et al., 1994), little to none has been done to track down the effects of human capital in the area of consumer economics, especially consumer knowledge, and it may not be far-fetched to attribute the lack of application in the consumer field to what Ratchford (2001) offered that "human capital is something that would make labor more productive and is seemingly irrelevant to consumer behavior".



## CONSUMER KNOWLEDGE AND COST OF CONSUMPTION

Ratchford (2001) shows that the human capital model has important potential applications to the study of consumer behavior and outlines major empirical approaches to these applications. He argues that consumer knowledge reduces what he calls the “full price” to produce household commodities through the reduction in time and increase in the productivity. The differential in full price, not in innate preferences, would eventually lead to differences in consumption behaviors and patterns across households and over time. He justifies that consumers should, therefore, deliberately invest in knowledge for the current consumption which would lower the cost of their future consumption throughout their lifetime.

Investment in human capital, according to Ratchford, can affect at least five aspects of consumer behavior: consumption through the life cycle, lifestyle, brand loyalty, choice of product features, and search. As an example, we can take “shopping for consumer goods and services” as a household commodity, produced and consumed at home where some or all of the above aspects of consumer behavior can apply. As a commodity ( $Z_s$ ), shopping requires market goods and services ( $X_s$ ) such as gas and transportation valued at a market price ( $P_s$ ), time for search and purchase ( $T_s$ ) valued at a market wage rate ( $w_s$ ) which a household member would otherwise be qualified for, and knowledge ( $K_s$ ), acquired and developed by past experience of search and consumption, education, and other human capital inputs.

$$Z_s = f(X_s, T_s, K_s)$$

If such a function is maximized for a lifetime ( $n$ ), the consumer’s dynamic maximization would be subject to the discounted value of the resources used.

$$I = \sum (P_s X_s + w_s T_s) (1 + r)^{-n}$$

where  $I$  is household income,  $r$  is market interest rate, and  $s$  refers to the shopping activity. The first-order conditions reveals that:

$$P_s = CV_s + FV_s$$

$$w_s = CV_{sj} + FV_{sj} \quad j = 1, 2, \dots, n$$

where  $CV_s$ ,  $FV_s$  are the current and future values of the goods and services used in shopping, and  $CV_{sj} + FV_{sj}$  are the current and future values of time spent in shopping. These values are equal to:

$$CV_s = [(1 + r)^j / \bar{h}] a^j (\partial U / \partial Z) (\partial Z / \partial X)$$

$$FV_s = [(1 + r)^n / \bar{h}] \sum a^n (\partial U / \partial Z) (\partial Z / \partial X)$$

$$CV_{sj} = [(1 + r)^j / \bar{h}] a^j (\partial U / \partial Z) (\partial Z / \partial T)$$

$$FV_s = [(1 + r)^n / h] \sum a^{kn} (\partial U / \partial Z) (\partial Z / \partial T)$$

The impact of market goods and household time on the future utility can be measured by:

$P_s - FV_s$  and  $w_s - FV_{sj}$  respectively where the full price of shopping becomes:

$$P_s - FV_s / (\partial Z / \partial X) = w_s - FV_{sj} / (\partial Z / \partial T) = \mu_s$$

as more time is invested in shopping, and more knowledge is gained, the term  $(\partial Z / \partial T)$  gets larger and larger. As a result, the full price of shopping  $\mu_s$  gets smaller and smaller as the consumer gain more knowledge. The decline in a relative price of shopping would be reflected on the increase in the quantity and/or quality of consumption which at a reduced rate of cost reflects a positive increase in the efficiency of consumption.

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## **PRODUCTIVITY, INNOVATION AND ANTITRUST POLICY**

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### **ABSTRACT**

*Traditionally marketing's interest in antitrust legislation and policy has focused on both the constraints imposed by external legal and political forces on marketing strategy decisions and the effect of noncompetitive markets on consumer well being. On the one hand, constraints on predatory pricing, mergers and other anticompetitive activities limit strategic choice and potentially reduce a company's ability to gain competitive dominance. However, while monopoly power may enhance company profits, marketers also value healthy competition that enhances consumer welfare, a goal supported by a strong marketing concept orientation (Gundlach 2001, Gundlach and Phillips, 2002). Balancing the desire of corporations to gain competitive advantage with consumer welfare requires that policy makers understand the dynamic effects of competition. Writers in both economics (Klein, 1977;) and marketing (Gundlach, 2001; Gundlach and Phillips, 2002; Foer, 2002) criticize current, Chicago-school antitrust policy as being static, focused on simple price and output relationships while ignoring the positive results of innovation and productivity gains on fostering both healthy competition and consumer welfare. The purpose of this research is to examine the relationship between innovative activity and competition, applying major findings of the study to current U.S. Department of Justice merger guidelines as well as discussing the implications of these guidelines for marketing strategy decisions.*



# **CUSTOMER COMMUNICATION IN PROFESSIONAL SPORT (MLB, NFL, NHL, NBA): LOOKING FOR IMPROVEMENT FIVE YEARS LATER**

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## **ABSTRACT**

*Recent articles in sport marketing journals have suggested that professional sport organizations need to adapt a customer relationship marketing (CRM) model for their operations. It is a fairly simple concept, but generally only works in businesses that have developed a keen sense of consumer communications. The reality of this situation is that many professional franchises have not mastered the basic marketing principle of communication. As an example, in 1997 a letter requesting ticket information was sent to every major professional football, basketball, hockey, and baseball team in the United States. The exercise was repeated five years later (2002). The results of those two tests and a discussion of the implications are included in this article.*

## **INTRODUCTION**

Marketing theories and models are available as conceptual behavioral templates for the sports world. One concept, relationship marketing (building a long-term, mutually beneficial relationship rather than focusing on a single transaction) (Gronroos, 1994; Shani, 1997; McDonald & Milne, 1997; James et al., 2002) has paved the way to customer relationship marketing (CRM). While relationship marketing (RM) looks at a network of transactions, CRM concentrates specifically on the customer-supplier relationship (Gummesson, 2002). This is a progressive development in the field of marketing for research purposes. Sport teams that adopt a CRM approach in their organization may well be able to create a sustainable competitive advantage (long-term) as opposed to merely a competitive advantage (short-term) acquired through a winning season

Many professional organizations still believe the only way to market their product is to win on the field. Certainly, this is a workable theory in the short run. The problem is that it is impossible to achieve consistently in this area for a large number of reasons (amount of competition, free agency, injuries, simple stochastic factors, etc.). For many teams there will be down years on the field. This is when customer relationship marketing can prove to be of great value.

This necessitates that sports teams attract, develop, and maintain a relationship with a substantial number of sport customers. Focusing on developing a base of loyal sport consumers would certainly help a team achieve its financial objectives. (James et al. 2002, p.215)

One way to develop the fan (customer)-team (supplier) relationship is to provide what a customer wants in the way of entertainment and value for a dollar whether a team wins or loses.

It is a basic communication objective to build social ties with consumers who have a strong connection to a team or could possibly develop a strong connection (Mullin et al., 2000; Funk & James, 2001; James et al., 2002). This communication can take many forms including postcards, Internet e-mail, letters, newsletters, recognition events, regular surveys and focus groups, frequency/incentive programs, smaller ticket plans (5 or 10 contests), purchasing services, etc. The point is to make an effort to individualize the sporting experience and to create a life-long fan committed to merchandise purchases, ticket buying, etc.

The inability to sell sufficient tickets to sporting events is the result of a number of underlying causes (Burton & Cornilles, 1998; James et al., 2002):

|    |  |
|----|--|
| 1. | Stadia are larger.                       |
| •  | More sports leagues.                     |
| 3. | More entertainment options.              |
| 4. | More teams in leagues (expansion).       |
| 5. | More electronic broadcasting.            |
| 6. | Higher customer cost per game.           |
| 7. | Negative perception of current athletes. |

The problem intensifies from a marketing standpoint when the consumer is considered. The product changes from game to game, ticket supply fluctuates, and access to the venue is often difficult (game traffic, parking) (Mullin et al., 1993). Many of these problems can and have been alleviated through focusing on the network of relationships by professional franchises. The key here, however, is that these organizations need to develop the CRM model with current and potential customers concerning changes and improvements to the product. One way this can be accomplished is with effective communication.

Connecting ... can be accomplished by making the "client" aware of special packages, pricing arrangements, or upcoming opportunities. These tactics best address selling tickets for a volatile product such as sport. As many practitioners have learned, the selling of the sport product, due to its uncontrollable variables, is frequently difficult to build into a strict selling format. Connecting, however, allows the seller to "partner" with the buyer and ultimately lengthen the organization's prospect list through new "leads" provided by the buyer. (Burton & Cornilles, 1998, p.29)

### CONSUMER COMMUNICATION: AN EXAMPLE

In a fall semester, 1997 class of undergraduate Sport Marketing at a mid-sized liberal arts college in the Midwest, the students were divided into teams to tackle a small project (Bovinet, 1999). A duplicate exercise was performed in a fall semester, 2002 class. Each of the organizations from professional baseball, football, hockey, and basketball were assigned to the participants. Each student copied the following form letter:

September 15, 2002

San Francisco Giants  
3Com Park at Candlestick Point  
San Francisco, CA 94124

Dear People:

My family and I will be moving to the San Francisco area in the near future and would appreciate some information on team schedules, ticket availability, parking, etc.

Thank you for your consideration.

Student Name

Student Address

Addresses were gleaned from team Internet sites where possible. Otherwise, the relevant phone directories were used (also on the Internet). The letters and envelopes were processed by personal computer (nothing handwritten). Each student brought the letters and addressed envelopes to class for inspection. Two franchises were overlooked and the instructor made up the difference. The name on the return address was always addressed as Mr. or Ms. and gave no indication of age or any other qualification beyond gender.

The entire 121 letters were mailed on September 15, 2002 (by the instructor). Pro football was just beginning its season, pro hockey and basketball were due to start soon, and pro baseball had only a few games left in the regular season.

The table below shows the results. The number shown is how many days it took to send some sort of reply. If this space is empty, the teams have not replied (up until June 1, 2003). The percentage is the team's change in attendance during its last full season.

| NFL - AMERICAN CONF. | '97 | '02 | Δ%   | NFL- NATIONAL CONFER. | '97 | '02 | Δ%    |
|----------------------|-----|-----|------|-----------------------|-----|-----|-------|
| BALTIMORE RAVENS     |     | 6   | 0.0  | CHICAGO BEARS         | 29  | 8   | -11.1 |
| CLEVELAND BROWNS     | NA  | 5   | .5   | DETROIT LIONS         | 4   | 5   | -18.6 |
| CINCINNATI BENGALS   | 4   |     | -6.9 | GREEN BAY PACKERS     | 9   | 3   | 6.3   |



| NFL - AMERICAN CONF. | '97 | '02 | $\Delta\%$ | NFL- NATIONAL CONFER. | '97 | '02 | $\Delta\%$ |
|----------------------|-----|-----|------------|-----------------------|-----|-----|------------|
| JACKSONVILLE JAGS    | 39  |     | -6.9       | MINNESOTA VIKINGS     |     |     | -2         |
| PITTSBURGH STEELERS  | 6   | 13  | -1.8       | TAMPA BAY BUCS        |     | 8   | .1         |
| TENNESSEE TITANS     |     | 6   | 0.0        | ARIZONA CARDINALS     |     |     | 6.5        |
| BUFFALO BILLS        |     | 6   | 8.5        | DALLAS COWBOYS        | 11  |     | -2         |
| HOUSTON TEXANS       | NA  | 9   | N/A        | NEW YORK GIANTS       | 4   |     | .2         |
| INDIANAPOLIS COLTS   |     | 12  | .6         | PHILADELPHIA EAGLES   | 8   |     | -7         |
| MIAMI DOLPHINS       | 26  | 27  | -4         | WASHINGTON REDSKINS   |     |     | 3.1        |
| NEW ENG. PATRIOTS    | 9   |     | 13.5       | ATLANTA FALCONS       | 11  | 12  | 29.4       |
| NEW YORK JETS        | 18  | 5   | .2         | CAROLINA PANTHERS     | 9   | 30  | -2         |
| DENVER BRONCOS       | 9   | 4   | 1.2        | NEW ORLEANS SAINTS    | 9   | 11  | -3.2       |
| KANSAS CITY CHIEFS   | 4   | 5   | 1.3        | SAN FRANCISCO 49ers   | 11  | 9   | .3         |
| OAKLAND RAIDERS      |     |     | 2.8        | ST. LOUIS RAMS        |     |     | -1         |
| SAN DIEGO CHARGERS   | 11  | 8   | 4.2        | SEATTLE SEAHAWKS      |     | 36  | 4.5        |

| NBA - WESTERN CONF.  | '97 | '02 | $\Delta\%$ | NBA - EASTERN CONF. | '97 | '02 | $\Delta\%$ |
|----------------------|-----|-----|------------|---------------------|-----|-----|------------|
| DALLAS MAVERICKS     | 9   | 6   | 1.7        | ATLANTA HAWKS       | 40  | 5   | 4.5        |
| DENVER NUGGETS       | 10  | 53  | -4.1       | BOSTON CELTICS      | 6   |     | 7.5        |
| GOLD. STATE WARRIORS | 17  | 19  | 7.0        | CHICAGO BULLS       |     | 5   | 3.6        |
| HOUSTON ROCKETS      | 6   |     | 17.4       | CLEVELAND CAVALIERS | 40  | 39  | -20.9      |
| LOS ANGELES CLIPPERS |     |     | -4.6       | DETROIT PISTONS     | 9   |     | 10.3       |
| LOS ANGELES LAKERS   | 7   | 16  | -1         | INDIANA PACERS      | 6   |     | -2.3       |
| MEMPHIS GRIZZLIES    |     | 15  | 3.4        | MIAMI HEAT          |     | 12  | -4.2       |
| MINN. TIMBERWOLVES   | 6   | 37  | -12.0      | MILWAUKEE BUCKS     |     | 5   | -10.6      |
| PHOENIX SUNS         |     |     | -4         | NEW JERSEY NETS     |     | 6   | 10.3       |
| PORTLAND TR. BLAZERS | 14  |     | -2         | NEW ORLEANS HORNETS |     |     | 38.7       |
| SACRAMENTO KINGS     | 13  | 5   | 0.0        | NEW YORK KNICKS     | 10  |     | -3.8       |
| SAN ANTONIO SPURS    |     | 8   | -18.8      | ORLANDO MAGIC       |     | 6   | -2.5       |
| SEATTLE SUPERSONICS  | 10  |     | .6         | PHILADELPHIA 76ers  | 17  | 5   | -4.3       |
| UTAH JAZZ            |     | 8   | 2.6        | TORONTO RAPTORS     |     | 13  | -4.1       |
|                      |     |     |            | WASHINGTON WIZARDS  |     |     | -2.4       |

| NHL - WESTERN CONF.  | '97 | '02 | $\Delta\%$ | NHL - EASTERN CONF. | '97 | '02 | $\Delta\%$ |
|----------------------|-----|-----|------------|---------------------|-----|-----|------------|
| MIGHTY DUCKS OF ANA. | 10  |     | 17.0       | BOSTON BRUINS       |     |     | -2.4       |
| CALGARY FLAMES       |     |     | 3.0        | BUFFALO SABRES      | 7   | 6   | -20.0      |
| CHICAGO BLACKHAWKS   |     |     | -5.0       | FLORIDA PANTHERS    | 6   | 8   | -4.1       |
| COLORADO AVALANCHE   | 11  |     | 0.0        | MONTREAL CANADIANS  | 12  | 20  | 3.2        |
| DALLAS STARS         | 13  | 8   | 0.0        | NEW JERSEY DEVILS   | 8   | 6   | -6.7       |
| DETROIT RED WINGS    | 6   | 6   | 0.0        | NEW YORK ISLANDERS  | 6   | 6   | 2.6        |
| EDMONTON OILERS      |     |     | .4         | NEW YORK RANGERS    |     |     | .6         |
| LOS ANGELES KINGS    | 11  | 49  | 4.9        | OTTAWA SENATORS     |     | 26  | 1.6        |
| PHOENIX COYOTES      | 13  | 9   | .5         | PHILADELPHIA FLYERS | 7   | 16  | -1.2       |
| ST. LOUIS BLUES      | 6   | 6   | -2.1       | PITTSBURGH PENGUINS | 7   | 4   | -5.7       |
| SAN JOSE SHARKS      | 18  |     | -4         | TAMPA BAY LIGHTNING | 6   | 6   | 5.2        |
| VANCOUVER CANUCKS    |     |     | 3.9        | WASHINGTON CAPITOLS |     | 6   | -9.0       |
| MINNESOTA WILD       | NA  |     | .2         | TORONTO MAPLE LEAFS |     |     | -2         |
| NASHVILLE PREDATORS  | NA  |     | -10.6      | ATLANTA THRASHERS   | NA  | 49  | -1.4       |
| COLUMBUS BLUE JACK.  | NA  |     | -2.2       | CAROLINA HURRICANES | NA  |     | 1.1        |

| MLB - AL             | '97 | '02 | $\Delta\%$ | MLB - NL              | '97 | '02 | $\Delta\%$ |
|----------------------|-----|-----|------------|-----------------------|-----|-----|------------|
| BALTIMORE ORIOLES    |     | 5   | -14.4      | ARIZONA D'BACKS       | NA  |     | 17.0       |
| BOSTON RED SOX       | 10  | 10  | 1.0        | ATLANTA BRAVES        | 7   | 5   | -7.8       |
| ANAHEIM ANGELS       |     | 15  | 15.2       | CHICAGO CUBS          |     |     | -1.7       |
| CHICAGO WHITE SOX    |     | 17  | -6.2       | CINCINNATI REDS       | 88  |     | -2.7       |
| CLEVELAND INDIANS    |     | 6   | -18.6      | COLORADO ROCKIES      | 92  |     | -13.5      |
| DETROIT TIGERS       | 4   | 8   | -21.7      | FLORIDA MARLINS       |     | 9   | -36.3      |
| KANSAS CITY ROYALS   | 2   |     | -8.0       | HOUSTON ASTROS        |     |     | -13.3      |
| MINNESOTA TWINS      |     | 4   | 6.6        | LOS ANGELES DODGERS   |     | 12  | 3.6        |
| NEW YORK YANKEES     |     |     | 6.9        | MILWAUKEE BREWERS     | 6   | 16  | -30.0      |
| OAKLAND ATHLETICS    | 116 | 6   | 1.7        | MONTREAL EXPOS        | 97  | 18  | 26.3       |
| SEATTLE MARINERS     | 91  | 6   | 1.0        | NEW YORK METS         | 123 |     | 9.4        |
| TAMPA BAY DEVIL RAYS | NA  | 6   | -13.2      | PHILADELPHIA PHILLIES |     |     | -10.7      |
| TEXAS RANGERS        | 17  | 5   | -16.1      | PITTSBURGH PIRATES    |     | 62  | -26.8      |

| MLB - AL          | '97 | '02 | Δ%    | MLB - NK\L           | '97 | '02 | Δ%   |
|-------------------|-----|-----|-------|----------------------|-----|-----|------|
| TORONTO BLUE JAYS |     | 15  | -14.7 | ST. LOUIS CARDINALS  |     | 5   | -3.3 |
|                   |     |     |       | SAN DIEGO PADRES     | 10  |     | -7.8 |
|                   |     |     |       | SAN FRANCISCO GIANTS | 131 |     | -1.7 |

Note: Attendance figures came from various issues of Street and Smith's SportsBusiness Journal - MLB, 10/7/02; NHL, 4/14/03; NFL, 3/31/-3; NBA, 4/21/03.

| TOTAL RESULTS: | 1997 |         |      | 2002 |         |      |
|----------------|------|---------|------|------|---------|------|
|                | SENT | REPLIED | %    | SENT | REPLIED | %    |
| NFL            | 30   | 19      | 63.3 | 32   | 21      | 65.6 |
| NBA            | 29   | 16      | 55.2 | 29   | 18      | 62.1 |
| NHL            | 25   | 16      | 64.0 | 30   | 16      | 53.3 |
| MLB            | 28   | 14      | 50.0 | 30   | 19      | 63.3 |
| TOTAL:         | 112  | 65      | 58.0 | 121  | 74      | 61.2 |

| LEAGUE: | Missing Replies | # of Attend. Drop | %    |
|---------|-----------------|-------------------|------|
| NFL     | 11              | 6                 | 54.5 |
| NBA     | 11              | 6                 | 54.5 |
| NHL     | 14              | 6                 | 42.9 |
| MLB     | 11              | 8                 | 72.7 |
| TOTAL:  | 47              | 26                | 55.3 |

A request for ticket information was sent to 121 professional teams and 74 (or 61.2%) sent some form of reply. In the last five years, 9 new franchises have appeared and their 1997 results are marked "NA" since no letter was sent. Out of the 74 replies received, only eight addresses were printed on a mailing label. All the rest were handwritten, some in what looked like crayon or Magic Marker. It is probable that a majority of these management teams have not established and maintained a viable database in which to track their customers.

Surprisingly, the sports industry that has many organizations that are service organizations or organizations that sell high-involvement products and has a very strong core of heavy users, was slow to adopt database marketing. ...Consequently, it will be practically impossible for such organizations to adopt the relationship-marketing concept without first developing and implementing database-marketing techniques. (Shani, 1997, p.11)

Since the students in this class are what is known as a "prime demographic" (18-25 years old, higher future discretionary income) and one in which professional sport has been having an increasingly difficult time attracting, they were asked to peruse the materials sent by each team and rated them as below expectations, above expectations, and above and beyond expectations (to save space, the other materials were considered average or standard and not listed here).

Code: A: Ticket plan with map of stadium/arena.  
 B: Business card/person to contact (considered professional by students).  
 M: Merchandise catalog.  
 P: Parking instructions/explanation of travel to stadium/arena.  
 TP: Ticket plan (usually 5- or 10-game purchase plans depending on sport)  
 X: Map of stadium/arena/area.  
 Y: Ticket ordering plan/procedure.  
 Z: Schedule (usually wallet-size, glossy brochure or business card size).  
 Note: (a number in front of a letter indicates multiple items)

#### **BELOW EXPECTATIONS:**

|                        |   |
|------------------------|---|
| Anaheim Angels         | 2 player cards, 1 sticker, nothing else. No order info.   |
| Atlanta Thrashers      | 2Z  |
| Chicago White Sox      | P, copied info., some almost indecipherable, very amateur.  |
| Cleveland Indians      | Z.  |
| Dallas Stars           | Z, unsigned letter.   |
| Denver Broncos         | Postcard w/schedule. No other info.   |
| Los Angeles Lakers     | Unsigned letter, printed schedule (copied)  |
| Minnesota Timberwolves | Postcard w/1 TP. Nothing else. Voted worst response.  |
| Montreal Canadiens     | X, Y, Junior Hockey League description, all materials copies of originals - no production values. |
| Tennessee Titans       | Z, returned student letter - recommended calling Ticketmaster.                                    |
| Utah Jazz              | Player card, copies of arena seating and schedule - no ordering info.                             |

#### **ABOVE EXPECTATIONS:**

|                  |  |
|------------------|--|
| Atlanta Braves   | Y, X, P, "750 Club" brochure, "Hall of Fame" brochure, group ticket planner, attractive and well-produced materials. |
| Baltimore Ravens | B, Z, P, X, Y, well-produced materials.  |

|                     |  |
|---------------------|--|
| Buffalo Bills       | M, tix-ordering brochure, "Kids' Club" brochure, family guide, well-done materials.                  |
| Buffalo Sabres      | Z, Y, TP, season ticket brochure, order card w/return envelope, high production values on materials. |
| Carolina Panthers   | 2Z, unsigned letter, roster card, fridge. magnet, mascot card, "Roar" magazine, cheerleader pix.     |
| Los Angeles Dodgers | Unsigned letter, 5 decals, 2 player cards, 2Z - sent merchandise catalog in latter mailing.          |
| Los Angeles Kings   | 2X, A, large. kitchen magnet w/schedule, 2 decals, team picture.                                     |
| Orlando Magic       | B, Z, Y, TP brochure, signed letter, tix-ordering brochure.  |
| Phoenix Coyotes     | B, 2Z, excellent schedule w/seating, tix ordering info., TP brochure, attractive presentations.      |
| Pittsburgh Pirates  | B, A, Y, TP brochure w/ordering info., well-done materials.  |
| St. Louis Blues     | 2Z, 2B, X, Y, TPs, group sales brochure, materials easy to understand, well-produced.                |
| St. Louis Cardinals | Y, 2X, 2Z, "Explore St. Louis" magazine, city event schedule, hotel information.                     |

#### **ABOVE AND BEYOND EXPECTATIONS:**

|                   |   |
|-------------------|---|
| Denver Nuggets    | Z, TP (10-game), signed letter to addressee, ordering info., 2 stickers, key chain, attractive and well-produced materials.   |
| Milwaukee Brewers | Z, X, Y, unsigned letter, mascot card, Kids' club brochure, party suite brochure, roster picture, full description of Miller Park, very well-done materials.  |
| Seattle Seahawks  | 3X, P (very informative), 2Y, 4Z, attractive kitchen magnet, full stadium guide, nice materials.  |
| Toronto Raptors   | 6Z, unsigned letter, temporary tattoo, Raptors pin, Raptors towel, decal, 4 player cards, CentreSports brochure, Youth Academy brochure, info. on playing in the NBA, look at team behind the scenes - voted best response. |

#### **DISCUSSION**

This is not a scientific survey and is not meant to be. It is an exploratory survey intended to provide heuristic evidence of a problem in professional sports management and marketing. Some potential problems with this survey need to be recognized:

1. Letters can and do get lost in the mail - going both ways.
2. Some baseball organizations may have felt the season is over and it is useless to spend money on mailings at the end of the season (although this is debatable).
3. Some teams may be sold out and do not subsequently mail replies to customers.

4. The opinions of the students concerning the value of information received and the overall effectiveness of the materials is purely subjective.

The original idea for this research was to compare the amount of time it took for the teams to reply (or not to reply) with the average attendance at their games. This became problematical - it is difficult to differentiate between attendance and ticket sales. At any rate, regardless of attendance figures, the marketing departments of these franchises need to be responsive to information requests from current and potential customers. Even if a team is sold out, it is still possible to send information on waiting lists, merchandise options, and player/team information.

It is instructive to note that teams without attendance/ticket sales problems like the Green Bay Packers were quick to respond to this query (they have been sold out for decades) and teams on the other side of the ledger like the Arizona Cardinals were not able to reply at all. It is a difference in front office management that manifests itself in so many forms (on the field and off).

## CONCLUSION

Professional sport is first and foremost a business. The goal of a business is to make a profit. In every league there are only a handful of teams that can win division titles or overall championships. But all the teams must make a profit in order to survive.

To succeed in pro sports, you need two winning teams: one on the field and one in the front office - and the most consistent must be the one in the front office. (Helitzer, 1995, p.3)

To be consistently profitable, the management of a professional sports franchise must maximize the value of four basic income-producing sources (Helitzer, 1995):

1. Corporate advertisers (mainly broadcast);
2. Season tickets and luxury boxes;
3. Licensed merchandise royalties;
4. Stadium concession sales.

The number of people in the stands directly affects ticket revenue as well as concession sales, in-stadium and broadcast advertisers, and the amount of licensed merchandise sold on premises (Kwon and Armstrong, 2002). Ticket sales are the linchpin of professional sports and a large number of these organizations were unable to handle this basic business function. Major league baseball is a case in point. A number of their franchises have attendance/ticket sales problems and the entire league saw attendance drop 6.2% in 2002. Yet only 19 out of 30 teams were able to reply to a simple request for ticket information.

Organizations need to communicate with their customers. This is one of the basic precepts of customer relationship marketing. Losing years on the field need not be a disaster to a professional team if they have maintained a relationship with their customer base. A case in point is MLB's Boston Red Sox. The Red Sox have played in the postseason 6 times in the last twenty-five years

and have not participated in a World Series since 1918 (when they beat the Chicago Cubs). And yet, the management team has been able to maintain much of its customer base by providing good service. Currently Boston plays to over 97% capacity. Incidentally, their organization responded to the information request in a timely manner both years. Another example would be the Philadelphia Phillies of MLB. Philadelphia currently plays to less than 33% of stadium capacity and was not able to respond to a ticket information request in either year of the test.

Finally, it should be noted that professional sport organizations should be aware of exactly how responsive their front office teams are to customer inquiries. It is equally as important as success on the field of play.

Quality service in sport management practice is even more pronounced today. Sport organizations go to great lengths to improve the elements of the sport experience that surround the game. In fact, many organizations are placing a premium on serving customers beyond the presentation of the game. (Greenwell et al., 2002, p.233)

Considering the results, there has not been much improvement in this area of customer relationship marketing in the last five years.

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## **NUTRITIONAL ADVERTISING AND PRODUCT CONSUMPTION**

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### **ABSTRACT**

*This study was designed to explore the relationship between nutritional advertising and product consumption. At the time of this study peanuts were chosen due to their unhealthy reputation (because of their high fat content) but have many properties that make them a very healthy part of a balanced diet. Three large national grocery stores were selected. All three stores had a 28-day control period in which a national brand peanut product was displayed at the front of the store. After the control period one store received nutritional advertising, one store received product-only advertising and one store remained displayed at the front of the store without any additional advertising. Due to variations in store management poor shelf position and preferred shelf positioning also became variables. Total grocery sales and peanut product sales were collected using UPC scanner data. Both the product-only advertising and control sites experienced a decrease in sales between the control period and test period. The nutritional advertising store experienced a slight increase in sales between these periods. Preferential shelf positioning was found to approximately triple sales. A follow-up study was conducted in which the same sales trends were found.*



## **LOCAL CPA SERVICE PROVIDERS AS A STRATEGIC INTELLIGENCE SOURCE**

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### **ABSTRACT**

*Information obtained from a Strategic Intelligence System (SIS) can provide valuable input into a firm's strategic planning process. It is vital that all members of an organization, and its stakeholders, assume the responsibility for seeking, identifying, and proactively responding to environmental threats and opportunities. While employees have long been recognized and utilized as a source of strategic information, one potentially fertile resource is an organization's external accounting partner, the local CPA service provider.*

*These research findings reported here examined the existence, focus, and attitudes of small and moderate sized CPA services providers relative to strategic intelligence systems. The results indicate that while CPA related strategic intelligence service activity was reported to exist in many organizations, its focus was on tactical as opposed to strategic topics. The results also indicated that numerous obstacles limit the effectiveness of CPA service provider contributions to strategic intelligence systems. Significant differences also were found to exist based upon the size of the local service provider. An understanding of and response to these perceptions, obstacles, and differences can facilitate the development and implementation of a new strategic intelligence system or provide the impetus and direction for a substantive revision in an extant system.*



# **A PRELIMINARY STUDY OF THE DISPOSAL OF SOLID WASTES IN MISSISSIPPI IN THE EARLY 1970s: THE THIRD POLLUTION**

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## **ABSTRACT**

*This study is concerned with the development of the economic aspects of a practical program of solid waste disposal designed for use by the public sector at the local level in Mississippi. Since solid waste disposal is a necessity rather than something done by choice, traditional cost-benefit analysis proved to be of little use. Any benefits associated with the removal of solid waste accumulations are obvious; at the same time, these benefits are extremely difficult to quantify.*

## **INTRODUCTION**

One of the major problems associated with the growing affluence of society is the disposal of the flow of solid wastes that are the by-product of production and consumption of an increasing flow of goods and services. The problems of solid waste disposal are rapidly becoming problems of critical proportions, yet municipalities allocate only relatively small amounts of money and technology to the disposal problem. Traditionally, the disposal of solid waste accumulations, like other necessary public functions, has been the responsibility of the local governmental structure, namely the city and county. These local structures have been almost universal in the desire to conceal the accumulations of refuse from the public in the least expensive manner. The disposal of solid waste accumulations was viewed as a short-run problem (hauling the trash away) without much concern for the long-run consequences (aesthetic damage and public health hazards). The long-run effects of the solid waste problem are becoming increasingly evident as a result of the sheer mass of accumulations of refuse resulting from municipal disposal operations over the years. In many cases, city growth that has brought the former rural dump into the city limits and into close proximity to residential and commercial areas has necessitated municipal action with respect to pollution control ordinances.

## SCOPE OF THE STUDY

Demand for removal of solid waste is determined predominantly by non-economic factors. Aesthetic surroundings, public health, and a freedom from future environmental damage provide the motivation for the removal of refuse. Lack of an economic use for solid waste is possibly the result of insufficient technological development. Another paper will explore some of the more advanced methods of reclaiming resources from refuse.

The need for an economic approach to the problem of solid waste disposal in Mississippi becomes apparent when the statistical data concerning present disposal methods are studied. The economic problems of refuse disposal stem from man's hesitancy in defining his environmental goals and his failure to act until the dissatisfaction of living with his accumulation of solid waste has reached critical proportions. The let's-get-it-over-with attitude of the public tends to demand satisfaction from municipal problems while neglecting costs until the burden becomes apparent through taxation. In attempting to please potential voters, elected officials often attempt to solve problems without exploring the social and economic costs associated with such projects.

Although Mississippi is fortunate in that it has exhibited a slow pattern of urbanization and has thus forestalled the problems and costs of solid waste disposal which have already become critical in some more urbanized areas, the problems of refuse will increase rapidly as Mississippi becomes less rural. In an agricultural environment, solid waste disposal has traditionally been the responsibility of the individual citizen. Any accumulation of refuse was hauled to the most convenient gully, marsh, or unused cistern to be burned or left to decay. Fears of air pollution or pollution of underground water were largely nonexistent. As Mississippi becomes more urbanized, however, the problems of the disposal of solid waste become more complex and a matter of public concern. In an urban environment, the exportation of solid waste becomes a duty of the public sector. Individual citizens living in the central city could hardly be expected to supply the necessary transportation required to dispose of their accumulations of solid waste adequately.

## THE URBANIZATION TREND IN MISSISSIPPI

Mississippi is a mixture of rural and urban areas. Low population concentrations and relatively scattered production areas that are characteristic of rural areas do little to amplify the solid waste problems. Rural solid waste problems are primarily the problems of roadside dumps, general litter, and individual solid waste disposal by county residents. If the indiscriminate placement of refuse in rural areas is continued, however, the future environmental damage may be significant. Urban problems, in contrast to rural problems, are complex and demanding. The technology employed by any municipality to dispose of solid waste accumulations is probably the result of both political and economic forces. As the empirical data should reveal, solid waste accumulations of substantial proportions are present, and the methodology currently used to dispose of these accumulations is frequently inadequate.

## **FOUR AREAS OF STUDY**

This preliminary study is primarily concerned with four major areas of concentration: (1) economics, (2) technology, (3) related public problems such as public health, citizen involvement, and land use, and (4) current disposal practices in Mississippi.

### **ECONOMICS**

The economic implications of solid waste disposal are concerned with both economic and non-economic cost. The non-economic cost, though less obvious than the economic cost, is nevertheless of vital importance and has been a key causal factor in the demands of environmental issues for improvement in solid waste disposal practices. Mississippians have probably disposed of the accumulations of refuse in the most expedient, convenient, and low cost, short-run method available: the use of open dumps. On the other hand, the implicit costs added by population, inadequate public health, urban congestion, and other social ills have forced the larger cities in the state to seek alternative means of disposal (Personal conversation with V.T. Hawkins, Mississippi State Board of Health, August 24-25, 1971). The desire for clean air, clean water, and aesthetically pleasing surroundings that can be achieved through effective solid waste disposal will probably force the public sector to experience increasing costs through the implementation of more effective methodologies of refuse disposal.

### **TECHNOLOGY**

The second area of study was that of technology. Although the development of efficient technological methods of solid waste disposal has been generally left to the field of engineering, the public sector must pay for these technical systems. A major concern of this study was to establish a practical cost structure, concerning both economic and implicit cost, that would aid municipalities in the implementation of the desired technology for solid waste disposal, given the political realities of Mississippi. Efficient and economical technology for the joint disposal of solid waste accumulations may require city and county cooperation, or possibly the establishment of garbage districts similar to present water and school districts.

Certain costs will appear in all technological developments. Cost associated with collection, hauling, storage, and associated functions will occur regardless of the type of methodology employed in refuse disposal. Only the amounts will vary, depending on the locations of the disposal systems.

### **RELATED PUBLIC PROBLEMS**

The generation of solid waste and the necessary disposal operations that result from increasing refuse accumulations present various problems that must be anticipated by municipal authorities. The problems presented by public health, public education, and land reclamation must be identified in order to establish comprehensive planning that will aid in their solution.



## **PUBLIC HEALTH**

As cities grow in area and in population, the improper disposal of solid waste in uncovered open dumps contributes to public health problems and increases the economic cost of public health facilities. Because high concentrations of low-income families tend to congregate on low-cost land in the vicinity of refuse disposal operations, the problems are particularly intense. The location of low-income families in unsanitary areas is significant since, in all probability, low-income families comprise the largest group of tangible public health consumers. Families of higher income levels are likely to utilize private medical facilities rather than public medical facilities.

The association of the low-income groups--who have possibly contracted disease from unsanitary refuse disposal operations--with other members of society permits the disease to be shared through all levels of social strata. The social cost of low public health is reflected in higher cost to the public sector.

## **CITIZEN INVOLVEMENT**

The success or failure of any program of solid waste disposal depends on public acceptance of such a program. Today, with greater public awareness of the solid waste problem, there is active concern as to the type of solid waste disposal system employed and the relevant costs associated with it. Unfortunately, the public often misunderstands the nature of the solid waste problems faced by the local governments. Public reluctance to endorse bond issues to provide the necessary funding may cause the accumulation of an unmanageable quantity of solid waste. A program of public education should result in lower cost disposal, better land use, more land reclamation, and a better allocation of economic resources.

## **LAND RECLAMATION**

The landfill technology of disposal of solid waste has the advantage of being suitable for location on land that has few alternative uses. A completed landfill can return economic value to land that was once considered a blight on the community. Completed landfill operations return improved landscape for ballparks, golf courses, industrial parks, and municipal expansion. A careful study of current practices reveals that solid waste disposal systems in Mississippi are generally inferior to suggested standards. The sanitary landfill was probably the most promising technology available to Mississippi in the early 1970s.

## **RESEARCH DESIGN**

In the initiation of this study several basic objectives were identified. These objectives, the methods of attaining them, and the sources of data are described here.

The first objective of the study is an examination of the solid waste problem that currently exists in the U.S. The problems of externalities, public health, and citizen involvement are examined, relative to their national significance.

The second objective of this study is an examination of various technologies that offer probable success in disposing of solid waste accumulations. Special emphasis was devoted to relevant costs that might be applicable to Mississippi. Also, special attention was given to the existence of economies of scale related to the different technologies. Close attention was devoted to the operation of a sanitary landfill. The sanitary landfill was deemed the most appropriate solution to the solid waste problem in Mississippi. The state is well suited to the landfill operation because of geographical size, limited population concentration, and the existing methodologies of refuse disposal.

The last area of investigation was that of existing solid waste disposal practices in Mississippi. Empirical data on the refuse disposal practices of 42 Mississippi cities with a population of 5,000 or more were studied. These cities were selected because their size, relative to population and area, dictates that the public sector perform the solid waste disposal function. Research revealed that most small cities have little or no reliable data and that, in almost all cases, the method of refuse disposal fails to meet the minimum standards for sanitary landfill operations. Communities of fewer than 5,000 persons experience a large degree of individual refuse disposal. The test for economies of scale utilizes the least squares technique to establish decreasing cost per ton as the scale of operations increases. The establishment of economies of scale is essential if municipal authorities are to be convinced that the sanitary landfill is the most economical technology for Mississippi cities. Once solid waste predictors can be established for individual municipalities, comprehensive planning can begin to deal effectively with future solid waste concentrations.

The Mississippi State Health Department supplied the raw data. Many of the data were obtained through the use of two questionnaires constructed by the U.S. Department of Health, Education, and Welfare and distributed through the auspices of the Mississippi State Board of Health. All 82 counties in Mississippi were surveyed. The data were compared with economic and social factors such as city budgets, land use, public laws, pollution, and possible environmental damage.

## **CONCLUSION**

A study of this type is limited in that the accumulation of data on solid waste problems is severely restricted because of the recent recognition of the problem. Many of the raw data supplied through the use of the questionnaires are the result of estimations by city employees. Data accumulation by municipalities in this area is very limited.

Most of the data available concerning the national solid waste problems and solutions are the result of funded engineering studies that concentrate on technology with only limited reference to the economic burden associated with the implementation of technology. Studies of systems management rather than studies in public finance make up the bulk of the available literature. However, early 1970s studies funded by the U.S. Department of Health, Education, and Welfare are comprehensive in nature, and many economists are participants in these studies emphasizing the importance of economic variables associated with solid waste disposal. Hopefully, this study will be informative and increase concern in both the public sector and the academic community as to the problem of solid waste disposal--The Third Pollution.

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# **A LONGITUDINAL STUDY OF MISSISSIPPI LANDFILL OPERATIONS CIRCA 1971 AND SOLID WASTE ESTIMATIONS FOR 1980**

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## **ABSTRACT**

*Mississippi, as the empirical data presented in this paper reveal, operated a system of open dumps in a majority of the state's municipalities up to the early 1970s. Municipal operations that maintain the requisite equipment, personnel, and land space often appear to fail to utilize the efficient and economical technology available to them. Economies of scale are available to Mississippi landfill operations, thus justifying the conversion of existing refuse disposal operations to sanitary landfills before seeking alternative technologies. This paper presents the data necessary to evaluate the effectiveness of solid waste disposal operations in the early 1970s and the methodology used to calculate the solid waste burden forecasted for 1980.*

## **INTRODUCTION**

Mississippi solid waste disposal operations often fail to qualify as efficient sanitary landfill projects. Regardless of what the refuse disposal system is named by the city administrator, many of the state's solid waste systems are nothing more than open dumps. Operations in Mississippi pose a special problem when the amount of possible pollution resulting from inefficient refuse disposal operations is estimated. Many of the smaller cities in the state underestimate the amount of environmental damage done by their current solid waste disposal operations. Many of these cities are remotely located and their officials believe that any pollution that may exist is only a minor nuisance. Unfortunately, the extent of the pollution damage that is measurable is very small. Pollution of underground water is difficult, if not impossible, for a small municipality to measure without skilled help, and it is extremely difficult to correct once it is detected. Air pollution can be eliminated by enacting and enforcing regulations on burning.

### **CLASSIFICATION OF CURRENT LANDFILL OPERATIONS FOR CITIES WITH POPULATIONS BETWEEN 5,000 AND 10,000 PERSONS**

The landfills utilized by these small cities were rated less strenuously than were cities of larger populations for two reasons. First, the smaller cities generate smaller quantities of refuse than do the larger municipalities, and the waste disposal problem is generally less complex. Second, the location of some of the landfill areas in the small cities could allow some burning without creating a serious nuisance factor. Landfills that met all of the requirements of the sanitary landfill were awarded an "A" classification. Any operation that was guilty of burning and possible water pollution was immediately given a "C" classification. The remainder of the landfills were judged on the previously mentioned factors and location.

Of the 21 landfills operated by those cities having between 5,000 and 10,000 persons, 47.6 percent (10 locations) were easily recognizable as "C" class operations. Only 9.5 percent (two locations) could be classified as sanitary landfills. The remainder were awarded the "B" classification, and the criteria for this award were very generous. Classes "B" and "C" compose 90.4 percent (19 sites) of the landfills, and it is entirely possible that the majority of the class "B" operations presented here are in reality open dumps if the definition is interpreted strictly. However, the significance of the preponderance of open dumps in this part of the study is limited because of the size of the municipalities and because of the land use of the areas surrounding these landfills. In 66.6 percent (14 locations) of the cases, the lands adjacent to the landfills were either wooded or agricultural. It is doubtful that nuisance factors would influence public opinion concerning dumps in remote areas.

### **CLASSIFICATION OF LANDFILL OPERATIONS FOR CITIES WITH POPULATIONS IN EXCESS OF 10,000 PERSONS**

The classifications assigned to those cities having populations in excess of 10,000 persons are more meaningful than are the classifications assigned to the smaller operations. These cities report having sanitary landfills or rapidly improving facilities in many instances. Because of the fact that cities with populations in excess of 10,000 require more sanitary conditions than do cities of smaller size, the criteria used in classifying the landfills were slightly more rigid. Class landfills were those that conformed exactly to the cover frequency and nuisance factor guidelines established previously. No landfill could be given an "A" classification if any nuisance factors were present. Class "B" landfills, however, were granted some degree of flexibility. Although cities of this size require more strictly controlled sanitary conditions than do cities of lesser size, no city in the group of Mississippi cities with populations in excess of 10,000 persons represents a crowded metropolitan area. In all cases there is room for geographical expansion. Classification of the "C" landfill was determined by the number of dumps remaining after the identification of the "A" and "B" landfills. The criteria for establishing the landfill classification were, like those criteria applied to cities of between 5,000 and 10,000 persons, population, number of landfills, cover frequency, burning practices, possible water pollution, and surrounding land use. Of the 32 landfills observed, seven sites (21.9 percent) were awarded the "A" rating. Twelve locations (37.5 percent) received the "B" classification. The rating was assigned to several operations that appeared to be efficiently operated,

but by definition could not qualify as Class "A" landfills. A landfill such as the Brookhaven operation appears to be a very high "B." The daily cover frequency is adequate, and the burning nuisance is probably not objectionable because of the location of the landfill in a wooded area. Note should be made here that the decision to allow burning should depend on the circumstances existing at the individual landfill. Some types of refuse and quantities should not be burned at any location. Unfortunately, the "C" classification also prevailed in the larger cities. Thirteen disposal operations maintained by the larger cities received the "C" classification. In most cases the cover frequency was totally inadequate. Six locations of the "C" grade landfills reported no cover frequency at all. Two of the 13 landfills awarded the "C" classification reported cover frequency in terms of months rather than days.

It appears that Mississippi in the early 1970s was not forced into the unpleasant situation of maintaining landfills in urban areas. Cities with populations between 5,000 and 10,000 persons reported the largest concentration of refuse disposal operations on predominantly agricultural land--42.9 percent. Landfills in wooded areas (five sites) accounted for 23.8 percent, and those in industrial areas (three sites) provided 14.3 percent of total land use. The smallest land use for surrounding areas in this group of cities was shared by commercial property, two sites, and residential areas, two sites, with each accounting for 9.5 percent of the total.

#### **ASSOCIATED WASTE GENERATION FACTORS THAT INFLUENCE FUTURE SOLID WASTE DISPOSAL ACTIONS BY MUNICIPALITIES**

Since solid waste generation in the future will place an even greater strain on municipal resources than current solid waste production, comprehensive disposal planning for future decades must be started in order to avoid both financial hardship and environmental damage. The establishment of an effective plan for future solid waste disposal actions is dependent upon the estimation of future solid waste generation for specific municipalities.

The quantity of solid waste generated per capita per day is dependent upon the lifestyle of the population, which can be defined here as those factors that allow persons to attain a desired mode of living. Income, consumption patterns, and cultural mores allow some sectors of the population to adopt a lifestyle that imposes a greater burden on the environment than other parts of the population. The adoption of a particular lifestyle contributes to the explanation that some of the less populated areas of the world produce the greatest per capita quantities of solid waste. Income, consumption patterns, and cultural behavior allow a nation such as the U.S. to consume approximately 40 percent of the world's natural resources.

Establishment of a comprehensive solid waste disposal plan requires some reliable concept of the rate at which solid waste will accumulate in future years. Such projections are easily made if accurate records are available concerning solid waste accumulations, population, income, and the economic base of the community. When such records are unavailable, as they are in the case of all of the municipalities in Mississippi and most of the municipalities in the U.S., statistical projections can be made which may yield fairly satisfactory and useful approximations of solid waste generation in the future.

At this point, two assumptions are made regarding solid waste generation. First, it is assumed that solid waste generation will increase at the same rate as future population growth. This

assumption is almost universally used for the projection of solid waste growth in the absence of relevant time series data. Usually such an assumption is conservative (Personal correspondence with Douglas B. Chin, Consulting Engineer, Mississippi State Board of Health, Jackson, MS, June 16, 1972). The second assumption necessary for solid waste projections is that the rate of growth in municipal population will follow the trend of the 1950s and 1960s. Should the rate of population change for the future differ significantly from that of the 1950s and 1960s, the projections will not be accurate.

### **CORRELATION BETWEEN POPULATION GROWTH AND SOLID WASTE GENERATION**

The relationship between the population of a given municipality and the resulting solid waste generation must be quantified in order to predict the solid waste burden that will rise with future population growth. Assuming that solid waste generation increases at the same rate as the population will increase in the future, it becomes possible to establish a comprehensive plan for the future needs of municipal solid waste disposal for individual cities. To test the assumption of a joint rate of growth for solid waste and population for Mississippi, a coefficient of correlation was estimated for all of the cities in the state with populations of more than 5,000 persons. Although the data supplied for this study represent data collection for only one year, the correlation between the population of all of the municipalities with inhabitants of more than 5,000 persons and their respective capacities for current solid waste generation should provide some insight into the nature of solid waste generation in Mississippi.

The coefficient of correlation can be defined as the ratio of the standard deviation of the predicted values of the dependent variable to the observed values of the dependent variable; thus, in this case, the coefficient of correlation is a measure of the closeness of the relationship between the population and the generation of solid waste.

The following coefficient of correlation was estimated for the data pertaining to all municipalities with populations of more than 5,000 inhabitants:  $r = .902$ ;  $r^2 = .815$ . The sub-case  $r$  represents the coefficient of correlation that explains directly how close is the relationship between solid waste and population. The square of the coefficient of correlation is the coefficient of determination which shows the ratio of the explained variation in the quantity of one variable (solid waste generated) to the total variation in the quantity of the other (population). For Mississippi municipalities in 1971, 81.5 percent of the variation in solid waste generation is explained by population variation.

### **SOLID WASTE PROJECTIONS FOR 1970-1980**

The future obligations placed upon municipal governments by solid waste accumulations can be anticipated to a great extent by predicting the future solid waste generations that can be expected from increases in the populations. Future solid waste production can be projected with a reasonable degree of certainty through the use of a standard biological growth curve. The equation used to project future solid waste accumulations is as follows:  $X_1 = X_0 (1 + R)^t$ .

$X_1$  represents the projected population at time  $t$ ,  $X_0$  is the initial number of items in the current population, while  $R$  is the percentage growth rate for each city.

In order to place the proper weights on population growth trends that could be used to predict future population movements (abstracting away the large periods of population changes that had characterized several periods of the 20<sup>th</sup> century) a growth rate ( $R$ ) was calculated for each municipality in the Mississippi study. The two-decade period from 1950 to 1970 was chosen, thus establishing a trend that could be utilized in projecting future growth rates for specific municipalities. In order to establish growth rates for each municipality, the population of that city was projected through the equation previously stated, with the present population being symbolically represented by  $X_1$ . Once the growth rates for each municipality have been established, the equation used to project solid waste generation through 1980 should read as follows:  $X_{1980} = X_{1970}^{(1+R)^2}$

Note should be made here that many metropolitan statistical services provide yearly growth rates for both cities and counties. No growth rates were available for Mississippi cities in the early 1970s. Therefore, researchers must rely on individual calculation of decade growth rates rather than utilize more meaningful year-by-year growth rates.

Thirteen of the 18 cities studied appear to project relatively stable growth patterns; therefore, the solid waste accumulations of these 13 cities were not expected to double during the 1970s. Five of the municipalities contained in this group reported solid waste multipliers  $(1 + R)^2$  that were greater than 2.00. Such a multiplier indicates that the solid waste accumulations of these cities can be expected to double in 10 years. These large multipliers are the result of large inflows of inhabitants during the 1950s and 1960s. In all probability the urbanization trends that will affect the growth pattern for Mississippi for the future are already established; therefore, cities experiencing large solid waste multipliers should be discounted as temporary exaggerations of their actual growth patterns. The solid waste projections for most of these cities are probably unreliable.

## CONCLUSION

Unfortunately, the most common method of solid waste disposal currently utilized in Mississippi is the open dump. Stream beds and banks, roadsides, and abandoned lots usually become the recipients of the residue produced by the surrounding populations. These dumps represent an anachronistic method of refuse disposal that can no longer be tolerated. The methodology of open dumping is too costly to society in general to be allowed to continue in operation. Air pollution from constantly burning piles of refuse, water pollution from poor drainage, and disease-bearing vectors that feed on the uncovered piles of organic matter are all too common in Mississippi. An economical alternative to open dumping must be established in each municipality in Mississippi to avoid future environmental damage and poor public health.

Solid waste generation of the future can be predicted by quantifying the relevant variables and establishing a solid waste multiplier for each municipality. Assuming that the causal factors that allow a particular level of consumption are predetermined, municipalities can begin to undertake comprehensive solid waste disposal action that will reduce the burden of refuse management for future municipal administrations. Mississippi, with its relatively stable growth patterns, is in an excellent position to prepare solid waste disposal techniques for the future. However, it is essential that municipalities take action quickly to avoid the solid waste crisis that has faced many of the



nation's larger metropolitan areas since the 1960s. Municipal authorities must work steadily in order to bring about a feasible solution to the solid waste problems of the future.

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## **TAG, YOU'RE IT!: CONSUMER PERSPECTIVES OF RFID**

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### **ABSTRACT**

*In 2003, Wal-Mart, the world's largest retailer, and the U.S. Department of Defense made announcements that stunned many in the field of supply chain management. By early 2005, and possibly sooner, both of these industry leaders will require suppliers to integrate Radio Frequency Identification, or RFID, technology into case and pallet shipments to distribution centers. This news created an immediate reaction among the nation's leading distributors, integrators and sellers. There was a rush to find out everything known about this new technology. What they found was a new world of possible uses for a system that could increase visibility in the supply chain, reduce waste, and aid in security. They also found a number of unanswered questions. The technology behind RFID has existed for over 60 years, and it has successfully been implemented in a number of applications, such as Exxon Mobil's Speedpass™ system. However, only a handful of companies in the United States currently use a RFID based inventory control system. There are several reasons for this, the main obstacle being the costs associated with system components. Specifically, manufacturers of RFID equipment have been unable to produce 'tags' at a price and quantity that make them attractive to widespread use. However, this is likely to change as advances are made in digital technology and as market leaders like Wal-Mart demand their use.*

*In this presentation, we will address the consumer perspectives of RFID. Like any new technology, a large number of factors can influence its acceptance. Some consumers will put up barriers against the acceptance of new technology. For RFID, there is already a group protesting its use at the retail level. Consumers Against Supermarket Privacy Invasion and Numbering (CASPIAN), has quickly attacked RFID as another form of 'big brother' unnecessarily monitoring consumer purchases and habits. On the other hand, some consumers may perceive an innovation as the solution to a problem and adopt it immediately. This is also true for RFID. Gillette, a leader in the application of this new technology, plans to put a half-billion RFID tags on individual packages of its razors to track them from the manufacturer to the point of purchases.*

*To explain the process of innovation adoption, researchers in this area have forwarded a number of theoretical models including: the technology acceptance model, the theory of planned behavior, and innovation diffusion theory. From these models, we can see that the consumer's decision to adopt RFID would be influenced by a number of factors, such as ease of use, performance expectancy, anxiety, etc. Research has also shown that characteristics of the consumer are linked to innovation acceptance. Using the results from two industry surveys, we plan to provide*

*a link between the theories that predict innovation adoption and the likelihood that consumers will adopt RFID technology. Independent research groups performed both studies, with one study focusing on consumer's perception and the other on RFID developers and end-users.*

## HOW ARE BEST-RATED WEB RETAILERS HANDLING ONLINE PRIVACY?

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### ABSTRACT

*While the US economy has struggled, and traditional brick and mortar retailers have not experienced the holiday and annual sales increases hoped for, online retail sales have been steadily increasing. In addition, the portion of overall retail sales attributed to the online environment is predicted to continue to rise as well. However, there consumer concerns relating to online security and privacy issues still plague the online retail venue. Research and consumer surveys indicate privacy concerns can be attributed to non-purchases online, as well as online shopping "drop-outs" from previous years. Personal privacy and security issues are major barriers to utilizing the Web for retail purchases.*

*Lack of trust has been an issue early on for online retailers and electronic commerce in general. A significant factor contributing to this lack of trust is that consumers simply are unwilling to provide personal information to Web retailers. Electronic commerce and online retailing will not attain its full potential in the U.S. economy unless consumers feel confident that their privacy and confidentiality are secure and protected. Several well-known Web retailers have announced changes in the treatment of personal information collection and dissemination/sharing policies recently that have increased the concerns of consumers as well as respective customers. Most noted of these are Amazon.com's change in the sharing of their customer database information, and Toysmart.com intention to auction off its customer database to the highest bidder.*

*Protection of privacy has become a central issue of the Federal Trade commission, as well as Web retailers. Several sweeping research studies conducted in recent years have indicated the large majority of Web sites surveyed do collect personal information, while much smaller percentages post disclosures of such practices. In addition the surveys indicate that in many instances, less than half of these sites implemented all four elements of fair information practices established by the FTC.*

*Third-party seals of approval have been developed to assist both Web retailers in gaining consumer trust, and to aid consumers in identifying companies that have developed their Web sites and company procedures in accordance with good practices.*

*This study will analyze the Web sites of online retailers identified as The 50 Best Web Retailers by Internet Retailers. The study examines the privacy policies and third-party seals of endorsement found on these sites. The specific research questions to be addressed by the study are:*

- 1) Does the Web retailer have a privacy policy posted, and how easily can consumers access it?*
- 2) Does the company indicate that it shares personal information with affiliates or third parties?*

3) What choice do consumers have in the control of sharing their personal information? 4) What third-party seals of endorsement and certification programs are present on the Web site? Preliminary results indicate as with previous surveys, only a small portion of the Web retailers belong to any third party seal program. Additionally, a large percentage collect personal information from consumers, and the vast majority share that information with business affiliates. Furthermore, the majority of sites require consumers to opt-out of such programs, while far fewer take the opt-in approach for sharing collected information. The paper concludes with suggestions for future research, detailing specific methodologies for data collection and analysis, along with additional sampling procedures for comparative analysis.

## **INFLUENCES IN THE SELECTION OF AN ATTORNEY**

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### **ABSTRACT**

*This paper explores the level of importance of various factors that influence the selection of an attorney. The paper explores factors that are considered by individuals and those of businesses. Some of the factors would include specialized expertise of the law firm, reputation of the law firm, diversity in the law firm, ability to handle complex matters, size of the law firm, recommendation of the law firm, and fees.*

### **INTRODUCTION**

Selecting an attorney is one of the most important decisions for many consumers and businesses. A reason for selecting the legal profession as a topic for this paper is based on the impact of the decision. This research examines the complexity of the decision making process through a review of literature and attempts to analyze the factors considered in selecting an attorney.

The large number of attorneys from which consumers and business may choose will often make the decision more difficult. Categorizing the legal issues one has and selecting the attorney based on the firm's expertise is a daunting and complex goal in the selection process. The process of finding an attorney is similar to finding an accountant, banker, or doctor. One is looking for expertise and someone with whom one feels comfortable (Rosenberg, 2003).

### **DECISION MAKING PROCESS FOR SELECTING ATTORNEYS**

Many studies have been done on how businesses select attorneys. Many business owners find attorneys through referrals, other company owners, accountants or bankers (Rosenberg, 2003). Over 4000 senior executives of southern California companies were surveyed in a study to explore the criteria used for both the selection and retention of law firms by corporations. The sampling frame consisted of senior executives at public and private firms with annual sales revenue in excess of \$3 million. The two most important factors that clients in the southern California market use in selecting a law firm are the specialized expertise of the firm in the areas the client needs most and the reputation for providing excellent service. The third, fourth, and fifth factors were a past favorable experience with the firm, a specialized understanding of the client's industry, and the ability to handle unusual or complex matters. The sixth and seventh most important considerations were recommendation of the law firm by a friend or trusted business advisor, and access to the most

senior attorneys at the law firm. The importance of the proposed fee had the lowest score of all the factors considered in the selection of an attorney (Seth and Martin, 2003).

Studies have considered issues dealing with the size of the law firm. Solo and small-firm practitioners get more complaints against them than big-law firms do. Keith Watters, a past president of the Bar Association of the District of Columbia and the National Bar Association, is convinced that the disciplinary system has an inherent bias against solo and small-firm lawyers. On the other hand, a 2001 study by the State Bar of California found no evidence of bias in the disciplinary process against solo and small-firm practitioners (Hansen, 2003). Disciplinary action or complaints that become public knowledge may have an adverse effect on the reputation of an attorney, which will effect attorney selection by those clients having such knowledge. In addition, there is a perception that larger firms have more resources and expertise to handle a wider variety of complex legal issues, which may enhance the firm's reputation and effect the selection decision on the part of consumers and business. Law firms correlate increased size to increased reputation in the marketing efforts ([www.nichenews.com](http://www.nichenews.com)).

Research has considered issues on diversity in the selection of an attorney. A diverse workforce has become a major selling point for many firms. More and more clients at home and abroad want to make sure that minorities will be a part of the team working on their cases. Firms that maintain a diverse staff increase their chances of landing new business. Holland & Knight, an international law firm, has more minority law partners than any other firm in the country, according to a recent study by the *Minority Law Journal* (Marketing Roundup, 2002).

LawMoose, a web site, can be used to help a client identify an attorney or law firm that would best meet their needs. Some of the qualifications that can be identified on this web site would include foreign language skills, ability to participate in diversity programs, and knowledge of a particular industry ([www.lawmoose.com](http://www.lawmoose.com)). The number of law firm website searches continues to grow, as does the information available on such sites, as attorneys market to consumers and business acquiring information needed to choose an attorney or law firm ([www.KEYTLaw.com](http://www.KEYTLaw.com)).

## FUTURE RESEARCH

A future paper will consist of administering a survey to a representative sample to identify how they went about selecting their attorney. The survey appears in Appendix 1 of this paper. The results of the survey will be presented in summary format. Marketing strategies that can be implemented by law firms to increase their client base will be developed based on the research findings.

## APPENDIX 1 ATTORNEY SURVEY

Have you used an attorney within the past five years?

no (terminate)

yes

Please answer all of the following questions about the attorney you have used most recently.

How did you select the attorney? (Check all that apply)

- television commercial
- reputation of the attorney
- reputation of the law firm
- convenient location
- attorney is a friend
- attorney is a relative
- yellow page advertisement
- he/she charges less than other attorneys (lower fee structure)
- referral from another attorney
- referral from a bar association
- referral from a friend or relative
- Internet

Please indicate how important the following variables were to you when you selected the attorney. A rating of 1 indicates that it is very unimportant and a rating of 5 indicates that it is very important.

|                             | Very Unimportant |   |   | Very Important |   |
|-----------------------------|------------------|---|---|----------------|---|
| Reputation of attorney      | 1                | 2 | 3 | 4              | 5 |
| Reputation of law firm      | 1                | 2 | 3 | 4              | 5 |
| Location of law firm        | 1                | 2 | 3 | 4              | 5 |
| Fee charged by the attorney | 1                | 2 | 3 | 4              | 5 |

Please indicate your level of agreement on a scale of 1 to 5 with the following statements. A rating of 1 indicates that you strongly disagree and a rating of 5 indicates that you strongly agree.

|  | Strongly Disagree |   |   | Strongly Agree |   |
|--|-------------------|---|---|----------------|---|
| Television advertising tarnishes the image of the law firm.  | 1                 | 2 | 3 | 4              | 5 |
| It is important for a law firm to have a web site.           | 1                 | 2 | 3 | 4              | 5 |
| I was very satisfied with the attorney I most recently used. | 1                 | 2 | 3 | 4              | 5 |

What is your gender?

- male
- female

What is your age?

- 18-29
- 30-39
- 40-49
- 50-59
- 60 - 69
- 70 and older



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[www.KEYTL.com](http://www.KEYTL.com)

[www.lawmoose.com](http://www.lawmoose.com)

[www.nichenews.com](http://www.nichenews.com)

## THE RISK OF CONSUMING A HARLEY

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*A marketer's relative success (or failure) in dealing with any particular segment is a function of achieving an understanding of the uniqueness of that particular consumer group and proper manipulation of the marketing mix. Almost no one has done this better than Harley Davidson, The All-American Brand. Harley is spectacularly profitable and has fierce brand loyalty. What other company can ask their customers to wait two years for delivery and get away with it? What other company has their customers tattooing the company logo on their bodies? Harley customers have formed a brand community. Owning a Harley means more than owning a motorcycle, it represents a lifestyle of freedom, adventure, and expression (Will 2002). Harley riders want to actively travel around the country together and share experiences. They have their own rituals and feel an obligation to help each other out.*

*The common stereotype of the Harley rider is often tied to the outlaw roots of the Hell's Angels and Hollywood portrayals such as "Easy Rider." While this subculture of Harley riders still exists, several other subcultures have developed that have driven the prices and profits for the heavy bike market (a.k.a. hogs). In particular, middle-aged professionals known as Rubs (rich urban bikers) have received much attention in both the academic and practitioner literature (Schouten and McAlexander 1995; Barker 1997). Harley Davidson has a balancing act of attracting new segments without alienating hardcore riders.*

*The very nature of riding a motorcycle is considered risky by most people. The purpose of this research is to examine the perceived risk of purchasing and consuming a Harley. Risk is defined as: the probability that something will happen that will have adverse consequences (Gertner 2003). A survey of 125 motorcycle enthusiasts (90% own a bike, 82% a Harley) measured their perceptions of the financial, performance (your confidence in the ability of your motorcycle to perform as expected), and operational risk (your confidence in your ability to operate your motorcycle) (Shimp and Bearden 1982). The results show that 58% of respondents think that riding a motorcycle is dangerous, while 33% think that it is not. Thirty-six percent (36%) think that purchasing a motorcycle is financially risky, 47% do not. Income had no impact on perceived financial risk. Regarding performance risk, only one respondent was not confident in the ability of their motorcycle to perform as expected. Although 86% of respondents had confidence in their ability to operate their motorcycle (i.e., operating risk), there were variations in their levels of confidence as measured on a seven point scale. The results of a regression analysis with operation risk as the dependent variable indicated that gender, miles rode per year, and performance risk were all significant predictors of perceived operating risk at the .001 level. These three variables yield an R-squared of .38, meaning they collectively explain 38% of the variance in perceived operating risk.*

*For motorcycle marketers like Harley Davidson, free riding classes may reduce the level of perceived operating risk, especially for inexperienced and female riders. Finally, since perceived*

*financial risk is not correlated with income, making stereo-types about perceived financial risk based on income, or vice-versa, should be avoided.*

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# OPTIMISING RADIO ADVERTISING IN NORTH QUEENSLAND, AUSTRALIA: A MATHEMATICAL PROGRAMMING APPROACH

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## ABSTRACT

*Decision-making could be described using two steps: (i) understanding the effects of a particular course of action, and (ii) selecting an action given this knowledge of effects. It is our contention that businesses wanting to advertise in radio have only partial information about the marketplace. There are approximately 500 commercial, and community radio stations in Australia. However, only commercial radio stations, which make up 47% of the total radio stations in the country, systematically conduct radio surveys. This paper profile radio audiences in North Queensland, Australia, using the “list of values” measure (LOV). Also, the combinations of commercial, and community radio stations that could deliver the maximum possible impact on the pertinent target market is presented.*

## BACKGROUND

Media expenditure in Australia is estimated at \$8 billion per annum (Nielsen Media Research, 2003). In 2003, approximately \$702 million was spent on radio advertising (Industry Info, Advertising Federation of Australia). Predictions are that it would increase to \$740 million in 2004: a 5.49% increase over the 2003 spending (Commercial Radio Australia, 2003).

Nielsen Media Research, the firm that holds the contract with Commercial Radio Australia Limited to provide audience rating service to stations, has a software package called “Radio Advisor” that analyse radio surveys and provide businesses analyses such as session ranking, reach and frequency, station loyalty, and predictions about changes to listenership from one period to another (see [www.Acnielsen.com.au](http://www.Acnielsen.com.au)). What is missing in this approach is information about community radio audience.

More than three decades ago Clark and Sexton (1970) highlighted that all marketing decisions have two components: (i) understanding the effects of a particular course of action, and (ii) selecting an action given this knowledge of effects. It is our contention that businesses wanting to advertise in radio have only partial information about the marketplace. Specifically, little is known about the audiences of community radio, and the combination of commercial and community radio that would deliver the maximum possible reach or coverage of the pertinent target market. This paper attempts to bridge this gap in knowledge.

The paper is organised as follows. The next section highlights a behavioural framework that guides radio-audience measurement. The subsequent section employs the framework to profile

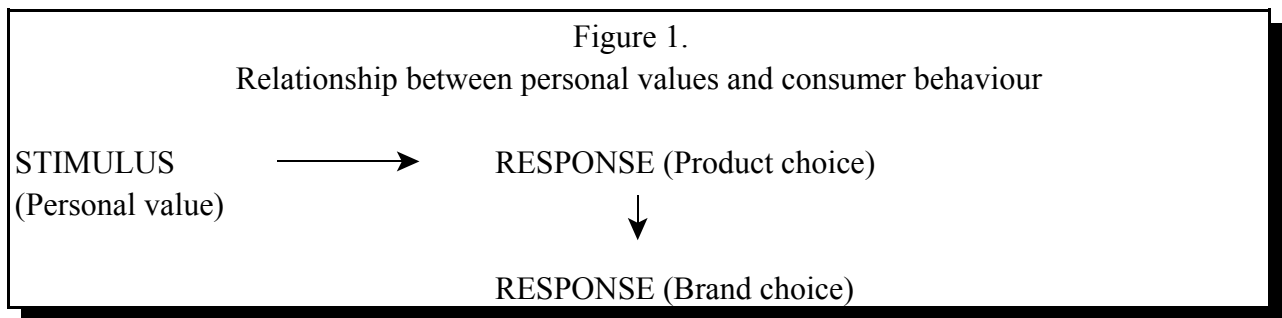
radio audience in North Queensland, and finally, an optimisation model for advertising in radio in the North Queensland region is presented.

### AUDIENCE ANALYSIS: A CONCEPTUAL FRAMEWORK

The most common approach to audience analysis is the use of geographic, and demographic variables to describe the population of interest (Shultz, Block, & Custer, 1977). However, as aptly observed by Lipke (2000), geo-demographic variables are causally remote to consumer behaviour. For example, two households with identical demographics may have different beliefs, and outlooks on life. Because of these differences, each household would respond to marketing messages in a different way and more importantly, each household might purchase and consume different products and brands. What is required is a profiling approach that would help radio stations highlight to media buyers the future consumer behaviour of their audience; not their geo-demographic details and their past purchase behaviour. What variable or set of variables could assist radio stations construct such a causally relevant classification scheme?

Howard & Seth (1969) posit that values implicit in a culture or sub-culture, for example, an ethnic group, affect consumption behaviour. In other words, values, which are enduring beliefs concerning desired states of existence toward which humans strive, regulate the manner in which this striving takes place (Vinson, Scott, & Lamont, 1977).

Consider Figure 1. It suggests that consumer's value orientation will affect the consumer's product choice but not brand choice. For instance, a consumer's general belief that "one should protect the environment in which one lives in" might affect the type of automobile (large, medium, and small) that the consumer purchases but not the brand purchased. Note that unlike attitudes and opinions, values are stable and slow changing. This suggests an extended "shelf life" for applied research that utilise consumer values.



In order to describe radio audience, we employ "personal values" as the profile variable. This is based on the reasoning that products are purchased as a means to satisfy a desired end state (for example, buying a sports car for self-expression purposes; see the means-end chain conceptualisation offered by Gutman, 1988).

In summary, our interest in this paper is to profile radio audience using personal values, and to suggest an optimal combination of commercial, and community radio that would deliver the maximum "reach" or target audience coverage in North Queensland.

## METHOD

The setting for this research is Townsville, the largest regional centre in Australia with a population of 144,000 persons. The city of Townsville is home to two community radio stations, and four commercial radio stations.

In order to gather radio listening data, 1000 households in the Townsville region were contacted. A systematic random sampling procedure was employed to choose the respondents and to ensure the accuracy of the information. A self-administered, structured questionnaire was employed to gather the information. Respondents were asked to indicate the specific stations listened to during each 15 minute time period for the past 24 hours. From this information the listening patterns for different time segments were derived. In addition, respondents were also asked to complete the list of values (LOV) profile (Kahle, & Kennedy, 1989).

### Measurement of values

We assume that the value rankings provided by an individual are error-prone observations of the individual's true value system. Specifically,

$$U_i^k = V_i^k + \varepsilon_i^k$$

If we assume the  $\varepsilon_i$  to be independent and identically distributed (iid) normals over the population, then  $E(U_i^k) = E(V_i^k)$ . This formulation was used in this paper to capture the importance ratings of LOV items assigned by radio listeners.

Since we use type of radio station as the segmentation variable: that is, the six commercial and community radio stations in Townsville, we compute personal values for each of the radio station, and combine them into value system using behavioural motivations related to the values.

### Determining optimal radio advertising

In order to prescribe the optimal mix of radio stations, the following objective function was maximized:

$$Z = \text{effective reach} = \sum c_{jk} x_j$$

Where,  $c_{jk}$  = Number of listeners during the  $k^{\text{th}}$  hour ( $k = 1: 6\text{am} - 7\text{am}$  to  $18: 11\text{pm} - 12\text{am}$ ) with the  $j^{\text{th}}$  ( $j = 1$  to  $5$ ) value system (for instance, "security"; see Table 6);

$x_j$  = radio station "j" ( $j = 1$  to  $6$ ;  $x_1 = 4\text{TO}$ ,  $x_2 = \text{HOT FM}$ ,  $x_3 = \text{MIX FM}$ ,  $x_4 = \text{SEA FM}$ ,  $x_5 = 4\text{TTT}$ , and  $x_6 = 4\text{KIG}$ )

subject to the constraint:  $\sum a_{jk} x_j \leq b_k$

where  $a_{jk}$  = Technical or production coefficient "j" such as the cost of placing a 30-second commercial during the hour "k", and

$b_k$  = available productive resources such as advertising time constraint: that is, the maximum number of advertising insertions possible in an hour "k".

To ensure that our problem solution results in whole numbers, we employ an integer-programming algorithm. Specifically, since the variables have lower and upper bounds, we utilise the “branch and bound” method to solve the problem (see Hu, 1970).

## RESULTS AND DISCUSSION

Of the 528 persons who responded to the survey, 507 (96%) had listened to at least one radio station during the past 24 hours. Table 1 lists the values endorsed by the radio listeners and highlight their association between the five motivational domains discussed by Schwartz and Bilsky (1987; 1990), and Kamakura and Novak (1992). In addition, the Table highlights whether the motivational orientations serve individualist, or collectivist, or mixed interests. As the label implies, an individualist orientation is concerned with “self” interest, a collectivist orientation refers to furthering the interests of a group, for example, the family, and mixed interests include both self interest and group interest. Note that the causal direction is from personal values to motivation.

Table 1.  
LOV items endorsed by respondents and LOV’s relationship with motivational domains

| Value              | Mean Score <sup>1</sup> | Rank | Motivational Domain | Interest Served |
|--------------------|-------------------------|------|---------------------|-----------------|
| Self-respect       | 2.86                    | 1    | Self-direction      | Individual      |
| Warm relationships | 2.78                    | 2    | Maturity            | Mixed           |
| Security           | 2.76                    | 3    | Security            | Mixed           |
| Accomplishment     | 2.73                    | 4    | Self-direction      | Individual      |
| Fun and enjoyment  | 2.68                    | 5    | Enjoyment           | Individual      |
| Self-fulfilment    | 2.67                    | 6    | Self-direction      | Individual      |
| Well respected     | 2.65                    | 7    | Achievement         | Individual      |
| Belonging          | 2.64                    | 8    | Maturity            | Mixed           |
| Excitement         | 2.29                    | 9    | Enjoyment           | Individual      |

**Note:** 1: Computed using a 3-point scale where 1 = low importance, and 3 = high importance.

*Self-respect* was rated the most important value. This value operates through the self-direction motivational domain. According to Schwartz and Bilsky (1987), self-direction refers to reliance on one’s independent capabilities for decision-making, creativity, and action. Product-purchase behaviour associated with this motivation include books, personal computer, music instrument, camera, car, skiing, parachute, hang glider, and rollerblades (Durgee, O’Connor and Veryzer, 1996).

*Warm relationships with others*, the second most important value of radio listeners in the region, maps into “maturity” motivation. Maturity is defined to include tolerance, faith in one’s convictions, deep emotional relationships, and appreciation for the beauty of creation (see Kamakura and Novak, 1992). Product purchases associated with this motive include greeting cards, art, flowers, and clothing.

*Security* includes family security, national security, and world peace. Durgee, O'Connor and Veryzer (1996) identify and list 33 products associated with security. These range from financial security products such as mutual fund to tangible safety products such as alarm system, and smoke alarm.

*Fun and enjoyment*, and *excitement* map into socially acceptable enjoyment pursuits such as watching a movie, vacation, and desserts. Finally, being *well respected* stimulates product purchases such as house, and brand name clothing (achievement motive). Table 2 group respondents according to their shared motivations

Table 2.  
Frequency of Values-Motives Classification

| Value of Respondents                               | Motivational Domain | Interest Served | Percent of Respondents in the Category |
|--|---------------------|-----------------|--|
| Self-respect, accomplishment, and self-fulfilment. | Self-direction      | Individual      | 35                                     |
| Warm relationships, and belonging.                 | Maturity            | Mixed           | 23                                     |
| Fun and enjoyment, and excitement                  | Enjoyment           | Individual      | 19                                     |
| Security   | Security            | Mixed           | 12                                     |
| Well respected                                     | Achievement         | Individual      | 11                                     |
| Total  |                     |                 | 100                                    |

### Maximising Advertising Reach

Based on the survey results, we derived the following objective function for the value system “self-direction” for the time period 6am – 7am:

$$\text{Maximise } Z = 3982x_1 + 174x_2 + 1165x_3 + 1125x_4 + 1472x_5 + 933x_6$$

Note that the objective function captures the number of listeners with “self-direction” oriented values for each of the radio station. For example, station “x5” (4TTT) attracts a share of 4601 listeners during the 6am – 7am time period. Similarly, 32% of the 4601 audience express “self-direction” related values. The product of the two figures is the coefficient of x5 in the objective function: that is,  $x_5 = 4601 \times .32 = 1472$ .

The optimisation problem, which included 13 constraints, was submitted to the H02BBF routine (NAG Fortran Library). This routine solves integer-programming problems using the “branch and bound” method. Table 3 shows the result of this exercise.



Table 3.  
Results of the Integer Programming Run: Self-Direction Related Values;  
6am – 7am Time Period

| Variable                     | x1   | x2     | X3     | x4     | x5   | x6   |
|------------------------------|------|--------|--------|--------|------|------|
| Station                      | 4TO  | HOT FM | MIX FM | SEA FM | 4TTT | 4KIG |
| # with Self-Direction Values | 3982 | 174    | 1165   | 1125   | 1472 | 933  |
| Optimal # of ads             | 14   | 2      | 2      | 2      | 10   | 2    |

The results of the optimization run suggest that businesses advertising during the 6am – 7am time period, attempting to appeal to the “self-direction” values of the population, should purchase seven minutes of airtime with the commercial radio station 4TO, 5 minutes of airtime with the community radio 4TTT, and 1-minute from each of the other four commercial/community radio stations.

### SUMMARY AND CONCLUSION

The results of this study offers two sets of guidelines to marketing decision-makers in the North Queensland region. Firstly, the study identifies “triggers” or stimuli for product purchases, and secondly, the study prescribes optimal mix of commercial, and community radio stations that should be used to reach potential purchasers of products. For example, a sports car marketer in the region would learn from Table 4 that the motive (stimulus) relevant for sports car purchase is “achievement”. Then, based on the results of the integer programming run, may decide to place twenty 30-second commercials in 4TO, and six 30-second commercials in 4TTT during the 8am – 9am time period.

It is a marketing truism that no brand can appeal to all consumers. Marketers who understand the value orientation of consumers, and through marketing communications appeal to that value, would attain competitive advantage. This research has shown that targeting both commercial and community radio audiences would maximize sales response from consumers in the North Queensland region.

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# LOTTERY TICKET SALES: AN EMPIRICAL ANALYSIS OF THE MISERY INDEX AS A PREDICTOR OF SALES

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## ABSTRACT

*In North America every Canadian province, 40 U.S. states, the District of Columbia, Mexico Puerto Rico, and the U.S. Virgin Islands all offer government operated lotteries. Elsewhere in the world lotteries are operated in over 100 countries on every inhabited continent. Total sales for U. S. lotteries in 2003 exceeded \$44 billion. There is much controversy regarding the benefits/drawbacks of government sponsored lotteries. But recent studies indicate that 57 percent of American adults purchased a lottery ticket in the last 12 months. Proceeds from government sponsored lotteries provide a stream of revenues to a wide range of beneficiaries, ranging from educational scholarships, quality of life programs, and general funds.*

*This preliminary study investigates the correlation of lottery ticket sales for a single state (Missouri) with the widely cited misery index. The misery index is often used as an indicator of an economy's performance. The misery index was initiated by Chicago economist Robert Barro in the 1970's. In its basic form the misery index is comprised of the unemployment rate added to the inflation rate. However, some economists add interest rates as an additional factor. The initial findings of regression analysis indicate that lottery ticket sales are highly correlated to the traditionally measured misery index, with a coefficient of determination ( $r^2$ ) of .63.*

*With an ever growing number of public constituencies relying on the profits of government sponsored lotteries the ability to more accurately predict sales would be of great interest. This study will be expanded in the future to confirm/reject the current findings utilizing data from a larger number of lotteries.*



# **AN EXAMINATION OF THE MARKET FOR HOUSEHOLD ELECTRICAL APPLIANCES: A VIEW FROM CHINA**

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## **ABSTRACT**

*The main objective of this study is to statistically analyze and map the spatial distributions of household electrical appliance exported from China in recent years. As supported by the body of literature surrounding global market research, this study will attempt to determine to what extent, if any, relationship exists between per capita import of a specific product and the socioeconomic attributes of these import countries or areas. The hypothesis is that the export markets of a given product from China can be classified by the country markets' socioeconomic data and be predicted into different segments of market capability. Thus the relative marketing decision can be made for entering a new market or expanding export to an existing market.*



# **BUYER PERCEPTIONS OF THE ROLE OF RELATIONSHIP IMPORTANCE AND RELATIONSHIP QUALITY IN DETERMINING THE LIKELIHOOD OF CONTINUING INTERACTION BETWEEN BUYERS AND SUPPLIERS**

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## **ABSTRACT**

*This paper presents a conceptual framework that considers the buyer's perceptions of the roles of relationship importance and relationship quality in determining the likelihood of continued interaction between buyers and suppliers. It is hypothesized that both relationship importance and relationship quality positively influence the likelihood of continued interaction between buyers and suppliers. It is also hypothesized that relationship importance moderates the effect of relationship quality on the likelihood of continued interaction between buyers and suppliers. This paper also presents empirical results based on a mail survey of buyers on their perceptions of their relationship with one supplier that support the hypotheses.*

## **INTRODUCTION**

Relationship quality has been shown to have an effect on the likelihood of continued interactions occurring between buyer and seller (Crosby, Evans and Cowles 1990), however it is possible that the importance of the relationship may moderate the role of relationship quality in determining the probability of additional contact occurring between buyer and seller. This outcome may be particularly true when the seller's product or service is crucial to the buyer's business. In such a situation, the buyer may be basing his/her firm's entire livelihood on the relationship with the supplier and the importance of the relationship may prevail over the quality of relationship, especially if the quality is poor, in determining whether or not to continue the relationship (Frasier 1983). Importance may also work in conjunction with relationship quality. For example, it is highly probable that a buyer who has a good relationship with an important supplier would want to maintain the relationship (Walker, Churchill and Ford 1977).

This study addresses the following research questions: What is the role of relationship importance in determining the likelihood of continued interaction between buyer and seller? What is the role of relationship quality in determining the likelihood of continued interaction between buyer and seller? Is the role of relationship quality in determining the likelihood of continued interaction moderated by the importance of the relationship between buyer and seller? As



previously mentioned, relationship quality has been shown to influence the likelihood of continued interaction (Crosby, Evans and Cowles 1990). This research adds the relationship importance dimension to determine if the importance of the relationship moderates the role of relationship quality in determining the likelihood of continued interaction between exchange partners.

## **LITERATURE REVIEW**

According to Levitt (1986) relationships between customers and salespeople often intensify after a sale has been made. Relationships between customers and salespeople are like marriages and the ability of exchange partners to manage their interactions will influence the quality and duration of the relationship (Perrien, Filiatrault and Ricard 1993). The salesperson must work to continually know what the buyer wants and be able to provide it to the customer.

The ultimate goal of relationship marketing efforts is to build up a loyal customer base that will grow and strengthen over time. The emphasis in relationship marketing switches from one of attracting new customers to one of retaining current customers (Evans and Laskin 1994). When companies can establish relationships with their customers they can learn more about what their customers want and need and tailor their product development and marketing strategies to those customers' needs (Levitt 1986). These relationships are more likely to be successful and enduring if the quality of the relationship is strong. By entering into relationships sellers hope to gain customer satisfaction and loyalty while buyers look for product quality (Evans and Laskin 1994). Relationships also increase the level of functional interdependence between buyer and seller and are often viewed as a way to obtain competitive advantage in the market (Spekman and Johnston 1986).

Relationships, however, may also have some negative implications. Buyers may forego better exchange alternatives in the future because of their commitment and loyalty to a particular supplier (Han, Wilson and Dant 1993). They may not be willing to give up the benefits associated with the relationship even if they could reduce the operating costs by dealing with another supplier.

Morgan and Hunt (1994) developed the Commitment and Trust Theory of Relationship Marketing that proposes that relationship commitment and trust are central to successful relationship marketing because they lead directly to cooperative behaviors that are conducive to relationship marketing success. Relationship commitment implies a desire to work to maintain ongoing relationships with one's exchange partners and trust between exchange partners implies that one's partner believes in the other partner's reliability and integrity.

Frazier (1983) suggests that the likelihood of continued interaction will be high when the relationship is crucial to the firm's livelihood. Buyers who have high expectations about their relationship with a supplier and who depend heavily on a supplier for their business operations should be more motivated to maintain a relationship and therefore, the likelihood of continued interaction should also be high.

## HYPOTHESES

The likelihood of continued interaction construct refers to the buyer's expectations for the relationship to continue in the future that may be based on either the importance of the relationship or the quality of the relationship. Based on the literature review the following hypotheses were developed and tested.

- H1: Relationship importance is positively related to the likelihood of continued interaction.
- H2: Relationship quality is positively related to the likelihood of continued interaction.
- H3: Relationship importance moderates the relationship between relationship quality and the likelihood of continued interaction.

## METHODOLOGY

This research involved surveying purchasing agents and buyers by mail regarding their relationships with their suppliers. Suppliers were defined as manufacturers who provide the buyer's firm with parts, service or equipment, service providers such as accountants and cleaning services, wholesalers who sell goods to organizations, or companies who sell raw materials or other production inputs. Each respondent evaluated their relationships with one of their suppliers or service providers. Respondents were asked to evaluate their relationships using the level of relationship importance and the level of relationship quality as *a priori* qualifying factors.

The survey was taken using a mailing list of companies drawn from the National Association of Purchasing Management membership list. This list was generated using SIC codes to categorize the data. Names on this list were involved in the purchasing function in their respective firms. A random sampling method was used to select 2,000 names from a master list of 5,000 names using a computer driven random number generator. Industries included on the list are: Fabricated Metal, Machinery, Electrical/Electronic, Transportation Equipment, Miscellaneous Manufacturing and Health Services.

## SURVEY RESPONSE RATE

A total sample of 368 surveys was received. This represents an 18.4% overall response rate. The surveys were returned anonymously and therefore it is hard to determine whether there is a difference between those who responded and those who did not. However, surveys were sent out in eight waves and similar response rates were received for each version with each wave. Only a small percentage (1.25%) were returned or deemed unusable (0.60%) indicating that the mailing list was accurate and up to date.

## RESULTS

Linear regression was used to test the hypotheses. Hypotheses 1 and 2 were tested by including both relationship importance and relationship quality in the model. Both variables were significant at the  $p < 0.0001$  level and the model accounted for 44.22% of the variance in likelihood of continued interaction (See Table 1 - Regression for Relationship Quality and Relationship Importance). This suggests the better a relationship is and the more important a relationship is, the more likely it is to continue.

| Column 1           | Column 2                             | Column 3 | Column 4   | Column 5  |
|--------------------|--------------------------------------|----------|------------|-----------|
| Dependent Variable | Likelihood for Continued Interaction |          |            |           |
| R2:                | 0.4422                               |          |            |           |
| Adjusted R2        | 0.4388                               |          |            |           |
| F:                 | 128.036                              |          |            |           |
| Prob. > F          | 0.0001                               |          |            |           |
| # of Obs.          | 326                                  |          |            |           |
| Tested Construct   | Hypothesized Relationship            | B        | Std. Error | Prob. > t |
| Intercept          |                                      | 0.5235   | 0.1948     | 0.0076    |
| H1                 | Positive                             | 0.2316   | 0.0446     | 0.0001*   |
| H2                 | Positive                             | 0.6919   | 0.0535     | 0.0001*   |

\* = Hypothesis confirmed

Both H1 and H2 can be confirmed which suggests that both relationship quality and relationship importance determine whether or not a relationship between a buyer and supplier is likely to continue in the future. However, in order to test Hypothesis 3 regarding whether relationship importance moderates the effect of relationship quality in determining whether or not a relationship is likely to continue, a regression model with an interaction term was tested (See Table 2 - Regression for Relationship Quality and Relationship Importance with an Interaction Term). This interaction term was the product of relationship quality and relationship importance. Results indicate that this interaction term is significant and negative. This suggests that as the importance of the relationship increases the effect of relationship quality in determining the likelihood of continued interaction is reduced. Relationships that are important to the firm are more likely to continue even if the quality of the relationship is not as good.

| Column 1           | Column 2                            | Column 3 | Column 4   | Column 5  |
|--------------------|-------------------------------------|----------|------------|-----------|
| Dependent Variable | Likelihood of Continued Interaction |          |            |           |
| R2:                | 0.4652                              |          |            |           |
| Adjusted R2        | 0.4599                              |          |            |           |
| F:                 | 87.864                              |          |            |           |
| Prob. > F          | 0.0001                              |          |            |           |
| # of Obs.          | 306                                 |          |            |           |
| Tested Construct   | Hypothesized Relationship           | B        | Std. Error | Prob. > t |
| Intercept          |                                     | -0.8672  | 0.5699     | 0.1291    |
| H1                 | Positive                            | 0.6457   | 0.1693     | 0.0002    |
| H2                 | Positive                            | 1.1562   | 0.1835     | 0.0001    |
| H3                 | Positive                            | -0.1357  | 0.0525     | 0.0102 *  |

\* = Hypothesis confirmed

## DISCUSSION OF RESULTS AND SUMMARY

As predicted relationship quality was significant in determining the likelihood of continued interaction. As perceptions of relationship quality increased the more likely the relationship was to continue. Higher levels of relationship quality suggest that buyers trust their suppliers and are satisfied with their performance. As hypothesized, when relationship importance is high, the relationship is more likely to continue. This suggests that the importance of the relationship should make a difference in determining whether or not a relationship will continue in the future and fills in a missing gap in the existing literature. The results of the regression analysis with the interaction term suggest that the effect of relationship quality on determining whether or not a relationship is likely to continue is reduced when the importance of the relationship increases. This suggests that even relationships that are not so good may still continue for longer than expected if the relationship is important enough for the buyer's firm to maintain.

This study set out to investigate three primary research questions. The results from this study suggest that sales managers should pay attention to maintaining the quality of their relationships with their customers and try to evaluate how important the relationship is from the buyer's perspective. Better quality relationships are more likely to continue and in today's market place having a good quality relationship can be a competitive advantage. The results also suggest that suppliers should monitor relationship importance to determine whether or not a relationship is likely to continue. This can be accomplished by paying attention to situational factors, such as the level

and quality of service and the availability of competitors in the marketplace, and inherent risk factors, such as the amount of risk involved and the cost of terminating a relationship.

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# **AN EMPIRICAL ANALYSIS OF FAMILY HOME PURCHASING DECISIONS IN SHELBY COUNTY, TENNESSEE AND THE PROCESS OF SATISFACTION/DISSATISFACTION**

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## **ABSTRACT**

*This paper presents the results of data analysis on family home purchasing decisions in Shelby County, Tennessee and the satisfaction/dissatisfaction process. For discussion purposes, the empirical results are divided into four major categories. The first section provides an evaluation of the sample. The second section presents the assessment of the reliability and validity of the scales used in the study. The third section reports the results of the empirical testing of the research hypotheses. The paper concludes with an assessment of the confirmation/disconfirmation model in the light of the results from the data analysis.*

## **INTRODUCTION**

Because of the many difficulties inherent in obtaining couple cooperation for husband-wife surveys, most of the data for this study was gathered from a sample of couples contacted through realtors in Shelby County, Tennessee. Additionally, using a two-step sampling procedure, a sample of homeowners was identified and contacted through the mail. Attempts to contact respondents through religious organizations did not yield a list that was large enough to warrant using such organizations for identifying and contacting prospective respondents. In most cases, religious organizations were unwilling to provide a roster of their membership or to publish the research undertaking in their weekly bulletin.

Where there was no listed telephone number for a house sold within the specified period, the next property listed in Chandler's RSR was substituted, provided it was in the same zip code and had a selling price which was within \$5,000 of the price of the originally selected property. Because the street names are alphabetically listed in the sales report, it was possible in many cases to substitute houses that were on the same street.

In gathering the data, it became apparent that it was time consuming and often very difficult to get couples to provide their responses to individual questionnaires and then provide their joint response to a single questionnaire. However, because the study focuses on a dyadic relationship,

the entire set of questionnaires for each couple (husband, wife, and joint) had to be completed or else all three were deleted from the study.

Each prospective respondent was sent an initial letter informing them of their inclusion in the study. This was followed by a telephone call aimed at determining if there was a married couple occupying the house and if they owned the house. The telephone call was also used to make appointments with couples wishing to participate in the study.

Of the 142 couples who could participate in step two of the sampling procedure, 57 couples, or 40.14 percent, agreed to take part in the study. However, only 40 of them actually participated. This yielded a response rate of 28.17 percent. Considering that each couple had to complete an individual and then a joint questionnaire, this response rate appears to compare well with reported response rates for gathering marketing data. A major shortcoming in collecting couple data could be attributed to the fact that both husband and wife had to agree to take part in the study. To the extent that one spouse was either busy or was unwilling to participate, the response rate was sure to be adversely affected.

### RELIABILITY ANALYSIS

One test for the uni-dimensionality of a multi-item measure is its internal consistency. Internal consistency is concerned with the correlations between the various measures used to measure a construct (Nunnally, 1978). If all the items in a multi-item scale measure the same underlying trait, the correlations between the various scale items should be high. The higher the correlation, the better the reliability.

*A priori*, the measures were partialled into initial clusters on the basis of the constructs they were intended to measure, and the reliability of each cluster was assessed using coefficient alpha, a widely used method for determining the internal consistency or reliability of multi-item measures. As recommended by Nunnally (1978), a coefficient alpha below .70 indicates that the items perform poorly in capturing the construct meaning.

The scales used in this study are consistent with those conceptualized and are highly reliable. A summary of the coefficient alphas for the various scales were presented. For the purpose of comparison, the alpha coefficients have been determined using four levels of data: husbands, wives, joint husband-wife, and averaged individual responses. With the exception of the cognitive measure of satisfaction that has an alpha of .60, the reliability coefficients are all above the .70 cutoff requirement, an indication that they are all quite acceptable for the three respondent groups. For the husbands and wives, the magnitude of the reliability coefficients does not differ markedly among the ten measures, .705 to .956 for husbands, .746 to .933 for wives. While the range is wider for the joint husband-wife respondent group (.602 to .961), some of the individual coefficients are higher than those obtained for either the husbands or the wives group.

After determining the coefficient alpha for each scale, factor analyses, using varimax rotation, were performed in order to confirm the various construct dimensions. Because of the relatively large number of scale items, the constructs were divided into three groups and the scale items related to each grouping of constructs were included in the same factor analysis. The first factor analysis included the scale items related to norms, expectations, performance, and disconfirmation. The second factor analysis included the items related to the three satisfaction

measures. The items related to the consensus, cohesion, and the syncratic decision process were included in the third factor analysis. In general, the factor analyses captured the relevant construct dimensions conceptualized. In almost every case, the items for each of the scales loaded heavily on only one factor, an indication of a single dimension within each scale.

### MEASURE VALIDATION

Measure validation provides evidence of the degree to which research tools are generalizable. In this study, the validation checks focused on the degree to which the various constructs exhibit high convergent and discriminant validity. Convergent validity seeks to determine the degree to which the scales correlate highly with other measures designed to measure the same thing; discriminant validity focuses upon the degree to which the measures differ from measures of different constructs. It requires that a measure not correlate too highly with measures from which it is supposed to differ.

The multitrait-multimethod matrix (Campbell & Fiske, 1959) can be used to simultaneously examine the reliability and the convergent and discriminant validity of the various constructs used in a study (Heeler & Ray, 1972). This method has been used to assess the validity of some of the measures used in husband-wife research (Davis, 1971; Wilkes, 1975; Hopper, 1983), and it has also been used in satisfaction research (Cadotte, Woodruff & Jenkins, 1987; Garland, 1983; Bolting, 1985).

According to this approach, the correlations among multiple measures of the same trait should have higher correlation in the matrix than the correlations across measures of different traits. In all cases, it was expected that measures of the same construct would show high correlation (convergent validity), and measures of different construct would exhibit lower correlation (discriminant validity).

The multitrait-multimethod matrix is composed of intercorrelations that result when each of two or more traits are measured by each of two or more techniques or methods. An assessment of reliability is provided on the reliability or main diagonal of the matrix. Heeler and Ray (1972) note that the traits or constructs may be considered internally consistent and relatively stable if the values along the reliability diagonal are high.

In this study, the information relating to the ten measures was obtained from three sources within each family--the husband, the wife, and the joint husband-wife response. Following the technique used by Davis (1971), the necessary data are available to construct a "multitrait-multirater" matrix. The multiple traits are the ten constructs or measures, and the three methods are the independent responses or reports of husbands, wives, and husband-wife to the same questions about satisfaction with the couple's place of residence. Since the reliabilities for the various measures do not differ across the respondent groups, the three sets of data were included.

Before discussing the convergent and discriminant validities of the various traits, it is important to note that since neither the decisions nor the methods used in this study are strictly independent, the traits and methods differ somewhat from those addressed by Campbell and Fiske (1959). Davis (1976) asserts that the use of identical scales to obtain information from husbands and wives within the same family contributes to the non-independence of the measures through



shared method variance. However, he notes that these factors do not lessen the usefulness of the multitrait-multimethod approach.

### **EMPIRICAL TESTING OF RESEARCH HYPOTHESES**

An empirical examination of the nine research hypotheses was conducted. These hypotheses were formulated on the basis of theoretical discussions of symbolic interaction theory and the disconfirmation model. In order to test the hypotheses concerning the differences between the satisfaction of husbands, wives, and their joint responses, the t-test of significance and ANOVA were used. Hair et al. (1987) notes that ANOVA and t-test are equivalent when only two independent sample means are being compared. Regression analysis was used to determine the relationship between satisfaction, the criterion variable, and the set of predictor variables included in the disconfirmation model. For discussion purposes, hypotheses analyzed using the same statistical technique are grouped and the findings are presented in the same section.

### **CONCLUSION**

This paper focused upon the empirical analysis of the research hypotheses presented. In this paper, the results of the reliability and validity checks were presented. The number of responses obtained was not uncharacteristic of studies gathering data from both husbands and wives. In fact, the number of responses compares favorably with the number of responses used in studies that focus on dyadic relationships.

Before attempting to compare the various groups, it was necessary to assess their comparability. To accomplish this objective, the demographic data from the various groups were subjected to Chi-square analysis. This procedure tests the degree to which the data sets were drawn from a relatively homogeneous population. The overall response pattern indicates that the two groups were quite similar in their evaluation of their homes.

Before analyzing any of the research hypotheses, the reliability and validity of the ten scales used in the study were assessed. The scales used in this study were reliable and were found to possess acceptable levels of uniqueness or unidimensionality in that they each loaded heavily on a single factor. Further, the multitrait-multimethod table provided relatively good support for the convergent and discriminant validity of the measures.

Following the assessment of the reliability and validity of the various measures, the nine research hypotheses were empirically examined. The first three hypotheses examined the relationship between the joint and individual responses of husbands and wives. The first hypothesis compared the satisfaction levels of husbands and wives. Except for the norms ratings, no significant differences were found between the two groups. Therefore, this hypothesis was rejected.

Hypothesis 2 examined whether there was a significant difference between joint satisfaction and the individual satisfaction of husbands or wives. This hypothesis was rejected as no significant differences were found.

The results from testing hypothesis 3 revealed that there was no significant difference between the joint responses and the average of the responses from husbands and wives. This finding was attributed to similarity between the responses of the husbands and wives. However, where

individual responses are at different ends of the scale, the degree of difference between the various measures may be affected.

Hypotheses 4 through 8 illustrated that there exists a positive relationship between the satisfaction ratings and consensus, cohesion, performance, disconfirmation, and syncratic decision-making. However, except for hypothesis 8, these hypotheses were rejected because none of the relationships proved significant.

Hypothesis 9 proposed that disconfirmation was a better predictor of satisfaction than performance. This hypothesis was rejected as performance was found to explain more of the variance in satisfaction than disconfirmation. This finding, however, should be tempered by the fact that responses to the performance items may have contaminated perception about satisfaction.

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# CONSUMER BEHAVIOR AT THE CEMETERY

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## ABSTRACT

*Death and end of life issues are becoming increasingly common in consumer behavior research. However, much of this research is focused on the distribution of the deceased's possessions and the meaning of those possessions to the living. This study examines the buying behavior of the living as they buy new items for the dead. Based on traditions dictating that people who are not happy with their new "homes" in death (their graves) will return to haunt the homes they inhabited in life, many Italian-American cemeteries of New York City exhibit grave decorations similar to residential landscaping. A similar, yet even more pronounced, phenomenon is found in non-ethnic cemeteries of rural northeast Pennsylvania. This study provides examples of the ways in which survivors attempt to create a "home away from home" for their departed loved ones.*

## INTRODUCTION

Csikszentmihalyi & Rochberg-Halton (1981, p. 1) contend that "To understand what people are and what they might become, one must understand what goes on between people and things. What things are cherished, and why, should become part of our knowledge of human beings." A special type of consumption occurs when a person's loved ones pass on, and the bereaved feels the need to mark the grave. Studies of consumer behavior in death related situations are rare, but there is a growing interest in the topic (e.g. Bonsu & Belk, 2003; Gentry, Kennedy, Paul & Hill, 1995; Hirschman, 1990; Kates, 2001; O'Donohoe & Turley, 2000; Price, Arnould & Curasi, 2000; Robinson, 2004; Schwartz, Jolson & Lee, 1986; Turley, 1995). Few have dealt with the later purchase of items by the living for graves and memorial gardens. This study specifically examines the purchase and display of lawn ornaments in cemeteries of a rural area of the northeast United States. In the following sections, observations drawn from these cemeteries along with personal interviews with a business person who caters to the grieving, will be intertwined with theoretical insights from the current consumer behavior literature.

## CONSUMER BEHAVIOR IN REGARD TO DEATH ISSUES

Gentry and associates (1995, p. 77) state that for the bereaved, consuming can be a "relatively safe and pleasant way to 're-enter the world.'" However, most business people are not trained in dealing with grieving people. Many business people treat the grieving as "socially dangerous people" (Murphy, Scheer, Murphy & Mack, 1987, p. 237). This attitude is inexcusable considering that grief is and has long been an important part of life (Gentry et al., 1995).

One reason marketers may avoid or misunderstand grieving consumers is that their heightened emotions can easily lead to dissatisfaction with products (Gentry et al., 1995). To gain

addition insight into this issue, an owner of a small lawn ornament manufacturing and retail business in rural Pennsylvania was interviewed. She stated

During the first year, nothing will be right. We try to understand, and even empathize with them. I have cried with people who have lost their pet because I know how it feels. We try to meet their needs and make something for them that will give them the satisfaction of having just the right thing on the grave, whether that is a pot, a deer, a cow, or whatever is important.

Gentry et al. (1995, p. 77) echo this statement in remarking that the depressed emotional state of the bereaved may lead to dissatisfaction with any type of transaction.

### **POSSESSIONS AND SELF-CONCEPT**

It is well established that possessions are an important part of self-concept (e.g. Belk, 1988; 1990; Csikszentmihalyi & Rochberg-Halton, 1981; Dittmar, 1992; Kamptner, 1991; Richins, 1994). People value possessions for the way they express their personal values or beliefs and prefer products that are consistent with their own self-concepts (Belk 1992, Hirschman & LeBarber, 1990, Kamptner 1991; Richins, 1994). In fact, Belk (1988, p. 160) states that "we are what we have and that this may be the most basic and powerful fact of consumer behavior." Possessions are not only important in developing and reinforcing our identities, but also in expressing it to others (Belk, 1990; Csikszentmihalyi & Rochberg-Halton, 1981; Dittmar, 1992; Kamptner, 1991; Richins, 1994; Wallendorf & Arnould, 1988). In general, people attribute to individuals certain characteristics and form beliefs about individual based on that individual's favorite possessions (Richins, 1994; Burroughs, Drew & Hallman, 1991).

After death, ones' ability to create and express self-concept curtailed. People must decide who they will be before they die, while they're still living, because death takes away both a person's identity and the opportunity to create a new identity (Belk, 1988; Bonsu & Belk, 2003; Gentry et al., 1995; Hirschman, 1990; Kates, 2001; Young, 1991).

However, cemeteries in rural northeast Pennsylvania abound with objects that are intended to let the dead continue expressing personality. Loved ones place items that would have meant something to the deceased upon their graves to speak for the dead, whose voices are otherwise silenced. Items found at Memorial Park Cemetery in Luthers Mills, Pennsylvania, during 2003 included concrete ornaments--deer from a few inches high to almost five feet high, rabbits, dogs, chickens, and cows as well as more traditional angels—and decorative flags and windchimes. Personal items such as caps and hunting equipment were also on display. Each of these items would most likely have been significant to the deceased if still living.

The lawn ornament business owner noted that customers buying items for graves are very concerned with purchasing something that would express the deceased's self-concept (as interpreted by the living). In this way, the identity of the dead is not taken away, but the responsibility for expression of this identity is passed on to the living. Loved ones choose the nature and content of grave markers, and how, if at all, the grave is decorated. It is possible that a living relative could "misrepresent" the deceased's self-concept if the living chose to mark or decorate the grave in a

manner inconsistent with the recipient's self-concept while living. For example, a man who preferred to express himself in a simple, plain manner could have a highly ornamented grave if the living prefers a high degree of decoration. This could give viewers a misguided idea of the deceased's self-concept and preferences.

However, this does not seem to be the general outcome. In an interview, the lawn ornament manufacturer/retailer stated that people seek new items for the grave that would have been meaningful to the deceased. The item purchased is usually one the deceased would have purchased for his or her home if he or she were still living, such as the animals, flags, windchimes and other lawn ornaments found at the cemetery. This seems to indicate that although purchased items are new, rather than formerly belonging to the deceased, they are a link to the past because they represent the deceased and what was important to him. For the dead, the past and present intertwine as they become frozen in time. For example, it has been generally observed that someone who dies at 34 years of age will "always be" 34 years old because they stop changing. The memories of the living about the person do not change (age the person) as time passes.

### **ONGOING RELATIONSHIPS**

Possessions are also useful as they provide a link to the past as memories and feelings are stored in association with them (Belk, 1988, p. 148). Just as possessions connect us to our pasts, they also associate us with others (Belk, 1988; Csikszentmihalyi & Rochberg-Halton, 1981; Kates, 2001; Wallendorf & Arnould, 1988). When asked about which items have meaning to people and why, people often respond that with stories of how they obtained the object or who gave it to them (W & A, 1988). The past provides the context for the object's meaning. (Csikszentmihalyi & Rochberg-Halton, 1981). The functionality or performance of an item, or even the item itself, is not seen to be as important as the memories connected to the possession (Csikszentmihalyi & Rochberg-Halton, 1981; Richins, 1994; W & A, 1988). Therefore, goods are not innately meaningful, but become so as people ascribe meaning to them. This meaning may be given by its owner (private meaning) or members of society (public meaning) (Richins, 1994, p. 504).

The study of the meaning of items takes a different route when examining items placed on graves. In fact, it is even different than items purchased immediately after death (such as caskets) because grave decorations are often purchased and displayed for many years after death. Much of the literature on the meaning of things (Belk, 1988; Csikszentmihalyi & Rochberg-Halton, 1981; Richins, 1994; W & A, 1988) has found that items acquire meaning based on past associations. Possessions are imbued with value because they are related to important people or events. For example, Kates (2001) analyzed the importance and distribution of the possessions of AIDS victims who had died. However, the bereaved seldom place items on the grave that belonged to the deceased. These items frequently have such value to the living that they do not want to risk theft or destruction that is a very real possibility when placed at an outdoor public cemetery. Items purchased specifically for graves are new, having never been owned by the deceased, yet, according to the lawn ornament business owner, consumers often speak of buying an item "for" the deceased, as though it is a gift.

Bonsu and Belk (2003) note that consumption choices related to death rituals can help the grieving feel better. One reason for this is the public comment it makes about the buyer. The

bereaved who places items on the grave is obviously a caring person who is doing for the dead what the dead can no longer do for him or herself. The lawn ornament retailer noted that customers place items on graves for two interrelated reasons. On one hand, they want to show that the deceased was and is still loved, and that there is still a type of relationship between the deceased and the bereaved. Another side of the same coin is that the living want others to know that they are caring people who still provide for their loved ones even though they, being dead, now have very different "needs." In this way, placing items on graves, especially at Memorial Day and Christmas, become a form of social obligation.

## CONCLUSION

This study has briefly examined the use of grave decorations as communication devices that express self-concept and relationships. Blending information from interviews with a lawn ornament manufacturer/retailer with insights from the current literature on consumer behavior, it is shown that possessions can continue to represent an individual's self-concept, even after that person is dead. Although exploitation of people who are emotionally fragile due to bereavement is unethical, the fulfillment of the needs of people attempting to deal with the separation between them and their loved ones can be an important service. Future research should further examine the relationship between the living and the possessions that they choose and display on graves.

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## **A NEW PERSPECTIVE ON MARKETING THEORY: AIDA IMPLICATIONS FOR B2C WEBSITES**

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### **ABSTRACT**

*The well-known AIDA concept, which identifies the stages that consumers' minds are moved through by promotional messages, serves as a theoretical guide in developing the 3AIDA concept. This 3AIDA concept offers insights into the design and evaluation of B2C websites. Easily remembered, 3AIDA includes factors that are important before consumers arrive at a website and other factors that are important after the website is exited. Its theoretical focus also considers consumer interactions on the website (website immersion) as they influence consumer perceptions (website involvement), decisions, actions, and satisfactions.*



# **GENDER DIFFERENCES IN THE PERCEIVED IMPACT OF FAMILY ISSUES ON SALES CAREERS: AN EXPLORATORY STUDY**

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## **ABSTRACT**

*The primary purpose of this exploratory study was to add to the body of knowledge related to work-family conflict (WFC), particularly in the area of the impact of family members' health issues on careers. The authors designed and distributed a survey on work-family conflict and technology issues to 35 salespeople they knew. Items from two previously-developed scales were borrowed, and new items and questions were created. After a profile of respondents is provided, the focus shifts to discussing gender differences. Significant differences were found for gender with regard to percentage of time spent on certain sales-related tasks, for several WFC questions relating to self-image and loss of productivity, and effect of parent's health on career plans. Limitations and tentative conclusions are then provided.*

## **INTRODUCTION**

A discussion of the effect of aging parents on professional careers took place at a conference in 2003 among several colleagues. This prompted the researchers to explore the impact of family-related issues (schedule flexibility, care giving responsibility and technology) on salespeople's ongoing professional development and careers.

## **LITERATURE REVIEW**

Work-family conflict has been established by prior research to be bi-directional; i.e., it involves two types of conflict, work obligations interfering with family life (work-family conflict, WFC) and family life interfering with work duties (family-work conflict, FWC) (Marchese, Bassham & Ryan, 2002, pp. 145, 146). Prior research identified the importance of studying gender differences in WFC, especially when both husband and wife are employed (see, e.g., Cinamon & Rich, 2002; Greenhaus & Powell, 2003; Jansen et al., 2003; Martins, Eddleston & Veiga, 2002; Parasuraman & Simmers, 2001).

Regarding the impact of caregiver arrangements and related issues on employees' attitudes and behavior, Gerstel and Gallagher (1993, p. 606) found a significant relationship between the

caregiver's level of depression and the degree to which care giving ("kinkeeping") was perceived to interfere with work. Jansen et al. (2003) found that having to care for a chronically sick child or other family member at home was a significant risk factor for WFC for men but not for women. Marks (1998) studied the impact of caring for disabled children, parents and spouses and found that women suffered more psychological distress from care giving. However, while being a caregiver generated more WFC than not being a caregiver, there were no significant gender differences in terms of increased WFC. Kossek, Colquitt and Noe (2001) conducted an extensive examination of care giving decisions and work performance and found that "managing elder care interacts with variables to influence employee outcomes more negatively than does managing child care, especially when caregiving is at home or by a family member" (p. 40).

Research on WFC has reached the selling/sales management literature (e.g., Borg & Kristensen, 1999; Nonis & Sager, 2003; Good, Page & Young, 1996; Netemeyer, Brashear-Alejandro & Boles, 2004). Boles, Wood and Johnson (2003) found gender differences with WFC: women realize more satisfaction with work, coworkers and company policies when WFC is reduced, whereas men realize more satisfaction with pay, supervisors, promotion and policies when WFC is reduced (Boles, Wood & Johnson, 2003, p. 109).

Based on the literature review and the anecdotal experiences of the authors, the primary purpose of the study was to add to the body of knowledge regarding the impact of family members' health issues on salespeople's careers. The authors focus on the significant gender differences related to family issues in this paper.

## **METHODOLOGY**

A questionnaire was originally designed in November 2003 and subsequently pretested on students in an upper-level Marketing class at a southern regional university, resulting in some wording changes. The final version of the questionnaire, printed in booklet format, contained 28 numbered questions, with three of the numbered questions containing a total of 33 Likert-type statements. The first set of questions on the final questionnaire addressed the following topics: length of employment with current employer, travel expectations of job, extent of travel, hour worked per week, work schedule flexibility, use of technology at work and at home for work purposes, online work assessment, and percentage of time spent on sales tasks (selling, meetings, paperwork, etc.).

One segment (four items) from Chonko and Burnett's (1983) role conflict scale was used in our study; this segment represented Factor 3: Family and addressed time spent working, socializing (with customers and other salespeople), and traveling. Responses were measured on a five-point scale ranging from "Complete agreement" to "No agreement."

Good, Page and Young (1996) used a 13-item scale that addressed self-image and esteem, impact on productivity, spousal career conflict, and contentment with current city. A five-point Likert-type scale was used to measure responses, ranging from "Strongly disagree" to "Agree strongly," with "Not applicable" as the fifth scale point. Four questions were added to the work and family conflict scale: health of spouse/significant other, health of parents or spouse's parents, health of children, and anticipation of career move/change due to health issues in next five years. The

authors developed a 12-item Likert-type scale to measure work and family conflict possibly stemming from technology-related issues.

The final series of questions dealt with demographics, including gender, age, marital status, number of children, state of residence, and education, computer usage (number at home, Internet access), and family information (parents living, distance from parents, distance from children, and primary caregiver).

A convenience sample was used in this exploratory study. Surveys were distributed by hand and through e-mail to 35 salespeople known by the researchers. All 35 surveys were completed during December 2003 and used in this exploratory study. The surveys were edited, coded and inputted into ABstat™ as a database. The data was cleaned, and then frequencies, descriptive statistics, and t-tests were calculated.

### **PROFILE OF RESPONDENTS**

Twenty (57%) of the 35 survey participants were women. Twelve (34%) of the respondents were between the ages of 35 and 44 and ten (29%) were between the ages of 45 and 54. Twenty-five (73%) were married. Thirty-three participants reported having one computer at home. All but one person had Internet access from home. Of those 34 with Internet access at home, 16 (47%) used a dial-up modem while 13 (38%) used DSL to access the web. Thirteen (37%) have earned an undergraduate degree, while another seven (20%) have earned a graduate degree. Just over half (51%) indicated that both parents were still alive, while 26% indicated that only one parent was still living. Nineteen reported that they lived less than 20 miles from their parents. Ten reported that they lived less than 20 miles from their spouse's parents. Thirty participants (86%) said they have children; of these, 43% have two children and 30% have one child. Thirteen (45%) of the 29 who answered reported that they have one child under the age of 18. Twenty-two parents indicated that they lived less than 20 miles from their children. Only one participant reported being the primary caregiver. All of the respondents lived in one state.

### **SIGNIFICANT GENDER DIFFERENCES**

Crosstabulations and chi-square tests were conducted on the categorical work-related questions. Even with the relatively balanced split between men and women in the sample, there exist potential cell size problems for some of the analyses. For the scale-based questions, the t test for two independent samples was selected over the Mann-Whitney U test, though the sample sizes varied above and below 30 (see Sheskin 1997, pp. 153 and 181). Since we did not hypothesize any directional differences, two-tailed probabilities were used.

A significant difference for gender with regard to travel necessitating an overnight stay was found. Male salespeople tended to be required by their travels to stay overnight, whereas women salespeople were not ( $\chi^2 = 4.4524, p < .05$ ). No other significant differences were found by gender for travel-related, technology-use, length of employment, and hours worked questions. Three significant differences were discovered for percentage of time spent in various sales-related tasks. Men tended to spend more time on the selling task than women did (38.67% vs. 32.5%,  $t = 1.8197$ ,

$p < .10$ ). Female salespeople tended to spend more time on professional development (10% vs. 6.67%,  $t = -1.942$ ,  $p < .10$ ) and paperwork tasks (17.25% vs. 12%,  $t = -1.8356$ ,  $p < .10$ ).

No significant differences by gender were found for the four questions on family and salesperson agreement on time spent on various activities. Seven significant differences were identified with regard to the 13 WFC questions. Women salespeople tended to be indecisive regarding the statement, "Personal concerns reduce my productivity at work," whereas men tended to disagree with the statement (mean = 2.55 vs. 2.067 for men,  $t = -1.9222$ ,  $p < .10$ ). Female participants also were indecisive about "Family problems cause loss of time at work for me" (2.526 vs. 2.071,  $t = -1.945$ ,  $p < .10$ ). Women tended to be disagree less about "My spouse's job or career conflicts with mine" (2.294 vs. 1.90,  $t = -1.9501$ ,  $p < .10$ ), "All in all, I am inclined to feel that I am a failure" (1.7 vs. 1.267,  $t = -2.011$ ,  $p < .10$ ), and "I am nervous, tense, or frustrated when I get home from work" (2.35 vs. 1.80,  $t = -2.2468$ ,  $p < .05$ ). Men were more in agreement about these statements than were women: "I take a positive attitude toward myself" (3.4 vs. 3.1,  $t = 1.8548$ ,  $p < .10$ ) and "On the whole, I am satisfied with myself" (3.5 vs. 3.2,  $t = 1.8815$ ,  $p < .10$ ).

Analysis of the four health-related questions yielded two significant differences by gender. Men tended to strongly disagree with the following two statements, whereas women tended to disagree: "The health of my parents or my spouse's/significant other's parents has affected my career plans" (1.357 vs. 1.722,  $t = -2.148$ ,  $p < .05$ ) and "I anticipate having to make a career move or change in the next five years due to the health of a family member (spouse, child, parent)" (1.417 vs. 1.778,  $t = -1.81$ ,  $p < .10$ ). No significant differences by gender were found for the technology-related questions.

### LIMITATIONS OF THE STUDY

There are several limitations that need to be addressed first. The pretest was done with students, not salespeople. Though these students may end up being salespeople, this is still a weakness of the study. The analyses were limited by the small sample size of 35 (or fewer, depending on variable and analytical method). The sample is not a representative sample, since it was a convenience sample and also drawn from a small region of the United States. The study also is affected by the use of borrowed scales and the appropriateness of added items (see Engelland, Alford & Taylor, 2001 for cautions in such use). The scale items also need to be carefully examined through factor analysis and reliability analysis.

### CONCLUSIONS

The conclusions we make are more speculations, given the exploratory nature of this study. A possible explanation for men spending more time on the selling task is that they see a clearer connection between their sales and their salaries, whereas women focus on relationships, and part of that is doing what is important to the organization (like paperwork). With regard to the work-family conflict questions, it appears that women are still more likely to worry about family concerns, even while at work. The role of women as traditional caregivers appears to be coming through in the findings discussed earlier. Men and women seem to have similar perceptions regarding the

technology issues. Given the heightened security awareness in the U.S., both may be reluctant to express disagreement with computer security and privacy issues.

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# THE PRINCIPLES OF MARKETING COURSE AND THE EFFECTS OF PART-TIME INSTRUCTION ON FINAL GRADES

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## ABSTRACT

*This paper studies the effect that part-time instruction has on students' final grades in the principles of marketing course at a comprehensive IIA university. We find part-time instructors assign grades 0.86 points higher than assigned by full-time instructors. using a multiple linear regression, in which the response variable is students' grades, the explanatory variable instructor status--i.e., full-time or part-time--is statistically significant at less than a 0.01 level of confidence ( $p$ -value =  $3.4E-22$ ). Additionally, the explanatory variable GPA is also significant at an alpha level less than 0.01 with a  $p$ -value of  $1.57E-51$ . The model yielded an adjusted  $R^2$  value of 0.52, indicating that 52 percent of students' grades are accounted for by the explanatory variables included in the model.*

## INTRODUCTION

there is an increasing trend towards the use of part-time instructors at community colleges and four-year institutions (Sonner, 2000). Many four-year institutions price discriminate by employing part-time instructors in an effort to contain escalating operating costs. Clery (1998) finds that between 1976 and 1995, the number of part-time instructors increased by 91 percent compared with an increase of only 27 percent in the number of full-time instructors. According to *The New Professoriate*, a report released in October 2002 by the American Council on Education (ACE), non-traditional faculty "now make up the majority in academe" (Marklein, 2002). Debarros (2003) states several reasons for the increasing utilization of part-time instructors, including the following: 1) the budgetary constraints facing numerous educational institutions, 2) the increasing number of academic program offerings, 3) the shortage of qualified full-time instructors, and 4) the manpower flexibility associated with the use of part-time instructors.

There are also drawbacks to the use of part-time instructors. Many, if not most, educational institutions have embarked on formal programs of self-study and continuous improvement. One of the requirements for continuous improvement is that the university strive for consistency in multi-section course content. However, measuring the quality of instruction is a difficult undertaking.

## LITERATURE REVIEW

Research in marketing education is highly varied. Researchers have analyzed student achievement and learning (Mellon, 2003). Other researchers have examined the importance of particular influences as they relate to student performance (McCorkle, Alexander & Schaefer, 2003; Williams, Kugele & Kamery, 2003), faculty staffing (Ramsett, Johnson & Adams, 1973), course sequencing (fazel & Johnson, 1986), and student withdrawal (Escoe, Julian & Way, 1997; Melnikova, Williams, Pitts & Kamery, 2003).

The purpose of the current study is to analyze the effect of instructor rank--as it pertains to full-time or part-time employment status--on student grades in the principles of marketing course. Can a student taking a principles of marketing course improve his or her grade by enrolling in a course taught by a part-time instructor?

## METHODOLOGY AND RESULTS

Data were collected from all sections of the principles of marketing course taught at a private comprehensive IIA university. Three full-time and three part-time instructors were employed to teach the course. For the sample of 370 students, the following data, which we believe to include explanatory factors for student grades, were obtained:

- 1) The dependent variable, *grade* in the principles of marketing course (*A, B, C, D, F*)
- 2) The independent variable, *status of the instructor* (full-time or part-time)
- 3) The independent variable, *status of the student* (day or evening student)
- 4) The independent variable, students' *major*
- 5) The independent variable, students' *gender*
- 6) The independent variable, students' *age*
- 7) The students' class standing (freshman, sophomore, junior, senior)
- 8) The independent variable, students' *GPA*

The dependent variable, *grade*, which is recorded on the students' record as an alpha character, was numerically represented in the model as:  $A = 4.0$ ,  $B = 3.0$ ,  $C = 2.0$ ,  $D = 1.0$ , and  $F = 0.0$ . Although the dependent variable, *grade*, is ordinal data, since the interval between the grades can be estimated as being ten point intervals (except for the *F* category), the data is considered to closely approximate interval level data. The use of the values 4, 3, 2, 1, and 0 for the letter grades of *A, B, C, D*, and *F* is similar to using the midpoint of a class to estimate descriptive statistics for a frequency distribution.

Table 1 examines and compares the sample variances of the grades given by part-time and full-time instructors. Since the F-test value of 1.75 is greater than the F-critical value of 1.28, it cannot be assumed that the population variances are equal. thus a two-sample hypothesis test for the equality of population means would employ the t-test, assuming unequal population variances (see Table 2).

|                     | Full-time | Part-time |
|---------------------|-----------|-----------|
| Mean                | 2.71      | 3.57      |
| Variance            | 0.95      | 0.54      |
| Observations        | 187       | 183       |
| df                  | 186       | 182       |
| F                   | 1.75      |           |
| P(F <= f) one-tail  | 8.19E-05  |           |
| F-Critical one-tail | 1.28      |           |

Table 2 analyzes the relationship between the status of the instructor, i.e., part-time or full-time, and the grade received in the principles of marketing course. The hypothesis tested was one of no difference in the average grades awarded by part-time vs. full-time instructors (in the population). The p-value of 9.50E-20 represents the probability that both populations, i.e., part-time instructors, and full-time instructors, award grades equally. This contention is rejected at any reasonable level of alpha.

|                              | Part-time | Full-time |
|------------------------------|-----------|-----------|
| Mean                         | 3.57      | 2.71      |
| Variance                     | 0.54      | 0.95      |
| Observations                 | 183       | 187       |
| Hypothesized Mean Difference | 0         |           |
| df                           | 346       |           |
| t-Stat                       | 9.67      |           |
| P(T <= t) one-tail           | 4.75E-20  |           |
| t-Critical one-tail          | 1.65      |           |
| P(T <= t) two-tail           | 9.50E-20  |           |
| t-Critical two-tail          | 1.97      |           |

Several studies have analyzed relationships between student grades and various student characteristics such as age, gender, class standing, attendance on a full-time or part-time basis, and academic major (Chan, Shum & Wright, 1997). We decided to include these variables, along with our variable of main concern, i.e., whether the course was taught by a part-time or full-time instructor, and measure their relationships with a multiple linear regression model. In this way, we can analyze the relationship between student grades and the employment status of the instructor (part-time or full-time) while controlling for the various student demographic characteristics mentioned above.

Although an ordered probit analysis (Van Ness, Van Ness & Kamery, 1999) or a multinomial logit model (Glasure, 2002) may be more appropriate for analyzing the dependent variable, coded

grades, and their relationship with the various student characteristics, only the multiple regression approach will be utilized here. Using the coding method of A = 4 (or 95), B = 3 (or 85), etc., is similar to estimating the mean or standard deviation of data that has been summarized into a frequency distribution. Table 3 presents the results of a multiple regression analysis.

|                         |       |           |        |         |                |           |           |           |
|-------------------------|-------|-----------|--------|---------|----------------|-----------|-----------|-----------|
| Multiple R              | 0.73  |           |        |         |                |           |           |           |
| R <sup>2</sup>          | 0.53  |           |        |         |                |           |           |           |
| Adjusted R <sup>2</sup> | 0.52  |           |        |         |                |           |           |           |
| Standard Error          | 0.67  |           |        |         |                |           |           |           |
| Observations            | 370   |           |        |         |                |           |           |           |
| ANOVA                   |       |           |        |         |                |           |           |           |
|                         | df    | SS        | MS     | F       | Significance F |           |           |           |
| Regression              | 12    | 184.50    | 15.38  | 34.15   | 4.01E-52       |           |           |           |
| Residual                | 357   | 160.74    | 0.45   |         |                |           |           |           |
| Total                   | 369   | 345.24    |        |         |                |           |           |           |
|                         | Coef  | Std Error | t-Stat | P-value | Lower 95%      | Upper 95% | Lower 95% | Upper 95% |
| Intercept               | 1.15  | 0.33      | 3.54   | 0.00    | 0.51           | 1.79      | 0.51      | 1.79      |
| TEACHER                 | -0.75 | 0.07      | -10.29 | 6.3E-22 | -0.90          | -0.61     | -0.90     | -0.61     |
| DAY/EVE STU             | 0.01  | 0.11      | 0.08   | 0.93    | -0.21          | 0.23      | -0.21     | 0.23      |
| MAJ1                    | -0.13 | 0.11      | -1.18  | 0.24    | -0.35          | 0.09      | -0.35     | 0.09      |
| MAJ2                    | -0.04 | 0.11      | -0.33  | 0.74    | -0.26          | 0.19      | -0.26     | 0.19      |
| MAJ3                    | -0.16 | 0.20      | -0.82  | 0.41    | -0.56          | 0.23      | -0.56     | 0.23      |
| MAJ4                    | 0.01  | 0.13      | 0.05   | 0.96    | -0.25          | 0.26      | -0.25     | 0.26      |
| GENDER                  | -0.07 | 0.07      | -0.99  | 0.32    | -0.22          | 0.07      | -0.22     | 0.07      |
| AGE                     | -0.01 | 0.01      | -0.88  | 0.38    | -0.02          | 0.01      | -0.02     | 0.01      |
| CLASS1                  | -0.03 | 0.08      | -0.45  | 0.65    | -0.19          | 0.12      | -0.19     | 0.12      |
| CLASS2                  | -0.24 | 0.19      | -1.25  | 0.21    | -0.61          | 0.14      | -0.61     | 0.14      |
| CLASS3                  | 0.07  | 0.24      | 0.30   | 0.77    | -0.40          | 0.54      | -0.40     | 0.54      |
| CUM GPA                 | 0.91  | 0.06      | 15.43  | 1.6E-41 | 0.79           | 1.02      | 0.79      | 1.02      |

Student major, class standing, whether day or evening student, and student gender were included as indicator variables. None of these indicator variables were significantly related to the grade received. A graphical analysis of the residuals did not indicate serious violations of the model's assumptions. There are no extreme points (outliers); at each grade level, residual variance does not indicate the presence of homoscedasticity; the residuals approximate a normal distribution. The adjusted coefficient of multiple determination shown in Table 3 is equal to 0.52, indicating that 52 percent of the change in the dependent variable, *grade*, is explained by the set of independent variables (which are student characteristics, except for the instructor status variable). The F-

statistic's high value of 34.15 corroborates the existence of a significant relationship between student grades and the set of independent variables.

Independent variables that would be significant at a 0.01 level of confidence include the following:

- 1) Instructor status (full- or part-time)      t-stat value = -10.29
- 2) Grade point average (GPA)                      t-stat value = 15.43

None of the other independent variables showed a significant relationship to the course grade.

## CONCLUSION

The primary objective of this paper was to examine the relationship between student grades in the principles of marketing course and the employment status of the instructor, i.e., whether part-time or full-time. A multiple regression model, which allowed for the inclusion of many student characteristics, did report a significant relationship between the two factors. We find that a student's cumulative GPA was the strongest predictor of success in the principles of marketing course. Next in importance was the employment status of the instructor, part-time or full-time. It is recognized that our sample may include selection bias since part-time instructors may teach predominantly at times and places where non-traditional students are enrolled. Our data was collected at a single university; thus, our results may lack universal application.

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# **THE EBAY FACTOR: THE ONLINE AUCTION SOLUTION TO THE RIDDLE OF REVERSE LOGISTICS**

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## **ABSTRACT**

*Cottrill (2003) observed that “reverse logistics is no longer an afterthought, as companies discover gold in the mountains of returned products at the back end of the supply chain” (p. 20). This article examines this proposition, looking at the increased focus on the handling of returned and excess goods and merchandise through reverse logistics operations. The article outlines the dimensions of the returns problem and gives an overview of the concept of reverse logistics, examining the ways that management of the "reverse supply chain" differs markedly from a firm's forward facing operations. The article explores how and why online auctions through eBay are becoming an integral part of leading retail and consumer goods' companies reverse logistics strategies. It offers guidance as to what key questions executives face in developing a proactive strategy for handling returns and excess goods and whether to do so in-house or via third-party providers.*





# **DUDE, WHERE'S MY COW?: THE UNITED STATES AUTOMATIC IDENTIFICATION PLAN AND THE FUTURE OF ANIMAL MARKETING**

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## **ABSTRACT**

*This article examines how two trends – the fear of Mad Cow and other animal borne diseases and alarm over the possibility of “agroterrorism” – are converging to force agribusinesses and governments around the world to take proactive steps to protect the food supply. Today, the United States is on the verge of implementing a plan, developed jointly by government, industry, and health experts, that will enable the nation to have the necessary “traceback” capability to locate and isolate animals in the food supply that have active foreign animal disease (FAD) or been exposed to disease, whether the source be from natural causes or by terrorist intervention.*

*The article details the fundamentals of the United States Animal Identification Plan (USAIP) and the timeline for its implementation over the next two years. It then goes on to explore the implications of the USAIP, including the funding, privacy and liability issues that need to be resolved in order for the promises of automatic identification of animals in the food supply system to become reality.*



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