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TABLE OF CONTENTS FOR VOLUME 10, NUMBER 2

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Articles

Articles

THE ROLE OF EXPLICIT CONTRACTS AND COOPERATIVE NORMS ON FAIRNESS IN BUYER-SELLER RELATIONSHIPS

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ABSTRACT

This research develops and tests a model that examines the effect of explicit contracts and cooperative norms on buyer's perceived fairness in the relationship. Data were collected in a business-to-business setting. Responses were received from 234 key informants. The model was tested using structural equation modeling. Findings indicate that the cooperative norms that develop in a relationship are a key indicator of buyer's perception of fairness in that relationship. However, explicit contractual agreements do not have an effect on buyer's perceived fairness in the relationship.

INTRODUCTION

Companies are beginning to focus on maintaining long-term relationships with customers. There are numerous reasons behind this trend. One reason is that long term customer relationships provide a sustainable competitive advantage (Day, 1994). Another reason is that retaining customers is more profitable than obtaining new customers (Curasi & Kennedy, 2002; Kalwani & Narayandas, 1995; Reichheld, 1994). Also, heightened competition has made it more difficult to obtain new customers. It has been suggested that existing customers should be viewed as strategic assets that must be protected (Webster, 1994). Concerted efforts to build and enhance relationships with customers are one way for firms to protect their "strategic customer assets."

Fairness in relationships has been found to be associated with customer satisfaction, commitment and loyalty to the relationship (Patterson, Johnson & Spreng, 1997; Seiders & Berry, 1998; Sindhav, 2001; Brown, Cobb & Lusch, 2005). Whether or not a customer perceives a relationship as fair can be dependent upon the customer's perception that the outcomes they receive are equitable given their contribution to the relationship (Brown, Cobb & Lusch, 2005). Firms often do spell out expectations of both parties by developing detailed explicit contractual agreements. However, it is difficult to contractually provide contingencies and solutions for every possible situation that can arise in a buyer-seller relationship. Consequently, firms develop unwritten and implicit norms that also govern the perception of fairness in the relationship. The purpose of this

research is to examine whether or not customers' perception of fairness can be managed through the use of explicit and implicit contracts in the buyer-seller relationship.

EXPLICIT CONTRACTS

Explicit contracts are detailed and binding contractual agreements that specify the buying and selling firms' obligations and roles (Cannon & Perreault, 1999). They are important in structuring and controlling relationships between firms (Cannon and Perreault, 1999). Legal contracts are entered into at the corporate level (Cunningham & Turnbull, 1982) but all individuals involved in the buyer-seller relationship are bound by the terms of the contract. Explicit contracts provide two primary benefits to exchanging parties. First, explicit contracts provide the protections available through the legal system should something go wrong (Beale & Dugdale 1975). Second, they regulate the relationship by furnishing a plan for the future (Macneil 1980). For example, Bowersox (1990) notes that contracts pertaining to inter-firm logistics systems should detail contingency plans for dissolution of the relationship.

Explicit contracts may become liabilities if they reduce the flexibility of the relationship partners in adapting to environmental changes (Reve 1986). It is almost impossible for a contract between two firms to account for every possible set of circumstances and interactions that arise. This becomes even more difficult as the relationship evolves over time. Relational contracting literature stresses the importance of norms in addition to legal contracts to operationalize formal and informal governance between firms. The relational contracting paradigm has its roots in the sociology of contracts (Macneil, 1980). With relational exchange, contracts are not able to be specific in terms of every possible specific with regard to fulfillment of obligations. Non-specific contracts leave room for organizations to interpret the requirements differently (Gundlach and Murphy, 1993). When this happens, disputes can arise. Explicit contracts enable the parties to resort to legal means of dispute resolution. However, reliance on legal means to enforce agreements can be costly in terms of time, resources, and stress on the buyer-seller relationship (Gundlach and Murphy, 1993; Kaufmann and Stern, 1988). Fortunately, extra-legal means of governance can be used to maintain relationships (Macaulay, 1963). Cooperative norms are an important mechanism of extra-legal governance (Macneil, 1980).

COOPERATIVE NORMS

Implicit in relational contracting is the expectation that firms cooperate during the performance of the contract (Collins, 1986, p. 160). Cooperation is necessary in matters which are not explicitly spelled out prior to entering into the contractual agreement (Collins, 1986, p.160). An expectation of cooperation exists over the lifetime of a contract (Collins, 1986, p.160). Cooperative norms are defined as the expectations, attitudes and behaviors the buying and selling

firm have about working together to jointly achieve mutual and individual goals (Cannon & Perreault, 1999). They are based on mutuality of interest and are designed to enhance the well being of the relationship as a whole (Heide and John, 1992). Cooperative norms are critical for the establishment and maintenance of long-term buyer-seller relationships. They create value in the buyer-seller relationships for both customers and suppliers (Frey and Schlosser, 1993). Cooperative norms reflect expectations the buying and selling firm have about working together to achieve goals. As defined here, cooperative norms do not imply one party's acquiescence to another's needs but rather that both parties behave in a manner that suggests they understand that they must work together to be successful (Anderson & Narus 1990).

Fairness

Fairness theory suggests that when unfairness is perceived by customers, they will try to determine who is to blame for the offense and what the motives and intentions were of the offending party (McColl-Kennedy & Sparks, 2003). Suppliers will perceive fairness if buyers have a process and procedure to resolve disputes that is consistent, accurate, and ethical. Fairness encourages companies to behave well (Ryals & Rogers, 2006). In applying fairness theory to buyer-seller relationships, there are several issues that must be considered. First, does the explicit contract provide details about the performance of both parties? If the contract provides explicit details, and the buyer lives up to those promises, then the customer should perceive the relationship to be fair. When situations arise over which the selling firm is perceived by the customer to have some control, the buyer is likely to hold the selling firm responsible for its actions (McColl-Kennedy & Sparks, 2003). If the selling firm's actions are perceived to be consistent with normative rules of behavior, the buying firm is likely to perceive the selling firm's behavior as being fair. Consequently, the following hypotheses are offered:

H1: The greater the extent to which explicit contracts govern the relationship between the buying and selling firm, the more likely the buyers are to perceive the relationship as being fair.

H2: The greater the extent to which cooperative norms govern the relationship between the buying and selling firm, the more likely the buyers are to perceive the relationship as being fair.

RESEARCH DESIGN

The hypothesized model was tested empirically by gathering data from business customers from a division of a Fortune 100 firm. The division sells a complex product. A customer mailing list was provided by the division of the Fortune 100 company. The lists included names of customers who are in an established relationship with the sponsoring firm.

Data was gathered using mail questionnaires. Before designing the questionnaire, depth interviews and focus groups were conducted with salespeople, sales managers and staff mangers in the supplier firm. In addition, depth interviews were conducted with customers who purchase the firm's products or services. The questionnaire was pre-tested on several customers prior to the final version being mailed. Changes to the questionnaire were made based on feedback received from the interviewed customers. The final version was sent to four hundred randomly subjects.

In order to increase response rates, the following steps were taken. All customers were sent a prenotification card. Three days later, a questionnaire was mailed. Each questionnaire had a one dollar incentive attached. Questionnaires were coded with the customer's name and business. Non-respondents were sent a follow-up questionnaire one week after the return deadline. Nonresponse bias was assessed by comparing early respondents with late respondents. Armstrong and Overton (1977) suggest that one way nonresponse bias can be assessed is by comparing the first one-third respondents to the last one-third. No significant differences were found on any of the constructs used in the study ($p > .10$). Two hundred and thirty-four individuals responded to the questionnaire, for a 58.5% response rate.

The respondents spent, on average, $1,000,000 with the Fortune 100 company each year. Most of the respondents' firms conducted business on a national or international basis. Respondents generally had a long-term relationship with their salesperson from the Fortune 100 firm. Over half of the respondents had conducted business with the same salesperson for two years or longer.

Scale Development

Previously validated scales were adapted to create the measures for this study. All of the scales were measured on a Likert format ranging from (1) "strongly disagree" to (7) "strongly agree". Cooperative norms (scale composite reliability = .71) and explicit contract (scale composite reliability = .78) measures were basaed from Cannon and Perreault (1999). The measure of fairness (scale composite reliability = .92) was based on Anderson & Weitz (1992).

RESULTS

Analyses were conducted using LISREL 8.5 in accordance with Anderson and Gerbing's (1988) two-step approach. The covariance matrix was computed using PRELIS 2. The measurement model was analyzed using all 9 items. All items performed well and were retained in the model. The chi-square of the measurement model was 28.01 with 24 degrees of freedom ($p < .260$). Other goodness-of-fit indices indicated that the model achieved a good fit as well (GFI = .96; AGFI = .92; standardized RMR = .05; CFI = .99; RMSEA = .03).

Results of the structural model indicate the model fits well (Table 1). The chi-square of the structural model was 28.01 with 24 degrees of freedom ($p < .260$). Other goodness-of-fit indices

also performed well. Specifically, GFI =.96, AGFI = .92, and CFI =.99, RMR =.05, RMSEA=.04. Parameter estimates and t-values for the hypothesized relationships are also shown in Table 1.

Table 1: Summary of Hypothesized Structural Model

Relationships					**Par. Estimates**	**t-Value**	**H. Supported**
Explicit Contracts → Perceived Fairness (H_1)					0.11	1.24	No
Cooperative Norms → Perceived Fairness (H_2)					0.59	5.50	Yes
Model	**df**	**Chi Square**	**GFI**	**AGFI**	**RMR**	**CFI**	**RMSEA**
Hypothesized Model	24	28.01	0.96	0.92	0.05	0.99	0.04

Interestingly, only one of the two hypotheses was supported. H1 which posited that the greater the extent to which explicit contracts govern the relationship between the buying and selling firm, the more likely the buyers are to perceive the relationship as being fair was not supported (t=1.24). H2 which posited that the greater the extent to which cooperative norms govern the relationship between the buying and selling firm, the more likely the buyers are to perceive the relationship as being fair was supported (t=5.5).

DISCUSSION

The results indicate that cooperative norms which develop in a buyer-seller relationship are far more important in governing the customer's perception of fairness in the relationship. These norms appear to override any effect that explicit contracts have on customer perceived fairness in the relationship. Sales managers should make sure their salesforce understands the role of cooperative norms in buyer-seller relationships. Salespeople should focus on cooperative behavior by working together to achieve goals that are important to the buying firm, without compromising the business necessities that drive the selling firm. The goal of developing and maintaining cooperative norms is to enhance the overall relationship.

Unexpectedly, explicit contractual agreements do not influence the customer's perception of fairness. One explanation for this is that customers expect performance to be completed in a manner consistent with the language set forth in the legal contracts. Meeting these expectations apparently does not influence the customer's perception of fairness. It appears that fairness in a relationship goes far beyond living up to contractual obligations. The give and take that is developed in the course of cooperation between two parties is far more important. Consequently, the legal language that is developed prior to entering in a relationship appears to set the groundwork for the expectations with the customer. Performing only at the level specified in the contract will

not leave the customer with perceptions of being treated fairly, and will likely lead to customer defection over the long run.

Study Limitations

While this study makes helps us to better understand the relationship of explicit contracts and cooperative norms on perceived fairness, it is not without limitations. One limitation of this study is that data were collected from customers of one company. This limits the generalizability of this study. However, respondents represented firms from all industries (28% were in manufacturing, 7% were in wholesaling, 7% were in retailing, 30% were in a service industry, 2% were in agriculture, and 26% were in other industries). While this does not ensure generalizability, it does provide greater confidence that the results represent a cross-section of respondents.

A second limitation of this study is that data were gathered in a cross-sectional survey. Relationships develop over time. A longitudinal study would provide more insight into the formation of inter-firm structure and its subsequent effects on buyer-salesperson behaviors and relationship outcomes.

Another issue that must be addressed is the identification of key informants. They also provide information regarding the properties of the firm relationships. In fact, the key informant method is often used to measure relational properties between organizations (Heide & John, 1991). Key informants should be well positioned to provide information about the research question. While some researchers question the validity of key informants (Phillips, 1981), other researchers maintain that carefully selected informants can give reliable information (John & Reve, 1982). Key informants should be selected on the basis of their knowledge rather than randomly (Heide & John, 1991). Key informants in this study were identified by the salesforce. The salespeople interact with buying firms on a regular basis. The salesforce is in a position to know which key informant can best respond to questions regarding the external environment, inter-firm structure, buyer-salesperson behavior and relationship outcomes. Therefore, the salesforce identified key informants used in this study. Using this approach, the key informants that were targeted were in a position to knowledgeably answer the survey questions.

Areas for Future Research

Future research should focus on variables in addition to cooperative norms that influence customer's perception of fairness in a relationship. While the expectation that firms cooperate during the performance of the contract is implicit, other relational norms such as flexibility and solidarity (Cannon and Perreault, 1999) may also influence firm's perception of fairness in the relationship.

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A STUDY OF MARKET ORIENTATION IN AMERICAN BUSINESS SCHOOLS

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ABSTRACT

The market orientation strategy is based upon the acceptance and adoption of the marketing concept. The market-oriented business recognizes the importance of coordinating the activities of all departments, functions, and individuals in the organization to satisfy customers by delivering superior value. Theory and empirical research suggest that greater levels of market orientation result in a greater ability of the organization to reach its objectives, in other words, higher levels of market orientation suggests better performance. The literature on market orientation however is quite sparse in the area of market orientation in the nonprofit sector. This paper extends the current research on the use of the market orientation strategy by investigating market orientation levels within college and university schools of business in the United States and comparing their levels of market orientation to levels of previously studied for profit businesses. Academic vice presidents and deans of business schools in the United States were surveyed by way of a national mail survey. All of the academic officers (VPs and Deans) were from colleges or universities that held membership in either the Association to Advance Collegiate Schools of Business (AACSB-International) or the Association of Collegiate Business Schools and Programs (ACBSP). These two organizations are both accreditation sources for schools of business. The national survey was responded to by 462 officials. Of the respondents, 223 were business school deans and 239 were academic vice presidents. The market orientation scores of these officials were compared to scores reported in the literature for business managers and also comparisons were made between various groups of the VPs and Deans by position and accreditation affiliation. Each respondent was asked to provide market orientation information about three specific customer or stakeholder groups which included students, parents of students, and employers of students. Overall, 84 different hypotheses were tested. The results of the research indicated that market orientation was significantly higher in the business organizations than in the schools of business. The paper presents details of the research process, findings, and discusses the implications of the research for schools of business.

INTRODUCTION AND DEFINITIONS

Can a particular organizational culture lead to improved organizational performance? If so, can a sought after culture be described and then be measured quantitatively? And, if measurements can be made will comparisons in measurements between organizations be advantageous in helping organizations improve their performance?

This paper investigates these questions, measures a specific component of organizational culture, and compares two types of organizations. The component of organization culture measured is market orientation. The quantitative measurement is accomplished by way of a scaled instrument used in a national survey. The comparisons described in this research are between commercial businesses (for profit entities) and schools of business administration (non-profit entities).

In marketing literature, numerous similar sounding terms are often encountered. These terms are not synonymous and should not be used interchangeably. To help avoid confusion the following descriptions and definitions are provided:

1. The *marketing concept* is a philosophy that advocates that a successful organization begins with identifying customer needs and wants, decides which needs to meet, and involves all employees in the process of satisfying customers.
2. *Marketing orientation* implies that the marketing function is the most important function within the organization and that all other functional areas are driven by the demands of the marketing department.
3. *Market orientation* refers to an organizational culture in which everyone in the organization is committed to the customer and adapts in a timely manner to meeting the changing needs of the customer. Market orientation blends a company culture dedicated to providing superior value with successfully achieving a customer focus, acquiring competitor intelligence, and maintaining interfunctional coordination. It is viewed as the implementation of the marketing concept.

DISCUSSION AND LITERATURE REVIEW

The marketing concept advocates that all activities of a firm should be directed toward satisfying the customer. The market orientation construct has been developed, defined and measured to operationalize the implementation of the marketing concept. Narver & Slater (1990) and Kohli & Jaworski (1993) concluded that market orientation is the type of business culture and climate that can be created within an organization that will most effectively lead to the behaviors and actions necessary to achieve a sustainable competitive advantage. The degree that the marketing concept has been implemented is manifested in the behaviors and actions of the organization. This degree is the level of market orientation. Or simply, the methods and strategies utilized by a firm to succeed.

Narver and Slater (1990) describe a firm that is market oriented as one whose culture is systematically and entirely committed to the continuous creation of superior value for its customers. Others characterize a market orientation culture as one in which a business focuses on customer wants and needs, continuously analyzes its competition, and coordinates all organizational activities toward customer satisfaction (Kotler 1980; Narver, Park & Slater 1992; Slater & Narver 1994; Siguaw, Brown &Widing 1994). Theory suggests and empirical research has found that greater levels of market orientation within a business result in a greater ability of the organization to achieve its objectives (Barksdale & Darden 1971; Houston 1986; Kohli & Jaworski 1990; Narver & Slater 1990; Jaworski & Kohli 1993; Siguaw, Brown & Widing 1994). Research to date however has only begun to address market orientation measurements in non-profit organizations such as universities (Harmon, Webster, & Hammond 2003).

A high degree of market orientation indicates that individuals in the organization are committed to customer satisfaction and remain so over time by recognizing changes in customer needs and wants, and reacting and adapting in a satisfactory manner to those changes. The process is dynamic and subject to forces external to the organization such as its competitors and the general state of the economy, and it is a process that should be viewed on a continuum. In other words, it is not a culture that a business either has or does not have, but is rather a matter of degree. Slater & Narver (1994) note that market conditions and competitive threats are never static; and, a high degree of market orientation is not achieved overnight but rather over time given adequate commitment from the firm's management and time for a supportive culture to develop.

Frequently market orientation is confused with marketing orientation. A firm that has a marketing orientation recognizes the importance of the marketing function in the organization and advocates satisfying the customer. Such a firm might, for instance, place more importance on the marketing department than it does on the accounting department, or the production department. Conversely, the market oriented organization recognizes the importance of coordinating the activities of all departments, functions, and individuals in the organization to satisfy customers by delivering superior value to the customer. The market oriented organization continually monitors customer information, competitor information, and marketplace information to design and provide superior value to the customer.

Marketing literature has numerous examples of successful market oriented firms. For example, Wal-Mart's success is attributable to its level of market orientation (Slater & Narver 1994). Specifically, Wal-Mart's ability to recognize changes in the retailing industry and the subsequent development of an efficient information sharing system to manage the flow of products from the manufacturer to its many retail outlets contribute heavily to its growth. Slater & Narver (1994) also note that Western Union failed to monitor the competitive environment and detect important technological changes. They subsequently lost a significant portion of their market share.

For decades the philosophy expressed by managers was a belief in the practical importance of a successful marketing function as an effective way to help the organization to achieve its

objectives (Felton 1959; Levitt 1969; McNamara 1972). More recently, researchers have found that greater levels of market orientation result in a greater organizational ability to achieve its objectives (Houston 1986; Narver & Slater 1990; Jaworski & Kohli 1993; Kohli & Jaworski 1993; Siguaw, Brown, & Widing 1994). The measurement of market orientation in the business organization was pioneered by Narver & Slater (1990). Drawing from theoretical research, they operationalized the market orientation construct as consisting of three separate and equally important components: (1) customer orientation, (2) competitor orientation, and (3) interfunctional coordination. Narver & Slater (1990) reported market orientation scores for three separate types of businesses: commodity, specialty, and distribution. The commodity and distribution businesses produced and sold generic products designed for a wide range of customers. The specialty business firms produced and sold products that were individualized (relative to the commodity products) for specific customer orders. By adapting its generic or base product, the specialty products firm creates superior value and thereby provides more benefit to the customer. They created multiple item scales for the measurement of each of the components. The scales included antecedent variables, moderator variables, and consequence variables, e.g., performance. Finally, the scale measured overall market orientation by averaging the three components or dimensions of the measurement scale.

Empirical research on the market orientation culture has focused on the business enterprise and has not addressed specific applications in non-profit organizations. Non-profit organizations such as churches, civic organizations, universities, and hospitals focus on customers or clientele wants and needs just as the business concern does. Given that successful businesses report higher levels of market orientation, we might expect a similar situation to be present in non-profit organizations as well. From a large group of potential non-profit organizations, we chose certain schools of business administration to research because of their seeming similarities to business enterprises. Specifically, a school of business has a number of constituencies to serve, it must determine wants and needs of its clientele, it operates to provide value to its constituencies, it is influenced by external factors, and it is an organization with many interfunctional areas and departments. Although a school of business administration does not exist to create profit or shareholder wealth, it does seek to achieve organizational goals such as surviving as an organization, increasing its professional reputation, improving its facilities and faculty, and growing its enrollment and endowment. Additionally, business schools teach the principles, methods, and techniques used by businesses in their pursuit of success and business school deans and faculty often have a business background. These factors tend to suggest that business school leaders (deans) and business leaders (managers) may possess similar managerial mindsets, values, and temperaments as well as implementing similar leadership styles, methods and techniques.

Recalling that the philosophy of providing superior value to customers (relative to competitors) is the marketing concept, this philosophy should be applicable to universities as they too have customers, competitors, external influences, and seek to accomplish organizational goals. Although the primary objective for the business enterprise is profitability, Slater & Narver (1994)

argue that in the non-profit organization, survival is analogous to profit in a business enterprise. Specifically, to satisfy constituencies in the long run requires that revenues must be adequate to cover long-run expenses and therefore survive. Like the business enterprise, the non-profit entity has organizational objectives that is seeks to achieve.

As in the profit-seeking business, quality, performance, and continuous improvement are objectives of schools of business administration both in the short-term and the long-term. Progress in achieving such objectives is part of the evaluative process addressed by the Baldridge Education Pilot Criteria (Karathanos & Karathanos 1996) and the AACSB—International Standards. Also, *U.S. News and World Report* (Morse and Flanigan 2000), *Peterson's* (2000) and other publications issue annual college guides that provide various measures of performance to assist students and parents in the college selection process. Consequently, the leaders of schools of business administration should be interested in an organizational culture that could positively impact the quality and performance of their schools. This research collects, analyzes and reports on the market orientation culture within schools of business administration that are members of AACSB-International and ACBSP. Member schools of these two organizations all choose to join the accreditation organizations, volunteer to undergo the accreditation process, and must meet accreditation standards on a continuing basis.

The target populations of this research were business school deans and academic vice presidents of member schools of the AACSB-International and the ACBSP. These schools were selected for study because the accrediting organizations hold to a commitment of continuous improvement in business education. Schools that are accredited by AACSB-International or ACBSP have undergone a series of reviews over time, have demonstrated success at achieving organizational goals, and therefore may exhibit an organizational culture with a bent toward market orientation, much like that of successful businesses.

RESEARCH QUESTIONS AND HYPOTHESIS

Although there are numerous customers or stakeholders that could be addressed in the university setting, we limited our examination to three distinct stakeholder groups, i.e., students, parents of students, and employers. The objectives of the study are to answer the following research questions:

1. What are the mean levels of market orientation of schools of business administration as perceived by the following university administrators?

   Academic vice presidents
   Business school deans

2. How do these mean levels of market orientation compare to the reported levels by business managers from previous research on commercial businesses?

To answer question one, the reported market orientation mean scores of the deans and vice presidents were calculated and placed in seven groupings for each of the three customer groups. For each of the groups, the mean market orientation scores for each of the four dimensions of market orientation (customer orientation, competitor orientation, internal coordination, and overall market orientation) were computed for each of the three stakeholder groups (students, parents of students, and employers of students). The seven groups are:

1 All administrators (Deans and Vice Presidents)
2. All Deans
3. All Vice Presidents
4. AACSB Deans
5. ACBSP Deans
6. AACSB Vice Presidents
7. ACBSP Vice Presidents

To answer research question two, the mean scores of the academic administrators were compared to the mean scores of specialty business managers as reported by Narver and Slater (1990). The general hypothesis was that there was no difference between the market orientation mean scores of the business mangers and the academic administrators. This general hypothesis was tested by way of a series of t-tests that compared mean scores of the academic administrators by the seven groups noted above to those of the business managers. For each of the seven groups, t-tests were conducted separately on the four components of market orientation for the three stakeholder groups (students, parents and employers). This process required the use of 84 t-tests in all (seven groups times four market orientation components times three stakeholder groups).

METHODOLOGY

A cover letter, survey instrument, and business reply envelope were mailed to deans of 1052 schools of business and to the academic vice presidents of the same schools. Schools were selected based on their membership in either the AACSB-International or ACBSP. After a follow-up letter and questionnaire, 462 usable responses were received from the 2104 survey instruments, a response rate of 22%. Each key informant (Campbell 1995; Phillips 1981) was asked to complete the survey and return it in the business reply envelope. Copies of the survey results were offered and confidentiality was assured. Adequate cell size for analyzing each group is indicated by the number of responses by each membership group as shown in Table 1.

Table 1: Composition of Respondents School of Business Deans and Academic Vice Presidents			
	AACSB	ACBSP	Total
Dean	139	84	223
Vice President	102	137	239
Total	241	221	462

The questions to measure the three subscales (competitor orientation, customer orientation, and organizational coordination) in the Narver and Slater original scale were modified somewhat to conform to the vocabulary and the types of stakeholders prevalent in academic institutions. For example, two of Narver and Slater's questions were:

1. Our objectives are driven by satisfaction of our customers.
2. We measure satisfaction of our customers systematically and frequently.

The questions were amended for the current research and were worded as follows:

1. Our objectives are driven by satisfaction of our students.
2. We measure satisfaction of our students systematically and frequently.

Churchill (1979) suggests that the appropriateness of scales borrowed from other studies needs to be addressed before survey research is accomplished. Therefore, all our scale items were pre-tested before mailed to the deans. We first consulted with several deans and other university administrators. These consultations resulted in a cover letter that more clearly defined the purpose of the research and rewording of several questionnaire items.

Forty-five (45) questions were used in the collection of the data. Each of the questions were to be answered using a seven (7) point scale that was anchored with "not at all" (1) and "to an extreme extent" (7) so that the higher numbers represented a higher (or greater) level of market orientation. The scales were subjected to reliability analysis, exploratory factor analysis and confirmatory factor analysis prior to use (Wheaton, Muthen, Alwin, & Summers 1997; Bentler & Bonett 1980; Marsh & Hocevar 1985; Bentler 1990; Browne & Mels 1992; and Browne & Cudeck 1993). Results of these analyses indicated satisfactory reliabilities (ranges from .75 to .91), satisfactory item-to-total correlations (ranges from 0.4 to 0.8), exploratory factor loadings ranging from 0.4 to 0.9, and confirmatory factor loading ranging from 0.5 to 0.8. Additionally, the confirmatory factor analysis demonstrated generally acceptable fit. These test results included comparative fit index measures ranging from .992 to 1.000, a Tucker-Lewis index ranging from .970 to 1.000, and the CMIN/DF ranging from 1.011 to 4.573. The RMSEA low values at the 90% confidence interval fell below 0.10 for all scales.

Although the literature indicates (e.g., Berdie 1989) that the presence of nonresponse bias in mail surveys does not necessarily alter the survey findings, we nonetheless proceeded to test for nonresponse bias. We used Larson and Catton's (1959) proxy methodology wherein potential nonresponse bias between early and late respondents is examined. These tests indicated no statistically significant difference.

Then, following the methodology of Narver and Slater, we combined the three subscales to form an overall, or composite, measure of market orientation. We then conducted separate t-tests for each of the four dimensions of market orientation to determine if a statistically significant difference existed between the various market orientation mean scores of the deans and vice presidents and the mean scores of certain business managers.

In their 1990 research, Narver and Slater reported market orientation scores for three separate types of businesses: commodity, specialty, and distribution. We believe schools of business demonstrate more of the characteristics of specialty businesses than the characteristics of the commodity or distribution businesses. The commodity and distribution businesses in the Narver and Slater study produced and sold generic products designed for a wide range of customers. The specialty business firms produced and sold products that were individualized (relative to the commodity products) for specific customer orders. By adapting its generic or base product, the specialty products firm creates superior value and thereby provides more benefit to the customer. This type of firm is challenged to constantly monitor the competitive environment and to be vigilant for changes in the customer's requirements. Likewise an AACSB-International and ACBSP schools of business seek to provide a product that is individualized through its programs of study or majors. The AACSB-International or ACBSP schools would argue that a superior product (relative to non-member schools) is provided that would benefit its customers (or constituencies). We therefore used the market orientation scores for specialty business as reported by Narver and Slater (1990) for our comparisons.

RESULTS

Because of the many separate t-tests performed, the data and tests results are summarized in three tables that follow. The three summary tables labeled tables 2, 3, and 4, show the mean scores of the specialty business managers and the mean scores of the academic administrators by the seven groups described earlier. The tables also provide the results of the t-tests.

Table 2: Mean Market Orientation Scores and t-test Results University Administrators Compared to Specialty Businesses (Narver and Slater, 1990)
Stakeholder: Students

	Customer Orientation	Competitor Orientation	Internal Coordination	Overall Market Orientation
Narver and Slater				
Specialty Businesses n=75	5.05	4.71	4.53	4.77
All Administrators (Deans				
And VPs)	4.76**	3.97**	4.40**	4.38**
Sample – cell size	462	462	462	462
All Deans	4.57**	3.72**	4.18**	4.16**
Sample – cell size	223	223	223	223
All Vice Presidents	4.91**	4.18**	4.57^	4.55**
Sample – cell size	239	239	239	239
AACSB Deans	4.55**	3.71**	4.13**	4.12**
Sample – cell size	139	139	139	139
ACBSP Deans	4.60**	3.72**	4.25**	4.23**
Sample – cell size	84	84	84	84
AACSB Vice Presidents	4.77**	4.17**	4.44^	4.46**
Sample – cell size	102	102	102	102
ACBSP Vice Presidents	5.02^	4.19**	4.67^	4.62*
Sample – cell size	137	137	137	137

(Scale 1-7; 1 = low market orientation; 7= high market orientation)
*significance .05; ** Significance .01; ^ Not Significant

Table two shows the results of the market orientation scores reported toward the students. Table three reports the results of market orientation toward parents of students. Table four reports the results of market orientation toward employers of students. In 80 of the 84 separate t-tests conducted, levels of market orientation were found to be significantly higher in the business setting than in schools of business. All results in the twenty-one tests that measured differences in the dimension of overall market orientation indicated statistically significant differences, with businesses demonstrating the higher level of market orientation.

Table 3: Meant market Orientation Scores and t-test Results University Administrators Compared To Specialty Businesses (Narver and Slater, 1990)
Stakeholder: Parents of Students

	Customer Orientation	Competitor Orientation	Internal Coordination	Overall Market Orientation
Narver and Slater				
Specialty Businesses n=75	5.05	4.71	4.53	4.77
All Administrators (Deans				
And VPs)	2.65**	3.66**	3.70**	3.35**
Sample – cell size	462	462	462	462
All Deans	2.57**	3.40**	3.56**	3.20**
Sample – cell size	223	223	223	223
All Vice Presidents	2.72**	3.85**	3.82**	3.46**
Sample – cell size	239	239	239	239
AACSB Deans	2.59**	3.41**	3.55**	3.20**
Sample – cell size	139	139	139	139
ACBSP Deans	2.54**	3.39**	3.57**	3.21**
Sample – cell size	84	84	84	84
AACSB Vice Presidents	2.80**	3.87**	3.81**	3.49**
Sample – cell size	102	102	102	102
ACBSP Vice Presidents	2.65**	3.85**	3.83**	3.44**
Sample – cell size	137	137	137	137

(Scale 1-7; 1 = low market orientation; 7= high market orientation)
*significance .05; ** Significance .01; ^ Not Significant

IMPLICATIONS

These findings indicate that businesses perceive a greater importance and have made greater progress in the implementation of the marketing concept vis-à-vis university schools of business as perceived by deans and academic vice presidents. If, as previous research has found, organizations can improve their effectiveness by increasing levels of market orientation, university schools of business would seem to have ample opportunity to improve.

Table 4: Mean Market orientation Scores and t-test Results University Administrators Compared to Specialty Business (Narver and Slater, 1990)
Stakeholder: Employers of Students

	Customer Orientation	Competitor Orientation	Internal Coordination	Overall Market Orientation
Narver and Slater				
Specialty Businesses n=75	5.05	4.71	4.53	4.77
All Administrators (Deans				
And VPs)	4.37**	3.770**	4.14**	4.14**
Sample – cell size	462	462	462	462
All Deans	4.20**	3.70**	3.99**	3.98**
Sample – cell size	223	223	223	223
All Vice Presidents	4.49**	4.08**	4.26**	4.27**
Sample – cell size	239	239	239	239
AACSB Deans	4.06**	3.69**	3.91**	3.89**
Sample – cell size	139	139	139	139
ACBSP Deans	4.44**	3.72**	4.11**	4.12**
Sample – cell size	84	84	84	84
AACSB Vice Presidents	4.51**	4.11**	4.22**	4.28**
Sample – cell size	102	102	102	102
ACBSP Vice Presidents	4.48**	4.06**	4.29**	4.27**
Sample – cell size	137	137	137	137

(Scale 1-7; 1 = low market orientation; 7= high market orientation)
*significance .05; ** Significance .01; ^ Not Significant

As virtually all of the academic responders to the survey perceived a lower level of market orientation than did their business counterparts, a significant opportunity would seem to exist for schools that will put more effort into their market orientation. As students of the university may be viewed as the most visible of the numerous markets served, market orientation efforts focused at students would seem to have the potential for the fastest and highest payoff. Examples of such payoffs might include:

1. An increase in enrollment
2. An increase in the hit rate (increase in percent of applicants that actually enroll)
3. An increase in the retention rate of current students

4. An increase in future giving by alumni
5. An improvement in rankings by outside organizations

The enhancement of market orientation toward the parent group could also pay dividends to the university. Additional parental involvement with the university should lead to the following:

1. Increased participation in the educational process with their students
2. A building of goodwill that might benefit the school in future recruiting and retention efforts
3. Willingness of parents to give more freely to the programs of the school
4. Increase feedback from another stakeholder group of the school
5. Enhanced parental impact on the purchase decision when a student selects a college

Improved market orientation toward employers of students might also benefit the school in a number of ways such as:

1. Engaged employers would be more likely to consider hiring school graduates as such employers would recognize themselves as school stakeholders
2. Academic programs might benefit from employer involvement and feedback thereby enhancing the educational 3. and pre-professional aspects of the college experience for students
4. Closer employer ties should benefit school graduates by providing more opportunities for employment
5. Involved employers would be more likely to assist in intern programs

In view of Narver and Slater (1990) and Kohli and Jaworski (1993) findings that enhanced levels of market orientation will improve the competitive advantage of organizations, business schools appear to be organizations ripe to take advantage of the market orientation concept. Focus on creating market orientation culture should serve both schools and their various stakeholders in more effectively achieving the school mission.

Our conclusions are tempered by the finding of Noble, Sinha, & Kumar (2002) that there appears to be no single strategic orientation that leads to superior performance in every case and as previously stated, building a market orientation culture within an organization is not a quick fix but rather a continuous process.

FUTURE RESEARCH

The research we report suggests several needs for additional research. For example, research should be undertaken to examine the impact or influence that variables such as size of a school, school affiliation (public or private), admission standards, placement efforts, or recruiting efforts have on market orientation. Such research would further our understanding of the market orientation construct and its application to higher education.

Additional research in organizational culture including that of market orientation should be conducted in other non-profit organizations. Of particular interest would be an expansion of this line of research into other areas of higher education, into governmental agencies that provide services to the public, and into the non-profit side of the healthcare industry. Also, research that investigates if differences exist between the sexes in the building of a market orientation culture would be a contribution to the literature.

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PAY FOR PERFORMANCE: CONTRARY EVIDENCE AND A PREDICTIVE MODEL

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ABSTRACT

This paper presents research from various disciplines and various settings revealing counter-intuitive results deriving from the use of rewards. It is hypothesized that these results obtain by virtue of the salience of the reward – contrary to models such as expectancy theory which suggest that to be effective, rewards must be salient. A salient reward distracts the subject from fully engaging in the process required to obtain the reward: shortcutting. The reward also seems to interfere with a person's need for autonomy. A model is proposed for understanding the effects of incentives as major components of compensation systems. This model relates the negative effects of reward contingency on three organizational outcomes: in-role performance, extra-role performance, and turnover.

INTRODUCTION

Motivating employees by using performance-contingent rewards is a long-established management practice. Pay-for-performance is used to promote two ends. First, it is expected that these systems will motivate employees to increase their effort and thereby their performance. Expectancy theory clearly posits that effort is increased when meaningful rewards are offered (Vroom, 1964; Porter & Lawler, 1968). "Managers try different methods of incentives or fear to get productivity out of their subordinates. …However, there is a burgeoning literature suggesting that the use of incentives and attempts to cajole may be experienced by employees … as controlling or pressuring and that such attempts to manipulate people have a significant downside" (Baard, 2002, p. 256). Second, these compensation plans are often introduced to better align the efforts of employees with organizational goals and objectives set by management. According to Barnard, alignment of individual self-interest with the interests of the organization is the basis of organizational efficiency. "... [T]he efficiency of a cooperative system is its capacity to maintain itself by the individual satisfactions it affords." (Barnard, 1938, p. 57)

Expectancy theory describes worker motivation as a function of the individual's expectancy of successful performance (expectancy), the valence or salience of the reward (valence), and the belief that performance will lead to reward (instrumentality). Following expectancy theory,

compensation planning should be based, at least in part, on establishing the proper goal and reward combinations that will effectively motivate employee performance.

Several researchers and theorists have raised serious questions, however, about the efficacy of carrot-and-stick techniques of motivation. Herzberg (1959) and Levinson (1973) were among the first to seriously question the use of incentives as a management tool. Festinger (1967) believed rewards would affect the attitude of individuals toward their work and their understanding of why they are working. Following his theory of cognitive dissonance, Festinger predicted rewards would reduce intrinsic motivation.

In order to test the relationship between monetary rewards and intrinsic motivation, Deci (1971) conducted one laboratory study and one field study. In the laboratory experiment, 24 undergraduate psychology students were divided into two twelve-person groups – one experimental and one control. The subjects were given the Parker Brothers game called Soma and diagrams showing configurations they were asked to reproduce. In three thirteen-minute trials, they were asked to complete as many as possible.

The experimental group was paid $1 for each configuration successfully reproduced in trial two. These subjects were told there was only enough money to pay them for one trial and thus they could not be paid for the third trial. To measure intrinsic motivation, the experimenter left the room for eight minutes in the middle of each session. A guise was used to explain the interruption. During the eight-minute break the subjects were free to play with the game, read magazines, which were provided, or simply wait. The amount of time each subject spent playing the game during the interruption was the measure of intrinsic motivation.

The test used was whether the difference in time spent playing Soma between the second and first interruption) was different for the experimental group when compared to the control group. The difference was significant at the 0.10 level. The introduction of rewards in trial two for the experimental group significantly reduced the amount of time spent playing the game in the second free-choice period when compared to the control group.

In a field replication designed to test the same effect, Deci (1971) utilized eight students working on the college newspaper. Here the measure of intrinsic motivation was time spent writing headlines. Using a four-person experimental group and a four-person control group with four trial periods, the students were assigned to write headlines. It was assumed that the more highly motivated students would require less time to write a headline. As before, the experimental group was paid in trial two ($.50 per headline) and the test was the difference between pre and post trial time for the experimental group compared to the difference for the control group. This test achieved significance at .01 for the trial-three difference and .10 for the trial-four difference. The introduction of a monetary incentive increased the post-reward trial times for writing headlines.

The headline-writing time difference for trial two – the reward trial – compared to trial one was nominally lower for the experimental (reward) group than for the control group but Deci did not test the significance of this result.

Deci (1972) replicated the Soma experiment using a sample of 96 undergraduate students. In this replication Deci sought to relate not only the relationship between monetary reward and intrinsic motivation, but also to relate verbal reinforcements and intrinsic motivation. Deci predicted that, as before, the use of monetary rewards would diminish intrinsic motivation. He also hypothesized that verbal reinforcements would serve to increase motivation. This study also developed, however, a non significant but interesting suggestion that even praise, when seen as controlling, can lead to a reduction in intrinsic motivation. Deci proposed that verbal reinforcements in particular, may exhibit an inverted-U shaped relationship with intrinsic motivation. At low levels verbal reinforcements would tend to increase intrinsic motivation, while at higher levels, when they are seen as controlling, they would actually serve to reduce it.

This result led Deci to conclude: "There are at least two aspects to any reward, a "controlling" aspect and an "informational" or feedback aspect. The controlling aspect leads to a decrease in intrinsic motivation by changing the perceived locus of causality, while the feedback aspect leads to an increase in intrinsic motivation by increasing the person's sense of competence and self-determination." (Deci, 1972 p. 118)

In yet another replication of this effect Pritchard, Campbell, & Campbell (1977) used a sample of undergraduate psychology students who were experienced chess players and an intrinsically interesting (for this sample) chess problem to solve. The control (non-rewarded) group consisted of 8 male and 3 female members. The experimental group consisted of 14 male and 3 female members. Pritchard, et al., used a free choice period during which intrinsic motivation was measured as the amount of time spent on a chess problem. They also, however, used a self-report instrument to measure task satisfaction. The groups were studied in two periods one week apart such that one measure of intrinsic motivation was taken before any reward was offered to the experimental group and a second measure was taken one week later at the second non-reward session. The experimental group was aware that there would be no reward prior to the second session. This study produced three significant results. First, intrinsic motivation was reduced after the introduction of a monetary reward contingent upon performance. This was true for both the time measure for intrinsic motivation as well as the self-report instrument (although the self-report was only marginally significant). Second, the effect of offering a reward was powerful enough to produce results one week after its introduction – in a group of chess players. Third, there was no performance difference for the group that was paid when compared to the control group. In other words, one might expect that the increase in extrinsic motivation would more than offset the reduction in intrinsic motivation. If this were true, performance would have shown improvement in the presence of contingent reward. It did not.

One principal effect of using monetary rewards (extrinsic motivation) to induce and direct (control) behavior is the reduction of intrinsic motivation, the interest, or motivation one derives from the task itself. Deci's research has led him to conclude that contingent rewards interfere with the individual's need for self-determination, i.e., the need to feel autonomous. The intended effect

of contingent rewards is, of course, to control and direct the motivation, and thereby the behavior, of those individuals. This constraint on individual self-determination serves to reduce the individual's intrinsic motivation in the task itself. Offering a reward induces the individual to focus on ends instead of means; outcome instead of process. This alone may be sufficient to reduce the individual's intrinsic motivation, or interest, in the means (or the process) of the task itself.

PAY FOR PERFORMANCE

Baker, Jensen, & Murphy (1988) reviewed aspects of compensation where economic theory and actual practice seem to disagree. They summarized empirical evidence revealing inconsistencies between the use of incentives in practice and the use of incentives as predicted by economic theory. After reviewing Deci's criticisms of the motivational effect of monetary incentives they concluded that " ... careful examination of the criticisms of monetary pay-for-performance systems indicates not that they are ineffective but rather that they are too effective: strong pay-for-performance motivates people to do exactly what they are told to do. Large monetary incentives generate unintended and sometimes counterproductive results because it is difficult to adequately specify what people should do and therefore how their performance should be measured (p. 597)." They found a wide discrepancy between what would be expected if compensation and reward schemes were derived purely from economic theory and the reality of compensation and reward systems in general use. They attributed this discrepancy to problems with performance evaluation systems, lack of employee trust in management to provide the promised rewards, and management's distaste for conflict that might arise should accurate appraisals be given.

If human motivation is described by economic theory, i.e. expectancy theory, then incentives and reward schemes should be extremely common elements of compensation plans and they should govern a relatively large proportion of remuneration. Employees who are rated as top performers should receive compensation amounts proportionate to their performance levels. Evidence from two large manufacturing firms, (reported in Medoff & Abraham, 1980) however, shows the pay differential in these firms for being evaluated as outstanding or excellent as opposed to not acceptable is 7.8% for one firm and 6.2% for the other. Baker, et al., concluded: "ultimately it may be that the psychologists, behaviorists, human resource consultants, and personnel executives understand something about human behavior and motivation that is not captured in our economic models" (p. 615).

Guzzo, Jette, and Katzell (1985) performed a meta-analysis of the effects of psychologically based interventions, including monetary rewards, on worker productivity. This analysis was based on 98 workplace studies of planned change that included objective measures of the consequences of the change. These 98 studies produced 37,371 measurements of worker productivity in companies providing goods and services. The results of this meta-analysis produced no significant

effects for financial incentives. The non-significant result for financial incentives suggests that, on average, the motivational value of incentives across these studies was zero. The use of financial incentives did not produce performance improvement.

In another meta-analysis of the effects of organizational behavior modification on performance, Stajkovic and Luthans (1997) arrived at similar conclusions. This meta-analysis was based on 19 studies with a total sample size of 2,818 subjects. It specifically included only studies based on contingent reinforcements (money, feedback, social praise) administered as an external intervention by a manager or researcher.

Separating the studies into manufacturing and service categories allowed them to look at the effects of various organizational behavior modification techniques on each sector. For manufacturing businesses, Stajkovic and Luthans determined that financial incentives for factory workers were not effective, i.e., the relationship of financial incentives to performance was not significant. For service businesses, which of course would include sales-related businesses, customer-service departments, and other white-collar employees, even though the effects of financial incentives on performance were statistically significant and positive, the results of combining non-financial incentives, e.g. social reinforcement, with performance feedback were found to produce much larger effects and, as the authors pointed out, are less expensive.

Darmon (1974) studied a sample of 23 salesmen working for the International Harvester Company. This study encompassed four years – two years before and two years after a change in their compensation plan. Darmon proposed five hypothetical responses of salespeople to financial incentives. They might: (1) persist in prior habit patterns unaffected by the change in incentive, (2) strive to maximize the sales results regardless of earnings, (3) change their behavior in order to reach some acceptable level of income, (4) change their behavior to maximize income, or (5) change behavior so as to maximize satisfaction. Darmon built nine models that focused on allocation of selling time by product line and work intensity level. He then validated the model by forecasting the results for each salesperson for each year in the study. By ranking the models from best fit to worst fit for each period and summing the ranks for each model, Darmon was able to select the model with the lowest sum as the best model to describe the response of the salesmen to the compensation (commission structure) change. He concluded that salespeople seek to perform at a level that produces a desired income level – model number 3 above. In his words: "This study has provided additional evidence to support the proposition that financial incentives have some effect on human behavior. ...In addition, this study has shown that if financial incentives do have some impact on salesman behavior, these effects may not always be those generally assumed by marketing practitioners and theorists" (Darmon, 1974, p. 424).

AUTONOMY, CONTROL, AND MOTIVATION

Woodworth (1918) proposed that even though an action or behavior of an organism can be initiated by extrinsic means, "only when it is running by its own drive ... can it run freely and effectively" (p. 70).

Harlow, Harlow, and Meyer (1950) noted that monkeys learned to solve puzzle mechanisms for no other reward than the apparent pleasure they derived from the task itself. These researchers may have been the first to use the term *intrinsic motivation* to describe this phenomenon. In subsequent research, Harlow (1950) demonstrated that monkeys performed some problem-solving tasks better when they were intrinsically motivated than when they were being rewarded for their behavior.

Woodworth (1958) and White (1959) proposed that a need for effectance is a basic drive. Being able to affect the environment in such a manner as to produce results that effectively provide for the maintenance of an organism is the definition of competence. Competence motivation, i.e., the drive to become autonomous and self-sustaining, is the basis for learning (Deci and Ryan, 1985). The reward for competence-motivated behavior is the feeling of effectiveness or competence that results. An interesting characteristic of this type of motivation is that mastery or competence, once achieved, does not result in satiation of the drive – as hunger is satisfied by food. The attainment of competence or mastery can only lead to the need to stretch, to attain the next challenge, and to reach for higher and higher levels of competence (Deci and Ryan, 1985).

The George and Weitz (1989). model of adaptive selling is based on just such an intrinsic orientation. Of course, sales representatives are generally rewarded vased on their performance in selling and servicing their products. The question of interest, then, is what happens to intrinsic motivation and performance in the face of extrinsic rewards?

deCharms (1968) proposed that when a person is rewarded for intrinsically motivated behavior, he or she will perceive a shift in the locus of control, i.e., a loss of autonomy, and will feel manipulated by the rewards. Deci (1971) confirmed that when monetary rewards are given in order to encourage or direct behavior, intrinsic motivation is reduced. In subsequent research, Deci (1972) proposed that rewards of any kind are comprised of at least two elements, a controlling element as described by deCharms (1968) and an informational element. While the informational element provides information about competence and tends to increase intrinsic motivation, the controlling element, at the same time, tends to reduce intrinsic motivation. When money or other salient rewards are offered, the controlling element overpowers the informational element resulting in a net reduction in intrinsic motivation.

It would seem that intrinsic motivation is inextricably linked to the experience of self-determination, the feeling of being autonomous in one's actions (Ryan & Deci, 2000). The need to develop competence and to become self-determining is fundamental, but in order to be self-determining one must experience control over one's actions (Deci, 1989).

RELATED RESEARCH

Many researchers have established the connection between intrinsic motivation and performance in non-work settings. For example, Miller (1961) asked 72 nine-year-old boys to distinguish between simple drawings of faces. Some were paid when they succeeded, others were simply given informational feedback, i.e., whether they were correct or not. Those boys who were paid made more mistakes than those who weren't. Amabile (1983) was able to show that intrinsic motivation in school children leads to greater creativity. Janet Spence (1970) found that children rewarded with candy performed less well than children given no reward when asked to remember which of two words was designated by the experimenter as "right."

In other studies with school children, (Deci, Schwartz, Sheinman, & Ryan, 1981; Ryan and Connell, 1989; Ryan and Grolnick, 1986) it has been shown that teachers who were generally supportive of the self-determination of their students "had a positive effect on the intrinsic motivation, self-esteem, and perceived competence of their students" (Deci, 1989 p. 581).

The counter-intuitive effects of rewards have also been found in studies of adults. For example, Schwatrz (1982) found that adults who were asked to observe a game and decipher the rules of the game were less successful when offered a reward than in a non-reward trial. Amabile, in an unpublished research in 1992, found that professional artists who were commissioned to create a work produced a less creative work than another group working without a commission. Creativity was judged by the artists themselves and by peers with the same result.

In a workplace study, Deci (1989) was able to further test the efficacy of these concepts. Using data from 23 managers and their subordinates, Deci was able to show that managers who support self-determination have an effect similar to that of the teachers in the earlier studies. Specifically, Deci, Connell, and Ryan were able to develop an intervention based on teaching managers to support self-determination in their subordinates. This intervention, over time, produced significant improvement in several work climate variables. Improvements occurred in feeling non-pressured and in general satisfaction. In addition, several items included in the job satisfaction measure also showed significant improvements, i.e., quality feedback, opportunity for inputs, security, trust in the corporation, and potential advancement.

The intervention/training program focused on three elements critical to self-determination: choice, non-controlling feedback, and acceptance and acknowledgement of the others perspective. By training managers in the importance of self-determination in workers, it was expected that creativity, learning, self-esteem, and the emotional character of the workforce would all be positively impacted. While there was support for this outcome, it also became apparent that when workers are fearful of pay and security issues, the gains from supporting self-determination are likely to be inconsequential – just as Maslow might have predicted. Perhaps the first and strongest response to the intervention supporting self-determination was in trust. It is important to note that trust can be regained through the effort to support self-determination.

SALES REPRESENTATIVES AND INTRINSIC MOTIVATION

Control Systems

Paying sales representatives by commission serves not only as a means of compensation, but also as a mechanism to motivate and direct their efforts (Darmon, 1974). Building on this concept and on the Deci (1971, 1972, 1985) research into self-determination and intrinsic motivation, Anderson and Oliver (1987) re-characterized contingent compensation schemes as outcome based control systems. Defining a control system as a "set of procedures for monitoring, directing, evaluating, and compensating its employees" (p.1), they propose that there are two general forms of control systems. Commissions identify the outcome-based control system, which is characterized by:

- relatively little monitoring of salespeople by management,
- relatively little direction by management, and
- straightforward objective measures of results (outcomes) used to evaluate and compensate the sales force.

An alternative control system is the behavior-based control system. This type of control system is characterized by:

1. considerable monitoring of salespeople's activities and results
2. high levels of management direction of and intervention in the activities of salespeople, and
3. evaluation and compensation of sales personnel based on subjective and more complex methods incorporating the skills and talents of the salesperson, activities, and sales strategies rather than outcomes.

Incorporating agency theory (Eisenhardt, 1985), transaction cost analysis (Williamson, 1985), organization theory (Ouchi, 1979), and cognitive evaluation theory (Deci and Ryan, 1972) Anderson & Oliver (1987) developed a series of hypotheses about the likely results of each type of control system.

A central premise of agency theory is that agents and principals have different goals. Where the principal desires increased profit, the agent desires increased personal income; where the individual is seen as risk averse, the firm is seen as risk neutral. In order to align these diverging goals effectively, commission compensation (outcome-based control) may seem the most effective and efficient control system. Anderson and Oliver point out, however, that this solution ignores several factors. The time lag between effort and sale, factors other than effort that influence sales, interrelated demand for multiple products, and the need for the sales representative to perform non-selling functions, are all important management concerns that are difficult to account for in an outcome-based control system.

Organization theory proposes that the divergent goals of workers and the firm can be reconciled through a process of socialization. This process results in workers identifying their goals with the goals of the organization. In addition, organization theory suggests that measuring the inputs or outputs as required in agency theory, may be impossible. The control system incorporating socialization and identification is a third type of control system, the clan system described by Ouchi (1979). In this system, neither inputs (behaviors) nor outcomes (results) are used to control. Rather, a humanistic socialization process encourages loyalty and identification with the firm and its goals.

Transaction cost analysis generally supports the use of outcome-based compensation and control systems. This system relies on the efficiencies of market driven economics to serve as a control mechanism. Even here, however, adherents of transaction cost analysis allow for situations in which behavior-based control systems are preferable, such as for salespeople who possess valuable customer knowledge and relationships, brand applications, etc.

Anderson and Oliver adapted a matrix (see Figure 2.1) based on the hypotheses of organization theory to describe the relationship of measurement of inputs and outputs and knowledge of the transformation process with the appropriate control system.

Only when feedback can be given in an informative manner does it increase intrinsic motivation (deCharms, 1969; Deci, 1972). Interestingly, one of the tools used by manufacturing businesses to improve quality and productivity was statistical process control, specifically Shewhart control charts. These control charts provide accurate, non-controlling information to machine operators. It might be instructive to measure the intrinsic motivation levels of workers before and after the introduction of control charts. Perhaps control charts could be used by sales representatives to record and monitor facets of their activity and to alleviate or overcome some of the controlling character of the commission compensation structure.

The result of the control-system considerations by Anderson and Oliver was a series of seven hypotheses. These hypotheses proposed, among other things that behavior-based control systems will be characterized by: sales representatives with more product knowledge and sales expertise, better customer satisfaction, and higher levels of intrinsic motivation and commitment to the sales agency.

Based largely on the theoretical work of Anderson and Oliver (A&O), Cravens, Ingram, LaForge, and Young, (1993), tested the A&O hypothesized relationships between compensation-control systems and cognitions, attitudes, motivation, sales strategies, and performance. They sampled sales managers (n = 144) in a diverse set of industries to test the relationships at the sales force level. Their results indicate that the type of control system, i.e., management control versus commission control, is correlated, in the hypothesized direction, to each of these elements. Performance in achieving sales objectives was more affected by commission-control than by management-control, as hypothesized by Anderson and Oliver (coefficients were .19 vs. .12). Customer satisfaction, however, was enhanced by management control (coefficients were .05 vs.

.13). Other areas also enhanced by management control were: competence, teamwork, motivation, and planning. All were in accord with the hypothesized relationships of Anderson and Oliver.

Figure 1.1
Knowledge of Process by Which Behavior is Transformed into Outcomes

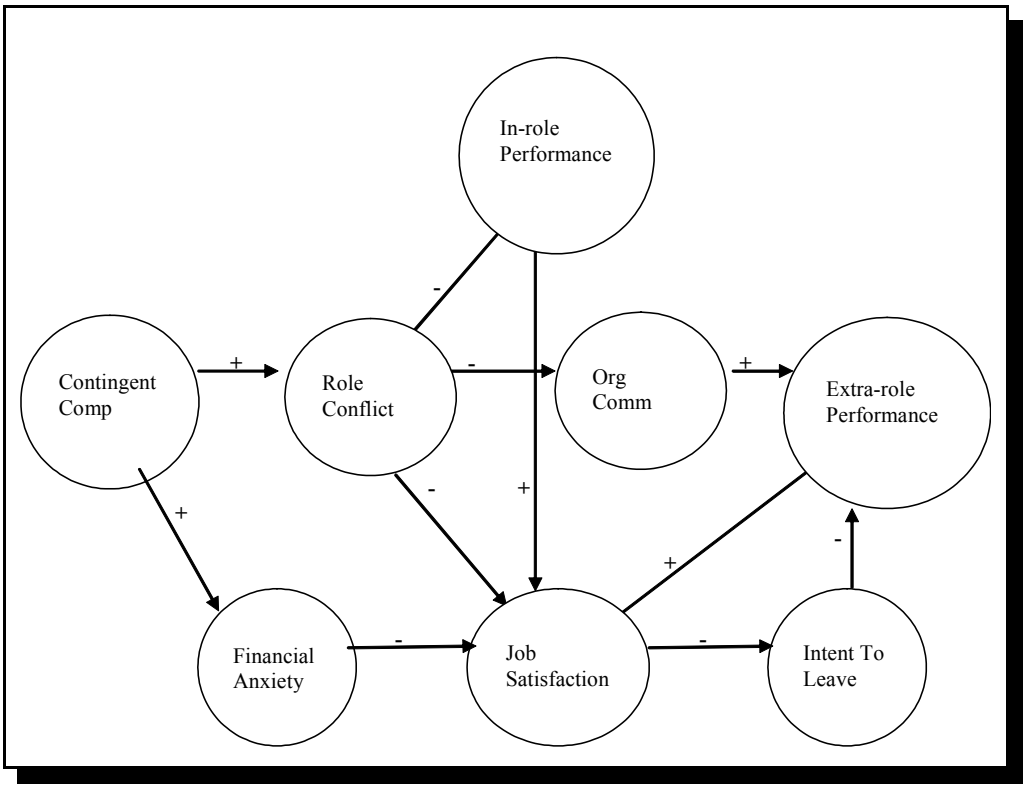
	Process Perfect	**Knowledge Imperfect**
High **Ability to Measure Outcomes Accurately and Completely**	Behavior or Outcome Control	Outcome Control
Low	Behavior Control	Socialization or "clan" control

From Anderson and Oliver, 1987 p. 81.

CONCLUSION

What appears at first to be a straightforward process of alignment, commission-based compensation is more broadly a system of control. When the contingent rewards result in a loss of self-determination, they also result in a reduction in intrinsic motivation (Deci 1972). Note, however, as described by Anderson and Oliver (1987) under outcome-based control systems, the sales process is not being actively controlled or managed. As Anderson and Oliver (1987) describe it, this system of outcome control is characterized by little monitoring of salespeople and little managerial direction of salespeople. Only results are important, not methods. Management of this crucial function has been transferred to the sales representative via a mechanism that reduces intrinsic motivation. This transfer of this responsibility occurs most commonly and completely in businesses where the high turnover rate (another characteristic of commission-based control, Weeks, 1966) results in a sales force with little experience. In the life insurance industry, for example, less than 50% of its field force has five years of experience (LIMRA, 1997).

Figure 1.2 Model relating compensation contingency to organizational outcomes.



Oliver and Anderson (1994) provided their own empirical test of their propositions, this time at the salesperson level. They sampled a group of manufacturers' representatives from the electronics components industry. The sample was made up of 216 managers and 347 sales representatives. Using this sample, they were able to show significant positive relationships between the use of behavior-based control systems and several hypothesized outcomes. Notably these included the innovativeness and supportiveness dimensions of organizational culture, job satisfaction, participative decision-making, organizational commitment, accepting authority, and sales competence. Interestingly, and contrary to their expectations, however, perceived control systems did not appear to affect the salesperson's behavioral strategy, i.e., the sales representatives did not ignore long-term strategies in favor of activities which might have produced immediate sales, even when compensated by commission. This might also be a manifestation of an inherited moral sense (Rushton, 1986) in addition to a rational need to plan and prepare for the future. Providing what is best for the customer makes good long-term economic sense and is good moral judgment as well.

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EFFECTIVENESS OF SALES PROMOTIONAL TOOLS IN MALAYSIA: THE CASE OF LOW INVOLVEMENT PRODUCTS

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ABSTRACT

The thrust of this paper is to evaluate the effectiveness of sales promotional strategies namely, coupon, price discount, free sample, bonus pack, and in-store display in the purchase of low involvement products by Malaysian consumers. The paper also recognises that certain demographic factors such as education and income of consumers could potentially confound the observed relationships hence, these factors were controlled. A total of 312 consumers in Kota Kinabalu, Malaysia were surveyed using structured questionnaire. The results show that price discounts, free samples, bonus packs, and in-store display are associated with product trial. Coupon does not have any significant effect on product trial. Details of the findings and their implications are discussed.

Keywords: Promotion Strategies, Product trial, Low Involvement Product, Consumers, Malaysia.

INTRODUCTION

A large body of research on consumer responses to sales promotions (e.g., Bawa & Shoemaker, 1987 and 1989; Blattberg & Neslin, 1990; Leone & Srinivasan, 1996; Huff and Alden, 1998) has accumulated over the past few decades due to the growing importance of this marketing lever. However, too much stress on coupons at the expense of other equally important promotional tools, has created the need for more work to be done in the area of investigating (together with coupon) the effects of other sales promotional tools such as free sample, bonus pack, price discount, and in-store display on product trial and repurchase behaviour, especially among Malaysian consumers, whose behavioural responses to promotional strategies are ill understood due largely to lack of research on them.

Moreover, research on the use of marketing tools in Malaysia is very scanty at best. And very little (if at all) is understood about the Malaysian customers and their purchase behaviours, especially with regards to how they respond to the various promotional strategies practised by marketers. Since the bulk of the extant literature on these relationships till date remains the Western perspective; there is an urgent need for research focusing on the Malaysian consumers and the

Malaysian environment, which is unfamiliar to most readers. Since understanding the behavioural responses of Malaysian customers to sales promotion strategies is salient in customer management and in designing effective sales promotion strategies, important impetuses for this research are established.

To embark on this task, the research focuses on low involvement products (LIP), which are generally believed to be more responsive to promotional tools than high involvement products. Low involvement products are those that are bought frequently and with a minimum of thought and effort because they are not of vital concern nor have any great impact on the consumer's lifestyle (www.marketingprofs.com). Not all purchase decisions are equally important or psychologically involving for the consumer. People engage in a less extensive decision-making process, involving a less detailed search for information and comparison of alternatives, when buying low involvement goods and services than when purchasing high involvement items. Because of the differences in the decision-making process between low and high involvement products, and the high frequency of purchase of low involvement products, this study focuses on the LIPs in order to unveil promotional strategies that might be more effective in the Malaysian context.

LITERATURE REVIEW

According to Shimp (2003), sales promotion refers to any incentive used by a manufacturer to induce the trade (wholesalers, retailers, or other channel members) and/or consumers to buy a brand and to encourage the sales force to aggressively sell it. Retailers also use promotional incentives to encourage desired behaviours from consumers. Sales promotion is more short-term oriented and capable of influencing behaviour. Totten & Block (1994) stated that the term sales promotion refers to many kinds of selling incentives and techniques intended to produce immediate or short-term sales effects. Typical sales promotion includes coupons, samples, in-pack premiums, price-offs, displays, and so on.

Coupons have been used to produce trial (Robinson & Carmack 1997). According to Cook (2003), coupons are easily understood by the consumer and can be highly useful for trial purchase. Gilbert and Jackaria (2002) concurring to the popularity of coupon reported that coupon is ranked last as the promotional least widely used by consumers and least influence on product trial. Other studies (e.g. Peter & Olson 1996; Gardener & Trivedi 1998; Darks 2000; Fill 2002) have reported the importance of coupons as a sales tool.

Price promotion does influence new product trial (*Brandweek*, 1994). According to Ehrenberg et al. (1994) short-term peaks in sales were due primarily to purchases made by occasional users of a brand rather than by new customers. Furthermore, the study concluded that these occasional users, after taking advantage of the price reduction, would most likely return to their favourite brands in their portfolio rather than buy the promoted brand at full price. However,

Shimp (2003) and Fill (2002) among other extant studies have documented a link between price promotion and product trial.

With regard to free sample, another important promotional tool often used by firms, marketing managers recognize the importance of product trial and direct behavioural experience with a product, hence they often mail free samples of products to consumers so that consumers can try the products for themselves, rather than just hear about the products (Kardes, 1999). However, Gilbert and Jackaria (2002) found that a free sample as a promotional offer had no significance on consumers' reported buying behaviour, whereas Pramataris et al. (2001), Fill (2002), and Shimp (2003), have shown otherwise.

Factory bonus pack according to Lee (1963) is used to increase consumer trial of the brand. Larger package size and accompanying advertising of the offer tended to make the promotion noticeable (Gardener &Trivedi 1998). Since more of the product is included at no extra cost, consumers can be persuaded to buy the product if they feel it represents a deal that produces the greatest value for their money. According to Gilbert and Jackaria (2002), packs with "buy-one-get-one-free" may not increase brand awareness before trial purchase because the customer will only come across the product once in the store (unlike samples or coupons), however, if the promotion is noticeable it will facilitate brand recognition and brand recall for future purchases. Since an additional amount is given for free, consumers may be persuaded to buy the product if they feel it represents a fair deal that provides value for money. Ong et al. (1997) found that consumers appeared to be slightly sceptical of the bonus pack offer, but somewhat more trusting of the price and quantity claimed. In other words, believability of the bonus pack offer was weak, however, they would likely buy one bottle and not buy more than one bottle they concluded. The report speculated that this happens because consumers suspect that manufacturers do raise prices slightly in conjunction with bonus pack offerings.

Product trial involves actually trying or using a product (Kardes, 1999). According to Peter and Olson (1996), trialability refers to the degree to which a product can be tried on a limited basis or divided into small quantities for an inexpensive trial. Banks (2003) wrote that with sales promotion, brands have a chance to quickly affect consumer choice and behaviour by adding value through an on-pack offer, by achieving incremental display or by encouraging trial via sampling and/or couponing. According to Schindler (1998), a price promotion that is designed to evoke attributions of responsibility could be expected to appeal to consumers more than one that does not evoke such attributions, and thus have a greater ability to create product trial among consumers. Wayne (2002) found a link between sales promotion and product trial. Chandon, et al. (2000) indicated that sales promotion may be attractive to highly promotion prone consumers for reasons beyond price savings. These highly promotion prone consumers may switch brands to receive "special" deals that reflect and reinforce their smart shopper self-perception. They concluded that highly promotion prone consumers might try a new product that has promotion. Thomas (1993) argued that the magnitude of planned distribution and promotion expenditures (advertising, sales

promotions, sales force, and so on) could affect initial trial of the brand. Based on the issues and discussion raised above, the following hypotheses are generated for verification:

H1: There is a significant positive relationship between coupon and product trial.
H2: There is a significant positive relationship between price discount and product trial.
H3: There is a significant positive relationship between free sample and product trial.
H4: There is a significant positive relationship between bonus pack and product trial.
H5: There is a significant positive relationship between in-store display and product trial.

All told, it is important to jog the readers mind that none of the extant literature cited above is about Malaysia. This observation corroborates one of the key impetuses for the conduct of this study, that is, the dearth of research on the Malaysian customers' behavioural responses to promotional tools, which has resulted in a poor understanding of the effectiveness of various promotional tools in the same context.

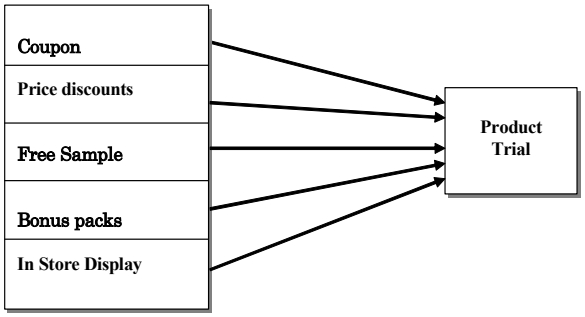
METHODOLOGY

In this study, five consumer promotion tools- coupons, discount, samples, bonus packs, and in-store display were investigated for their impact on consumer purchase behaviour. Items from Garretson and Burton's (2003) study of consumer proneness towards sales promotion were adapted in the measurement of proneness to coupon, price discount, free sample, bonus pack, and in-store display. Trial behaviour of consumers were measured with items adapted from Gilbert and Jackaria (2002).

Figure 1 shows the research model. Questionnaire was used for the study. The population of the study consists of consumers in Kota Kinabalu, Malaysia. The sample points were supermarkets in Kota Kinabalu area. The survey instrument was self-administered to customers using a mall intercept technique. Some respondents who could not answer on the spot were given a copy of the questionnaire (to be answered at home) with a postage paid return envelope. A five point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) was used for the construct's dimensions. A total of 420 questionnaires were distributed and only 312 were returned, which represents a response rate of 74%. The Multiple Regression Model was employed to predict the relationships in the construct. The schema of the research model is shown as Figure 1.

The regression assumptions with respect to autocorrelation (independent of residual), normality (residual is normally distributed), homoscedasticity of error terms, multicollinearlity and linearity of independent variables were verified before making any interpretation of the statistical results.

Figure 1: Research Framework



RESULTS AND DISCUSSION

Demographic Profile

Out of the 312 usable questionnaires returned by the respondents, 59.6% were female respondents, and 40.4% were male. Various income levels (in Malaysia Ringgit) were represented, for example below 24,000 was 60.9%, 24,000-47,999.99 (29%), 48,000-71,999.99 (9%), and so on. Chinese consumers made up 51%, Kadazan-Dosuns (22%), Malays (16%), Indians and others (11%). The ages of the respondents were as follows: below 20 (13%), 20-39 (62.8%), 40-59 (22%), and 60 and above (2.2%). The rate of married respondents was 46%, while singles represented the balance of 54%. With respect to education background, 50.6% had secondary school education and less, 26% had high school and diploma qualifications, and the rest (23.4%) were degree and post-graduate degree holders.

Psychometric Properties of the Instrument

Factor Analysis was performed on the questionnaire items in order to establish their suitability for performing the subsequent multivariate analyses. The results presented are based on parsimonious sets of variables, guided by conceptual and practical considerations, namely acceptance of factor loadings of .50 and above (Hair et al, 1998), and cross loadings mostly below .20. In very rare cases where cross loadings slightly exceeded .20, loadings were much higher than .50 to justify acceptance. The orthogonal rotation was employed for this analysis (Hair et al. 1998). High communality values were recorded for each variable, indicating that the total amount of variance an original variable shares with all other variables included in the analysis is high. Overall, the results in Table 1a and 1b show that the construct measures are valid. Put differently, the

measures define the concept of study very well. Table 1 shows the factor loadings and cross-loadings, Eigenvalues, and Variance of the dimensions under examination.

Table 1a: Factor Results for the Independent Dimensions Loadings and Cross Loadings						
	F1	**F2**	**F3**	**F4**	**F5**	**F6**
F1 – Free Sample						
Free sample 1	**.723**	.219	.152	.172	.079	.161
Free sample 2	**.742**	.170	.189	.130	.130	.151
Free sample 3	**.716**	.129	.205	.169	.108	.066
Free sample 4	**.746**	.165	.155	.120	.138	.117
Free sample 5	**.757**	.222	.172	.144	.088	.135
(Eigenvalue = 8.98; Variance = 30.95%)						
F2 – Bonus Pack						
Bonus pack 1	.120	**.801**	.163	.062	.009	.124
Bonus pack 2	.105	**.848**	.083	.011	.053	.103
Bonus pack 3	.233	**.703**	.257	.118	.124	.087
Bonus pack 4	.269	**.710**	.143	.127	.309	.064
Bonus pack 5	.254	**.734**	.211	.156	.137	.075
(Eigenvalue = 2.76; Variance = 9.52%)						
F3 – Price Discount						
Price discount 1	.147	.216	**.706**	.088	.102	.161
Price discount 2	.135	.129	**.726**	-.049	.154	.184
Price discount 3	.126	.175	**.739**	.086	.193	.062
Price discount 4	.275	.065	**.726**	.081	.190	.018
Price discount 5	.177	.204	**.792**	.091	.162	.017
(Eigenvalue = 2.18; Variance = 7.52%)						

Table 1a: Factor Results for the Independent Dimensions Loadings and Cross Loadings						
	F1	**F2**	**F3**	**F4**	**F5**	**F6**
F4 – In-store Display						
In-store display 1	.095	.113	.112	**.760**	.019	.087
In-store display 2	.213	.069	.066	**.819**	.065	.033
In-store display 3	.193	.074	.014	**.789**	.179	.151
In-store display 4	.203	.073	.049	**.847**	.128	.150
(Eigenvalue = 2.04; Variance = 7.03%)						
F5 – Coupon						
Coupon 1	.024	.098	.057	-.046	**.729**	.258
Coupon 2	.139	.119	.054	-.031	**.726**	.148
Coupon 3	.095	.052	.197	.212	**.671**	-.074
Coupon 4	.136	.126	.206	.137	**.691**	-.001
Coupon 5	.098	.065	.315	.169	**.733**	.000
(Eigenvalue = 1.67; Variance = 5.78%)						
F6 - Trial						
Trial 1	.085	.055	.121	.038	.253	**.724**
Trial 2	.124	.082	.149	.026	.057	**.787**
Trial 3	.234	.051	.046	.116	-.001	**.782**
Trial 4	.154	.172	.045	.212	.012	**.731**
Trial 5	-.095	.104	.047	.049	.022	**.534**
(Eigenvalue = 1.47; Variance = 5.08%)						
Total Variance = 66%						

A total of 29 items loaded on 6 factors. Factors 1 to 5 contain items measuring free sample, bonus pack, price discount, in-store display, and coupon. Five items were used in each case (save for Factor 4) for example: (1) If a brand offers ___ (free sample/bonus pack/price discount/in-store display/coupon); that could be a reason for me to buy it, (2) When I buy a brand that offers ___ (free sample/bonus pack/price discount/coupon), I feel I am getting a good buy; (3) I have favourite brands, but most of the time I buy a brand that offers ___ (free sample/bonus pack/price discount/in-store display/coupon); (4) One should try to buy a brand that offers ___ (free sample/bonus pack/price discount/in-store display/coupon); and (5) compared to most people, I am more likely to buy brands that offer free ___ (free sample/bonus pack/price discount/in-store display/coupon). Factor 4 has four items only, because of the omission of item 2, which is considered irrelevant with

respect to in-store display. Factor 6 has five items measuring trial, for example, coupon enables me to buy a product, which I have not tried before, price discount makes me to buy a product, which I have not tried before, etc. Total variance explained is 66% and item loadings are quite high, hence, there is high validity for the constructs measures.

Although the observed patterns of item loadings were similar for both Varimax (adopted in this study) and Oblique rotation (alternative technique), providing grounds to assume that the instruments are consistent, the internal consistency of the instruments were further tested via reliability analyses. Cronbach's alpha test was used to ensure the reliability of the variables. For sales promotional tools, the results indicate acceptable values: coupon (α=0.81), price discount (α= 0.86), free sample (α= 0.87), bonus pack (α=0.88), and in-store display (α= 0.87). The Cronbach's alpha value for product trial is 0.81. Mean score for all dimensions are as follows: coupon (2.99), price discount (3.67), free sample (3.08), bonus pack (3.28), in-store display (2.84), product trial (3.22).

Table 2: Descriptive and Reliability Analysis Results

Variables	No. of Items	Mean	S/D	Cronbach's Alpha Coefficient
Coupon	5	2.99	0.77	0.81
Price Discount	5	3.67	0.75	0.86
Free Sample	5	3.08	0.81	0.87
Bonus Pack	5	3.28	0.77	0.88
In-store Display	4	2.84	0.84	0.87
Product Trial	5	3.22	0.73	0.81

Relationship among Constructs

Table 3 shows the results of the regression analysis used to determine the relationship between the promotional strategies and product trial. Standardized beta coefficients are reported all through, as standardized regression coefficients allow for a direct comparison between coefficients as to their relative explanatory power of the dependent variable (Hair et al. 1998).

The above results show that coupon, price discount, free sample, bonus pack, and in-store display contribute significantly ($F = 25.22$; $p = .000$) and predict approximately 30% of the variations in product trial. The 30% explanation is considered good for a behavioural science research. Further examination of the results shows that price discount ($t = 2.334$; $p = .020$), free sample ($t = 3.483$; $p = .001$), and in-store display ($t = 4.322$; $p = .000$) are significantly associated with product trial at 5% significance level. Bonus pack is moderately associated with product trial ($t = 1.900$; $p = .058$). Hence there is enough evidence to accept hypotheses 2, 3, 4 and 5. The results

indicate that in-store display is the strongest predictor of product trial followed by free sample, price discount and bonus pack. There is no significant relationship between coupon and product trial (t = 0.401, p = 0.69) at 5% significance level, which leads to rejection of hypothesis 1. Therefore, it is conclusive that coupon is not a strong determinant of product trial among the respondents. This may be because of the sparse use of coupon as a promotional strategy by marketers in Malaysia. As a most rarely used promotional tool in Malaysia, many consumers may not be familiar with it compared to other promo-tools.

Table 3: Promotional Tools and Product Trial

Independent variables	Beta coefficients	t-value	p-value
Constant		5.932	**0.000**
Coupon	0.023	0.401	0.689
Price discount	0.143	2.334	**0.02**0
Free sample	0.218	3.483	**0.001**
Bonus pack	0.114	1.900	0.058
In-store display	0.234	4.322	**0.000**
	R^2 = .29 4F = 25.218	Sig. F = .000	

The results of this study provide some useful information on the impact of the five promotional tools on consumer buying behaviour (product trial). With respect to consumer proneness to sales promotions, the results show that in-store display plays a significant role in shaping consumer product trial reaction. Moreover, the results of this study show that free sample and price discount play significant roles in influencing consumer product trial behaviour. This finding is consistent with the views of Blackwell et al. (2001). Another sales promotional tool that has important effect is bonus pack. Bonus pack is instrumental in increasing consumer trial of a brand, thus, the more of the product included at no extra cost, the greater the likelihood of consumers buying the product for trial. Although, the effect of bonus pack on product trial is lower than other promotional tools such as in-store display, free sample, and price discount, bonus pack remains a useful marketing tool.

Contrary to some earlier findings (e.g. Banks 2003; Blackwell et al. 2001), coupon in this study does not have significant effect on product trial. This could be as a result of the respondents' poor familiarity with the use of coupons. In fact in Malaysia, the use of coupons as a promotional strategy is not as common as the use of other promotional tools. Marketers in Malaysia very seldom use coupons, resulting in the tool's unpopularity among Malaysian consumers. Zajonc (1980) had earlier shown that exposure to a stimulus enhances a person's attitude toward it.

Control

The control procedures applied in this study include the following: (1) examination of the role of familiarity with each promotional tool on the impact (or lack of it) of the tool on product trial; and (2) examination of potential confounding effects of respondents' education and income levels.

Firstly, to examine whether consumer familiarity with particular promotional tool is what explains its effectiveness, the study controlled for this factor. From the result in Table 4 below, it can be said that the weak impact of coupon on trial is attributable to the unfamiliarity of Malaysian customers with coupon. This may have resulted from the seldom use of this tool by marketers in Malaysia.

Table 4: The Role of Familiarity on the Effectiveness of Tools

Variables	B	Sig.
Coupon*Familiarity	**0.779**	**0.017**
Price Discount* Familiarity	0.068	0.874
Sample* Familiarity	-0.28	476
Bonus Pack* Familiarity	-0.457	0.236
In-store Display* Familiarity	0.356	0.237
R^2	0.289	

Further analysis confirms that familiarity is a key issue in coupon-trial relationship. Taking coupon use at below median and above median (inclusive), the corresponding values were assigned 1 and 2 respectively. Similarly, taking familiarity with coupon at below median and above median (inclusive), 0 and 1 were assigned. By plotting the graph of these dimensions, the resulting levels of product trial for different levels of coupon usage and familiarity with the tool are as shown in Figure 2.

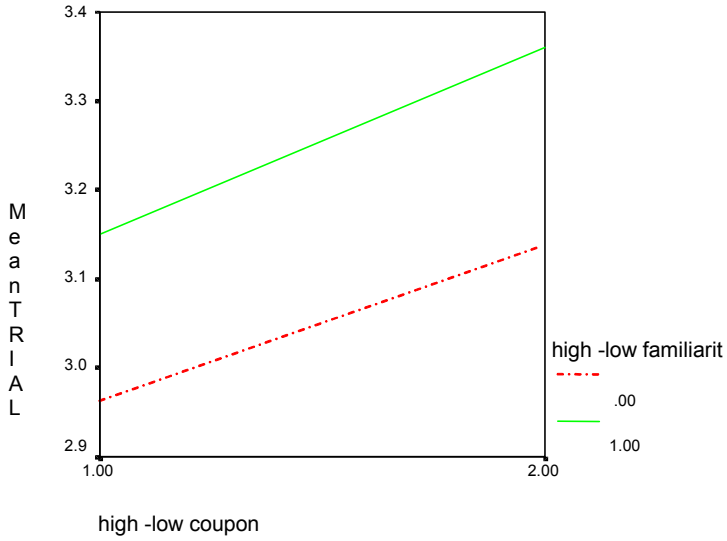
Figure 2 shows that customers, who are familiar with coupon, increase product trial as more coupon are offered. In other words, the behavioural responses of highly coupon-familiar customers are greater than the responses of those who are not familiar with the tool.

Potential Confounding of Education and Income Divide

There are several important demographic variables that could potentially confound observed relationships depending on the nature of the study. These are level of education, age, gender, and income (Minton & Schneider 1980; Praeger 1986; Kite 1996; Morris & Venkatesh 2000). With respect to responding to promotional tools, the most important covariates are those whose inclusion might theoretically eliminate observed moderation effects, such as income and education. This is

because high-income earners may be less interested in few dollar savings than their lower income counterpart; hence, they may be less responsive compared to the low-income group. In addition, since education and income are positively correlated, similarly more educated consumers may be less responsive to promotional tools than their less educated counterpart. Thus, in this research it is necessary to evaluate and control for possible confounding effect of education and income.

Figure 2: Trial at Different Levels of Coupon Use and Familiarity with the Tool



Before the control mechanism was applied, the two demographic variables, which originally had more than two groups, were recoded into two groups for ease of understanding. Thus, educational levels were re-grouped into non-graduates and graduates, and income into low-mid and high-income earners. In order to introduce the recoded demographic dimensions into the regression model, dummy variables were created for the groups (Hair et al. 1998). In creating the dummy variables, the first step was to determine the number of dummy variables, which is simply k – 1, where k is the number of levels of the recoded variable. In this instance 1 (2 – 1) dummy variable was created as follows: non-graduate (0), graduate (1); and low-mid income (0), high-income (1). The results of the controlled hierarchical regression analyses are presented in Table 5 below. These results are compared with the uncontrolled results in Table 3 above.

The results in Table 5 show that education and income levels are not confounds. In all the cases, the demographic variables have no significant relationship with the dependent dimension. By introducing each demographic variable in the 2nd stage of the hierarchical regression, it was found (as shown in Table 5) that the significant impacts witnessed in the price discount-trial, sample-trial, bonus pack-trial, and display-trial relationships (see Table 3) remain significant, and the non-significant effect in the coupon-trial relationship remains insignificant after controlling for

potential confounds. This shows that there is no confounding effect. If education or income is confounding the results, when controlled, the significant effects will become non-significant, and the non-significant effect will become significant.

LIMITATIONS AND FUTURE RESEARCH

Like any empirical research, there are few limitations to this study. First, only one product category (low involvement products) was considered in this study (which is a pioneer in the Malaysian context), leaving out high involvement products, which are somewhat noted for their poor responses to promotional tools. An interesting future research direction is to estimate the effectiveness of these promotional tools in high involvement product situations. Since some scholars believe that high involvement products are not as responsive as low involvement products to promotional tools, it is needful to verify this view in Malaysia. This future research will help to increase present knowledge in this area by providing empirical support for or refuting the above supposition. Additionally, future research may take a comparative approach between the high and low involvement products to see if they equally or differentially respond to promo tools, and if the former is statistically less responsive than the latter in the Malaysian context.

There is still an urgent need to investigate the impact of other promotional tools on product trial because research in this area is still inconclusive. Beside the five promotional tools (i.e., coupon, price discount, free sample, bonus pack, and in-store display) that were examined in this study, future research may investigate other types of sales promotions (e.g., contests, refund) on product trial. In addition, studies that utilize data compiled by retailers that track buying and sales promotion participation habits across various tools will add much value since it is based on hard data rather than perceptions.

CONCLUSIONS AND IMPLICATIONS

This research has important implications on theory. The framework provides new insights into the understanding of sales promotional strategies and their impacts on Malaysian customers' behavioural responses in low involvement product setting. In addition, it helps to explain the role of familiarity with sales promotion tools. Malaysian consumers respond more to free sample, price discount, in-store display, and bonus pack than coupon. A plausible explanation for the weak influence of coupon is poor familiarity with the tool. This research shows the linkages among various promotional tools and product trial, and thereby helps to better understand how Malaysian consumers respond to various promotional tools offered by marketers. This is an important

contribution to the body of knowledge in this field and in Malaysia in particular, being one of the pioneer studies in this area in Malaysia.

Table 5: Testing for Potential Confounding of Demography		
Interaction Terms with Education controlled	Dependent Variable - Trial	
	beta	p-value
Coupon	.041	.477
Price Discount	.138	.025
Sample	.238	.000
Bonus Pack	.098	.064
In-store Display	.245	.000
Education	.075	.143
Interaction Terms with Income controlled	Dependent Variable - Trial	
	beta	p-value
Coupon	.022	.693
Price Discount	.145	.019
Sample	.223	.000
Bonus Pack	.112	.064
In-store Display	.236	.000
Income	.029	.563

The results also have important implications for practitioners. One of the major implications of this research is that firms can increase sales by offering the right promotional tools to attract trial customers. Therefore organisations should carefully plan their promotional strategies, and allocate promotional budget over the different promotion tools, giving preference to the more effective tools. Promotions that emphasize in-store display, free sample, price discount, and bonus pack are likely to be more effective than coupon.

Second, the findings indicate that in-store display proneness has the strongest effect on product trial compared to other sales promotional tools. Attractive in-store display practices are necessary to gain the greatest sales from product trial. Third, (as shown in the results) bonus pack, free sample, and price discount significantly affect product trial, albeit the determinant power of bonus pack is the lowest among other promotional tools. Thus, one of the ways to improve the determinant power of bonus pack is to keep a regular pack along side with a bonus pack on the shelves, in order to enable consumers to make comparison. Such opportunity for a comparative observation will help to enhance the credibility of the tool and consumers' confidence in it. With

regard to free sample and price discount, sellers should continue to apply them because of their robust influences on product trial.

Fourth, the findings show that coupon have no significant effect on product trial. This is largely due to consumers' unfamiliarity with the tool. Thus, it is suggested that manufacturers and retailers should use more of coupons in their promotional efforts, with longer redemption period, prior to which they should create greater awareness of the benefits of coupons and how they could be redeemed. This will help ignorant customers to be better informed about coupons and their uses. Another probable reason for the poor influence of coupon may be because coupons provide less shopping convenience benefits, require more skill and effort than buying a product on sale. For example keeping the coupon and redeeming it before expiring date, searching for a product that has coupon, matching coupons with brands, etc can be cumbersome and time consuming. In the other hand, price discount, free sample, bonus pack, and in-store display can provide greater shopping convenience benefit.

Lastly, it is important to note that the outcome of this research, that is, the observed significant and non-significant relationships among the independent and dependent variables are not confounded by respondents' educational and income levels. In other words, these observations hold true, irrespective of the level of education or income of the respondents, hence the results are generically applicable to all income and educational groups.

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A TEST OF PROSPECT THEORY IN THE USED CAR MARKET: THE NON-LINEAR EFFECTS OF AGE AND RELIABILITY ON PRICE

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ABSTRACT

Prospect theory (Kahneman & Tversky, 1979) suggests that consumers compare decision criteria against a reference point when evaluating alternatives. It further posits that consumers are risk seeking for losses (below the reference point) and risk-averse for gains (above the reference point). In this paper we investigate whether consumers behave according to prospect theory in the used car market. We further consider that consumers use available classification schemes and establish separate reference points within each different class of the same product. In this case we test the idea that consumers compare reliability of automobiles using reference points based on age. We find empirical support for the prospect theory predictions that consumers are risk seeking when the reliability of a specific brand/model of a car is below the average for the age category and risk averse when the reliability is above average. The paper concludes with suggestions for alternative reference categories and a discussion of implications for academics and practitioners.

INTRODUCTION

Prospect theory (Kahneman and Tversky, 1979) explains how people make choices among alternatives (prospects) by comparing them to reference points. The significance of this theory has been recognized by the Nobel Prize awarded to Daniel Kahneman in 2002 "for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty" (The Nobel foundation, 2002). Traditionally, people's choices were explained and predicted by the expected utility theory (Von Neumann & Morgenstern, 1944) which suggests that individuals make rational choices based on the level of relevant decision criteria (Friedman & Savage, 1948). However, the rationality assumptions of the expected utility theory have been empirically shown to be violated on numerous occasions (Slovic & Tversky, 1974). In particular, human choices often depend on the framing of a problem (Tversky & Kahneman, 1986; Hogarth & Reder, 1986), which cannot be explained by the expected utility theory, but follow the propositions of the prospect theory (Kahneman & Tversky, 1979; Shafir, 1999). According to the prospect theory, people do not use the absolute value of the outcome but

rather 'code' the alternative as a gain or a loss relative to a reference point. The resulting losses or gains are then weighed by their perceived probabilities of occurrence, forming a non-linear value function. People approach gains and losses differently, generally acting risk-averse on gains and risk-seeking on losses (Kahneman and Tversky, 1979).

While prospect theory has been widely applied to decisions regarding financial outcomes and time, it has not found much application in relation to choices regarding product quality (Ong, 1994). Given that quality is an important aspect used by the consumers in their evaluations, it is important to study it. However, the difficulty of operationalizing and measuring it has been a major stumbling block on the way to empirical research of decision-making under uncertainty using quality (Ong, 1994).

In our paper, we empirically test the ideas of prospect theory applied to quality in the used car market. We believe that the prices on the used car market are close to the manifestation of the car's utility to the consumer, given that the market is not dominated by few major players and is close to a competitive market. Furthermore, there is plenty of information regarding various aspects of quality of the used vehicles that are readily available to the consumers to base their judgment on and to the inquiring researchers to conduct an empirical investigation. In particular, the data on car's reliability (the aspect of quality related to the car's performing its core function, transportation) lends itself to our research.

We are looking for the non-linear effect of the car's reliability on its price in the used car market as predicted by the prospect theory. We are also investigating two alternative reference points around which the reliability is coded as either a gain or a loss an 'average car' common to all used passenger cars on the market and age specific reference point.

The structure of the paper is as follows. First, we discuss the prospect theory. Then we discuss using the prospect theory in application to quality of products. In the next section we address the market that our study is based on – that of the used durable goods market, in particular, the used car market. Our data collection, sample and methods are addressed next, followed by the analysis and results. The paper concludes with suggestions for further research and implications for practitioners.

PROSPECT THEORY

Nobel-winning prospect theory (Kahneman and Tversky, 1979) is one of the most influential theories of decision-making. It was developed to explain instances where the traditional expected utility theory failed to explain people's choices. Under uncertainty, expected utility theory suggests that people weigh the outcomes by the probabilities of their occurrence. They then choose the one that provides the highest absolute expected value. Thus, a game offering 25% chance of winning a $1000 and 75% chance of winning nothing is equivalent to a game offering 50% of winning $2000 and 50% chance of losing $1500, and both are equivalent to getting $250 with certainty. However

individual's judgment has been known to violate the rules of expected utility estimation; for example, it is often heavily influenced by the framing of the situation. Aversion to risk on behalf of some people can still be accounted for within the expected utility theory by assigning some utility to certainty; that is in the above example, both games with uncertain outcomes will be equivalent to less than $250 for a risk-averse, $250 for a risk-neutral and more than $250 for a risk seeking individual. But a seemingly superficial change like change in the framing of the problem cannot, within the assumption of the expected utility theory, change individual risk aversion.

Four substantive assumptions of expected utility theory have been shown to be problematic (Tversky & Kahneman, 1986): 1) cancellation (elimination of outcomes that do not depend on the individual choices from consideration); 2) transitivity (if outcome A is preferred to outcome B, and outcome B to outcome C, then A is preferred to C); 3) dominance (if outcome A is better than others in one state and at least as good as others in other states, it should be chosen); 4) invariance (person's preference does not depend on the presentation of the problem, so, for example, 20% mortality should enter choices in the same way as 80% survival rate).

The assumptions above are violated especially often when their application in a decision-making situation is non-transparent. While cancellation is obeyed in a transparent situation, it is violated otherwise. Likewise, when making pairwise choices in non-transparent situations, people violate the assumption of transitivity, thus selecting outcome A over outcome B, B over C, and C over A (Tversky, 1969). When people make choices where the problem was subdivided into smaller steps which did not aggregate in an obvious fashion ("nontransparent dominance" situation), they also violated the assumption of dominance choosing against the outcome that overall is better than others in some states and at least as good as others in other states (Tversky & Kahneman, 1986). People also frequently violate invariance (for example, questions regarding "extra tax for people without children" vs. "tax breaks for people with children" can generate quite lively discussions in one's classroom). These violations of the assumptions of expected utility theory render its descriptions and predictions inaccurate. Prospect theory accounts for the behaviors described above with an alternative model as to how people make choices.

Framing of alternatives (Thaler & Kahneman 1981) is one of the major drivers of choices according to the prospect theory. The process can be briefly described as follows: people 'code' the outcomes of various prospects (alternative outcomes) as either gains or losses relative to some reference point. Then they weigh the resulting gains and/or losses by their subjective probabilities. When weighing the outcomes, they weight gains differently from losses, acting risk-seeking for losses, and risk-averse for gains.

Tversky and Kahneman (1986) also observed what they referred to as a "strong distaste for losses", when people derive more disutility from a loss than they derive utility from an equivalent amount of gain. Thus, the 'pain' from losing $100 exceeds the 'pleasure' of gaining $100. The following experiment conducted by Tversky and Kahneman (1986) exemplifies a typical situation where such effects were revealed: respondents have to choose between two treatments, radiation and

surgery. They are told either of two mathematically equivalent statements: (1) that radiation ensures 10% increase of survival (from 90% to 100%) over surgery or (2) that radiation provides a 10% reduction of risk of death (down to 0) surgery. When the problem was framed in terms of survival (1), radiation is chosen by 18% and in terms of mortality (2) by 44% of respondents. This larger disutility placed on a loss than the utility accorded to an equivalent gain has become an integral part of the prospect theory, which has been evolving over the years to also account for multiple alternatives and pessimism and optimism.

Another integral part to the prospect theory is that of the reference point, relative to which the outcomes are coded (Kahneman & Tversky, 1979) as gains or losses. This concept has received its wide application as reference price in pricing, where prospect theory is most widely used (Erdem, Mayhew, & Sun, 2001; Niedrich, Sharma, & Wedell, 2001). Reference price is defined as "any price in relation to which other prices are seen" (Biswas & Blair, 1991, Briesch, Krishnamurthi, & Raj, 1997). Two kinds of reference pricing are recognized: internal (stored in consumer's memory) and external (provided by the environment). For example, "manufacturer suggested retail price $76.00" on the price tag of a $56.00 item is an attempt to establish an external reference price and subsequently invoke coding of the decision making problem as a gain. Reference price as a concept has been utilized before the development of the prospect theory. For example, adaptation-level theory (Helson, 1964) relies on this concept by suggesting that people adapt to stimuli, forming standards for evaluations. When stimuli change, the changes are integrated into previously held standards.

Prospect theory has become one of the most widely cited theories and is utilized in a great many academic disciplines. Finance, economics, management, decision theory and political science are among those that employ the prospect theory. Marketing is among such disciplines. People's decisions involving money (prices, discounts, coupon promotions, advertising, monetary incentives including sales force compensation, product bundling (Stremersch & Tellis, 2002: Johnson, Herrmann, &Bauer, 1999) have been frequent applications of the prospect theory in marketing. Somewhat less frequently, prospect theory was applied to decisions regarding time (Mowen & Mowen 1991; Leclerc, Schmidt & Dube´, 1995) and very rarely to quality Ong (1994). For example, formal explanation of the relationship between price promotions and internal consumer's reference price (Jagpal, 1998), suggesting that it is moderate-amount temporary price decrease that is especially detrimental in this regard, is one of the applications of prospect theory in marketing.

Designed laboratory experiments comprise the majority of the empirical research involving the prospect theory (Kahneman & Tversky, 1979; Thaler, Tversky & Schwartz, 1997; Salminen & Wallenius, 1993), although some studies have used panel data (Mayhew & Winer, 1992). Such reliance on experimental data, exacerbated by the over-reliance on college students as the subjects of such experimentation, raises concerns related to external validity (generalizability) of the findings. However there have been a great many such experiments and they have shown strong support for the basic tenets of prospect theory.

PROSPECT THEORY AND QUALITY

While prospect theory has been widely applied to decision-making situations regarding money and time, it has not found much application to quality (Ong, 1994). Yet quality is one of the major characteristics of the products that impacts customer choices (Kotler 1997). Each tangible and intangible attribute characterizing any given product is related to how well the product performs its core function or some important secondary function, and the level of those attributes relative to the industry standard and/or performing their function is often defined as quality.

For each attribute, there is a level of quality that is considered 'adequate', 'average', etc. - a level that serves as a reference point. Relative to that level of quality, the quality of a particular product is either a gain or loss. As long as there is an expectation of performance relative to the reference point, it is not essential for the attribute in question to be directly observable. When the quality offered exceeds the reference quality, it is a gain, when it falls short, it is a loss. For example, a car could be considered as providing a smooth ride because it is 'smoother' than other cars. In this case it is of higher quality because it is bringing a gain in the form of smooth ride. The notion of reference effects in quantified quality comparisons is supported by research. For example, merchant-supplied reference quality has been shown to influence consumer evaluation of product quality (Ong, 1994).

Applying prospect theory to the effects of quality remains an underdeveloped area (Ong, 1994; Liu, 1998), despite all the support in favor of doing so. The general difficulty of operationalizing and quantifying quality is the biggest stumbling block on the way to successful application of prospect theory to it (Ong, 1994).

THE USED CAR MARKET

To approach the empirical investigation of the effects of quality, we concentrate on durable goods. Durable goods are products that last throughout many uses and maintain value over a period of time. We are further narrowing our focus to durable goods that are expensive, such as cars, motorcycles and major appliances. Such goods are characterized by high initial cost and value that retains over time, which allow for the existence of a resale market (Ocada, 2001). The consumer can, therefore, choose between purchasing new or used models of these goods. It is the market for the used goods that presents us with a remarkable opportunity to study quality judgments influenced by the prospect theory due to the used goods market's considerable difference from the market for new goods. New goods are generally sold in retail establishments and the prices usually are determined jointly by the manufacturers and retailers, who have the power to influence the market through a set of strategic actions. Many new goods markets (cars, motorcycles, etc.) are clearly oligopolistic in nature, dominated by a small number of companies. However, the used goods are commonly sold in a variety of ways by many individual buyers to many individual sellers. There

are no dominant players who strategically set the price when a large proportion of such transactions are done among the consumers directly. With none of the players able to significantly affect the price, the used durable goods market is close to pure competition. Thus, prices on used goods in such markets can be considered as manifestation of the utility placed on them by the buyer. The used car market has a large number of transactions conducted among the individual consumers. Additionally, there is a great deal of information regarding used cars (see the discussion below) hence we choose it for our empirical investigation.

Since purchasing a car is usually a high involvement decision, consumers are intensively seeking and using information related to automobiles. The intensity of such a search is related to their individual characteristics and familiarity with the automotive market, including their general familiarity with cars and familiarity with particular brand/model/year combinations, and the cost of search (Furse, Punj & Stewart, 1984; Punj & Staelin, 1983). This demand for information is met with extensive supply. Consumer Reports, Edmunds' publications and others provide reviews, performance, specifications and other data, including historical averages of many factors that are of concern to consumers. Many of such sources have been around for decades. They keep increasing in numbers, evolving, becoming ever easier to use and providing richer data with the advance of the Internet. (For example, a consumer can now even check an on-line database of damaged vehicles that have been superficially restored to hide the damage.) The cost of search is getting ever lower, leading to more search behavior utilized by consumers, since it is inversely related to the cost of search (Punj & Staelin, 1983). Consumers base their judgments regarding car prices on this widely available information. We believe that they arrive to these judgments relying on decision-making mechanisms in line with the prospect theory.

The abundance of information in the used car market makes it possible to study consumer decision making regarding quality in light of the predictions of the prospect theory. While largely unavailable in other product categories, there is a well developed set of quality information in the used car market. For example, there are readily available ratings regarding historical performance and availability, along with prices, specifications, etc. Such ratings are well known to consumers and some of them have been maintained for over at least half a century. The Consumer Reports began publishing before most car buyers on the market today were born and so have been around their entire lifetime. Being that these ratings and other data regarding used cars have been published and used for so many years, they became, on one hand, a powerful external reference tool, and on the other hand, have developed into a true reflection of consumer attitudes. Thus, the used car market presents unique opportunities to study the effects of quality.

The used car market is quite large. In 1999, 40.9 million used vehicles have been sold, which is almost three times the number of new vehicles sold. 25% of the $361 billion transactions were conducted through private party sales (ADT, 2000).

A consumer's purchase of a car is a complex decision influenced by many factors. Cars are characterized by a great variety of attributes. Consumer preferences and utility derived from various

levels of these attributes are heterogeneous (see, for example, Tay, 2003; Lambert-Pandraud, Laurent, & E. Lapersonne 2005; Berry, S., J. Levinsohn, & A. Pikes, 2004; Kavalec 1999). Considerable literature has been devoted to some of these attributes and consumer choices related to their levels in different vehicles. Consumers choosing among automobiles may care about utilitarian features (such as gas mileage) or hedonic attributes (such as design, social prestige associated with the vehicle, etc.) (Dhar & Wertenbroch, 2000). Oftentimes, for the consumers there is particular emphasis on experiential attributes such as performance, ride and handling, as well as 'wow' factor in the vehicle design (Tay 2003). BMW has been relying on such experiential performance attributes for a while with its "Ultimate Driving Machine" positioning (Tay 2003). Country-of-origin effect has been discussed as having an influence in various ways (Chao & Gupta, 1995), for example preference for Japanese-made cars has been shown to be related to geographically and demographically defined social networks (Yang & Allenby, 2003). Various personal characteristics also have an impact. For example, older people may display more of a tendency to purchase the same brand they have been driving, and baby boom generation shows some preference for cars with higher gasoline mileage (Kavalec 1999; Lambert et. al 2005).

In addition to the individual differences among the consumers in the automobile market, there are also differences in terms of whether the purchase was decided on by the customers themselves or with other family members. Discrepancy of preferences among the family members is resolved based on the decision-making roles and other characteristics of the family relationship (Burns & Granbois, 1977).

The heterogeneity of the market with respect to the preferences regarding various car attributes had led to automobile manufacturers utilizing various price-quality segmentation schemes with customers self-selecting into various classes (Kwoka, 1992). Pricing in the new car market is established as a result of strategies taking into consideration these price-quality segmentation schemes in the context of oligopolistic competition (Sudhir, 2001).

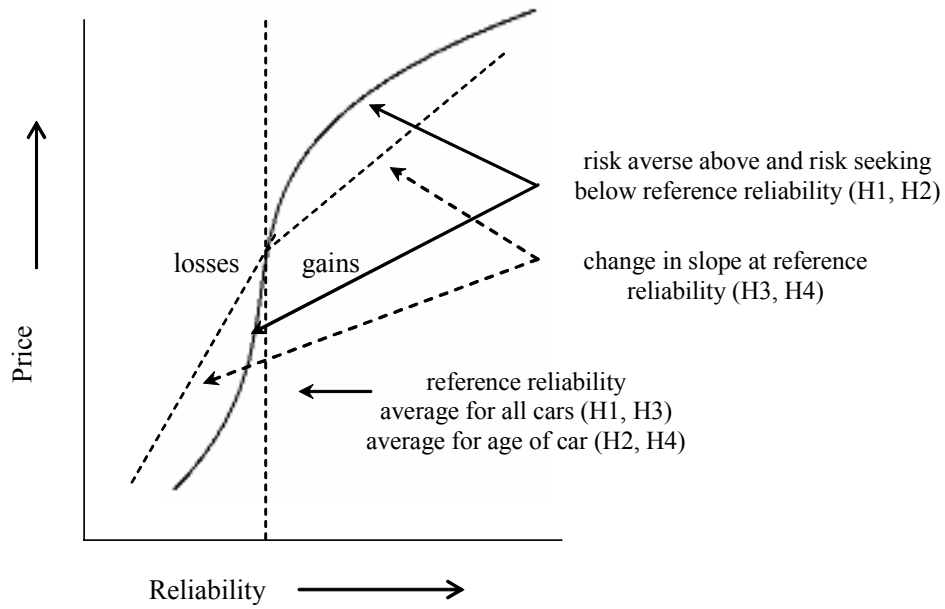
The majority of the discussed preferences show in the consumer choices of a vehicle based on the totality of the attributes that the car has and the utility placed on these attributes vis-à-vis its price. In the current paper, we consider such choice exogenous to our investigation, and the heterogeneity with respect to the various price-quality schedules duly reflected in the original price of the car when it was new. In other words, while very important, these various characteristics and personal preferences are outside our investigation, which concentrates on the utility placed on the quality characteristics of a particularly chosen used vehicle.

Additionally, it is reasonable to assume, that while people indeed rely on many subjective factors such as general looks, they also rely on objective information at the very least as means of psychological justification of their high ticket, important purchase choice. This leads us to believe that we can find the evidence of the influence of objective indicators of quality/reliability on purchase prices.

THEORY AND HYPOTHESES

Following the basic ideas of the prospect theory, we postulate that the used car buyer compares the quality rating of a specific car with a reference quality rating. The deviation from the quality reference point influences people's judgment in nonlinear fashion. Specifically, buyers are risk averse regarding gains, and risk- seeking for losses, and they derive dis-ulity from losses at a rate higher than they derive utility from gains. These relationships are illustrated in Figure 1.

Figure 1 - Prospect Theory Effect of Reliability on Price



The price that the buyer is willing to pay for a used vehicle is a manifestation of the cars' utility to the buyer. To be able to operationalize our theory further and test it empirically, we need to choose that reference point for the quality ratings. According to the adaptation-level theory (Helson, 1964) consumers can shift their reference point if adequately compelled to do so, and thus there may not be one dominant basis for setting a reference point. Betts & Taran (2003) discusses various bases for setting a reference point, most notably the 'average car' reference point, which we will consider in the current paper. We also add to consideration another basis for the reference point – that of the car's age.

First we consider that there is a general perception of what an 'average car' is. In this case, there is a single reference point across all cars, and the 'average car' is a standard reference car. Compared to the 'average car' reference, a 1993 Chevrolet Corsica might provide a below-average level of reliability, and a Toyota Camry 2000 above-average. An alternative idea is that cars are compared to each other within a certain age group, that is, a 1993 Chevrolet would be compared to a 1993 Toyota and not a 2000 Toyota. The notion of an age reference point seems particularly appealing, since any car classification known to consumers always features the age as the most prominent classification characteristic. Reliability tables in Consumer Reports used car price reference guides always break the information down by age. Additionally, the idea of value retention over years is widely spread with a great number of the calculators and other materials available to the consumers on-line and off. Such abundant availability of value assessment tools based on the vehicle's age further reinforces the conclusion that a consumer would have a general idea as to how reliable cars of a certain age should be.

The first two hypotheses are related to people's evaluation of the car's utility relative to a reference point in accordance with the prospect theory. In situations where the reliability rating of a specific car is higher than the reference rating, since people are risk-averse for gains, the incremental utility of the gain due to higher reliability decreases the further from the reference point. On the contrary, in a situation where the reliability rating of a specific car is lower than the reference rating, since people are risk-seeking for losses, the incremental (dis)utility of the loss due to lower reliability increases the further from the reference point. This utility should manifest itself in the price that the buyer is willing to pay. Hypothesis 1 is based on the assumption of the 'average car', single reference point for all cars.

Hypothesis 1: R reliability will have a decreasingly positive effect on price for cars with reliability rating above average for all cars and an increasingly positive effect on price for cars with reliability rating below average for all cars

The second hypothesis is based on the assumption of an age-specific reference point, whereby cars are compared to the average within a certain year of production.

Hypothesis 2: Reliability will have a decreasingly positive effect on price for cars with reliability rating above average for its year and an increasingly positive effect on price for cars with reliability rating below average for its year

The next two hypotheses are related to the idea that the absolute value of the utility of a higher reliability than the reference would be lower than that of an equally lower reliability , that is the "strong distaste for losses" observed by Tversky and Kahneman (1986). This utility should also manifest itself in the price. Therefore, for the 'average' car as the reference point:

Hypothesis 3: The increase in the relationship between reliability and price when reliability rating is below average for all cars is greater than the decrease in the same relationship when reliability rating is above average for all cars.

And for the age-related reference point:

Hypothesis 4: The increase in the relationship between reliability and price when reliability rating is below average for the car's year is greater than the decrease in the same relationship when reliability rating is above average for its year.

We expect to see additional relationships in as much as more expensive used cars tend to produce more expensive used cars, and so do bigger cars. We therefore start by modeling the price of the used vehicles as the function of their price when new, as well as wheelbase, and then proceed to test our hypotheses regarding the effects of reliability.

METHODS

We used information on used car prices and other pertinent characteristics available in the public sources. Information on passenger cars of 17 makes (parental brands) from 1993 to 1999 was obtained from Kelley Blue Book (Kelley, 2002), Consumer Reports (2001), and Edmunds (2002). The particular brands chosen represent a variety of countries of origin and price ranges. "Private-party price" as reported by Kelley Blue Book (Kelley, 2002), was chosen as the indicator of the used car's price. These prices are provided by Kelley based on the national average over a large sample of asking prices and imply a car in a good condition, with average for the model options and with average for the year mileage. This 'Private-party price" was used as the dependent variable, the used car price as the manifestation of the vehicle's utility to the buyer.

We also wanted to use an indicator of car size. There are many different indicators related to the car size (exterior width, length, height, wheelbase, ground clearance, etc.; interior dimensions such as head room, leg room, rear head room etc.), all of which has shown consistently high correlation in a series of unrelated analyses. Wheelbase is one of the indicators mentioned above, and it is reported by Kelley Blue Book along with the "Private party price" chosen as the dependent variable. Wheelbase was thus chosen to be an indicator of size.

The price of a new vehicle produced in 2001 comparable to the used vehicle was as reported by Edmunds (2002). In several instances, Consumer Reports and edmunds.com have been reporting essentially the same vehicle of the same make being marketed under a new model name (for example, Acura RL is referred to as the new name of Acura Legend, and the two vehicles are reviewed as one list); when this was the case, the price of the new model name was used (for example, price of Acura RL for every Acura Legend). In several instances, a vehicle was no longer produced and another vehicle with similar attributes was considered its "replacement" by the

Consumer Reports. In that case, the price of a new 2001 "replacement" model was used for the older model.

To gauge the reliability as the proxy quality measure, we obtained reliability rating on 14 "trouble spots" for each car from the Consumer Reports (2001). These ratings are based on the number of problems related to each "problem spot" between April 1999 and March 2000 reported by the respondents to the 2000 Annual Questionnaire conducted by the Consumers' Union (which publishes Consumer Reports) (Curry & Riesz, 1988). The responses to these questionnaires form a true continuous, ratio scale (Nunnally, 1967) variable. The Consumers' Union for the purposes of reporting in the Consumer Reports subsequently codes these responses as follows: 2.0% or less becomes a 5, 2.0% to 5.0% a 4, 5.0% to 9.3% a 3, 9.3 % to 14.8 % a 2, and more than 14.8 % a 1 (Consumer's Union actually uses its own special symbols, such a red donut-shaped figure rating for the highest reliability, a black circle for the lowest, etc., which have been recoded into numbers for use in the analysis). The resulting variables can be treated as interval scale variables. These 14 reliability ratings of various "problem spots" were combined to create a reliability scale with an alpha reliability of 0.927 (Cronbach, 1951).

Our sample had to be somewhat limited due to data availability and compatibility considerations. From a year to a year, car models and even makes get introduced or discontinued, new features get introduced, and previously optional equipment becomes part of standard package. Also, past a certain age, the variance in a car's reliability becomes too high to be meaningful. Since reliability is only reported for a limited number of years (in our case, 1993- 1999) we used those years in our sample. Furthermore, models that were too new to accumulate reliability history were not included in Consumer Reports' ratings and thus could not be included into the analysis.

To analyze the data, we used regression analysis methods. The nature of the dependency between our dependent and independent variables is nonlinear, as explained in the previous sections. Therefore, to be able to use linear regression, we needed to introduce some transformations to the variables first (Neter, Kutner, Nachtsheim & Wasserman, 1996).

Age reliability was computed as the average reliability of all the passenger cars for a given year, across all the brands and models of cars produced in that year. Deviation of the car's reliability from the average for all cars reliability was computed for testing Hypotheses 1 and 3, and deviations of the car's reliability from the age reliability was computed for testing Hypotheses 2 and 4.

Next step was to model the nonlinearity of the dependency between quality and price. We need a transformation that would correspond to that depicted in Figure 1: be concave below zero and convex above zero. A function that has such property is cubic root, $y=\sqrt[3]{x}$. Cubic root function produces a shape similar to that which is conceptually predicted by the prospect theory (see Figure 1). Thus, predictions made by the prospect theory could be approximated using the cubic root transformation of the deviations from the reference point. To model this nonlinear dependency, this curve, we apply the cubic root transformation to our independent variable. It is important to keep in mind that the prospect theory (and, consequently, Figure 1), deals with deviations from the

reference point and not absolute values. Therefore, it is the deviation between the car's reliability and the reference reliability that we are transforming using the cubic root function. The reference reliability that we are using to calculate this deviation depends on the assumptions underlying particular hypotheses. For our Hypotheses 1 and 3, based on the idea of an 'average car' with a single reference point for all cars, we are taking the difference between each car's reliability and the average for all cars reliability. For our hypotheses 2 and 4, based on the idea of 'average car within a year', we are taking the difference between each car's reliability and the average for age. To simplify the description and make for somewhat more readable presentation, we will be referring to the cubic root of difference between the car's reliability and reference reliability as the curve term throughout the text. We will be differentiating between 'Age curve' and 'All car curve' depending on whether the reference point was the average reliability for all cars or the average reliability for a given year.

In addition to nonlinearity, another feature of the dependency predicted by the prospect theory that we are trying to model is people place larger disutility on a loss than they place utility in a gain of equal amount. In modeling terms, this difference will translate into the notion that the slope of the curve before and after reference point may be different.

This change in slope ocurs at the reference point. Since we are operating with deviations from the reference point, this change of slope happens at 0. Operationally, the slope changes when the sign of the transformed variable changes. If b_+ is the slope of the curve where $x>0$ (reliability is higher than the reference reliability) and b_- the slope of the curve where $x<0$ (reliability lower than the average reliability), then $b_- = b_+ + \Delta$. Regression model is $Y= b_+ x$ where $x>0$ and $Y= (b_+ + \Delta)x = b_+ x + \Delta x$ where $x<0$. We do not expect the intercept to change at the point of origin, only the slope. Such a situation can be modeled via piecewise regression (Smith, 1979). To achieve the effect of piecewise regression, we introduce an indicator variable, which is equal to 1 when $x<0$ and 0 when $x>0$. The interaction effect of this indicator variable with our independent variable x will help us model the slope change after the point of origin. Let I be the indicator variable as described above. Then a regression equation $Y = b_+ x + b_I Ix$ will yield $Y= b_+ x$ where $x>0$ and $Y= (b_+ + \Delta)x = b_+ x + \Delta x$ where $x<0$. This indicator variable essentially serves to achieve the effect of piecewise regression (Smith, 1979). For readability and simplicity, this term will be referred to as simply the 'slope'. Consistently with the 'curve' term, we will be differentiating between 'age slope' and 'all car slope' based on the choice of the reference point. After the transformations described above and introduction of the interaction term, multiple linear regression was performed.

ANALYSIS AND RESULTS

The interrelationships among the variables were assessed first, (See Table 1). The price of the car when new has the highest correlation (0.72) with the dependent variable. Of the independent variables appearing in the same model, only price new and wheelbase are significantly related.

However, they are both entered together into the regression and neither is included in any of the hypotheses, therefore the correlation between price new and wheelbase does not affect our modeling.

Table 1.: Correlation coefficients and descriptive statistics.

		mean	SD	1	2	3	4	5
1	Price used	10674.7	6819.7					
2	Price new	23373.6	9903.5	0.72				
3	Wheelbase	106.66	5.148	0.188	0.508			
4	Age	5.277	2.151	-0.542	-0.063	-0.041		
5	All car curve	0.107	2.005	0.431	0.021	-0.074	-0.705	
6	Age curve	0.041	1.673	0.106	0.008	-0.118	-0.042	0.613

** Correlation larger than .188 is significant at the 0.01 level (2-tailed).
* Correlation larger than .106 is significant at the 0.05 level (2-tailed)

Next, the hypotheses were tested using a series of regressions. The results of the regressions are presented in Table 2. Model A is the base model with only the control variables of 'price new' and 'wheelbase' as the independent variables. Model B adds the 'all car curve' to test Hypothesis 1. Model C adds the 'all car slope', testing Hypothesis 3. The 'all car' terms are removed and replaced by 'age curve' and 'age slope' in Models D and E to test hypotheses 2 and 4 respectively.

To test whether adding variables according to our hypotheses statistically significantly improved the model fit, partial F-test for nested models (Neter et. al., 1996) has been employed. The last row of Table 2 presents the results of the partial F-test for the models. The information on the switch from which to which model produced the partial F-test results are included in parentheses. It follows that adding every variable significantly improves the model fit in every case. Every term is statistically significant. This indicates that all our hypotheses have been confirmed. The curve terms have positive sign, indicating a shape consistent with our predictions. Reliability has a decreasingly positive effect on price for cars with a rating above the reference point (whether the all car or the age average) and an increasingly positive effect on price for cars with a rating below the reference point.

The slope term has a negative coefficient, which means that the slope of the curve above the reference point is smaller than the slope of the curve below reference point. That is, the increase in the relationship between reliability and price when quality rating is below the reference point (whether the all car or age average) is greater than the decrease in the same relationship when quality rating is above the reference point.

Table 2: Model Coefficients and Fit

	Model A		Model B		Model C		Model D		Model E	
	Control		hyp 1		hyp 3		hyp 2		hyp 4	
	beta (SE)	sign.	beta (SE)	sign.	beta (SE)	sign.	beta (SE)	sign.	beta (SE)	sign.
constant	31096 (5336)	0.000	24998 (4294)	0.000	24084 (4267)	0.000	29500 (5366)	0.000	33363 (5489)	0.000
Price New	0.580 (0.027)	0.000	0.558 (0.022)	0.000	0.564 (0.022)	0.000	0.575 (0.027)	0.000	0.579 (0.027)	0.000
Wheel base	-318.5 (52.772)	0.000	-258.0. (42.47)	0.000	-268.3 (42.24)	0.000	-302.7 (53.07)	0.000	-329.9 (53.46)	0.000
All car curve			1359 (93.91)	0.000	2355 (366.4)	0.000				
All car slope					1950 (694.5)	0.005				
Age curve							295.4 (140.6)	0.036	971.9 (277.1)	0.001
Age slope									1480. (524.0)	0.005
R^2	0.561		0.719		0.725		.566		.575	
Partial F (models)			209.2 (A,B)	0.000	8.095 (B,C)	0.005	4.286 (A,D)	0.039	7.856 (D,E)	0.006

Dependent variable is the 'private-party price' (Kelley, 2002)

Both, the all car and the age curve and slope accounted for statistically significant proportion of variance in the data. However, the R-square for the all car reference point full model, 0.725, is noticeably higher than the R-square for the full model based on age reference points, 0.575. Therefore, regression models based on all-car reference reliability have higher explanatory power than the models based on age reference reliability. This means that people indeed, have a general expectation as to how reliable a used car should be, and deviations from that point is what influences their judgments.

CONCLUSIONS

In this paper, we have shown that consumers' evaluation in the used car market is influenced by the reliability of the used cars in a manner consistent with that predicted by the prospect theory (Kahneman & Tversky, 1979). Many factors affect consumer's choice of a vehicle, both utilitarian

and symbolic/emotional in nature. Our paper addresses the incremental influence of more rational utilitarian aspects of decision-making considering quality in establishing a price. Prospect theory suggests that, when evaluating alternatives (prospects), consumers compare utilitarian decision criteria against a reference point. Consumers consider reliability above the reference point as a loss and reliability below the reference point as a gain. Prospect theory further suggests that consumers are risk seeking for losses (below the reference point) and risk-averse for gains (above the reference point). Quality has a decreasingly positive effect on price for cars with quality rating above the reference point and an increasingly positive effect on price for cars with quality rating below the reference point.

We tested hypotheses based on two classification schemes that consumers might use when establishing the reference point for used car reliability – a broad based view that consumers form an expectation of the reliability of a used car based on reliability of all other used cars, and a narrower view that consumers form more specific expectations based on the age of the car. All of the hypotheses were supported, which means that consumers have an overall image of used cars combined with adjustments for age. One suggestion for further research is investigation of other reference points. An alternative to using age or all car reference points is to use a 'vehicle class' reference point. The underlying idea is that cars are compared to each other within a class more so than across classes. This would mean that a Dodge Neon is not measured against a Mercedes Benz 600 using the same set of criteria, but is compared to a Honda Civic. The support for this idea comes from researchers who refer to the classes of automobile as "price-quality tiers" (Lemon & Nowlis, 2002). Another approach is to use the brand as the reference point, with the underlying idea that the consumer associates a general level of some attribute, in this case car quality, to the brand name. The brand average quality influences the evaluation of specific cars by what is referred to as a 'brand halo' effect (Betts & Taran, 2002), which would support the idea of a brand reference point.

This study bears important implications for researchers, educators and practitioners. For researchers it is a contribution to our understanding of consumer driven pricing. We explain the relationship between quality and price, and we empirically validate our conclusions. The adoption of prospect theory perspective in examining how consumers make their decisions considering quality is a more general contribution that this paper makes, especially in light of the fact that quality has remained a largely underdeveloped area of application of prospect theory.

Our research design makes an additional contribution. The methodology is simple, relying on available secondary data sources, making it simple to explain and introduce into students' and practitioner's toolbox set. The nature of the data allows us to overcome the generalizability and external validity issues inherent in traditionally used in the field experimental studies. Additionally, it offers the opportunity for the triangulation of findings as an alternative to experimental studies, complimentary tool.

This study can also prove valuable for educators in the field of marketing and consumer behavior. It offers a simple approach to prospect theory and consumer decision making that is easy to explain. Additionally, most students are interested in cars and are easy to get involved in a discussion about used cars. This paper can also be used as supplemental material in a classroom discussion related to pricing, promotion, consumer decision making, and/or product quality.

For consumers, the lesson from the support of prospect theory is simple – in situations where the price is set by the market, some items will be overpriced and others underpriced. An understanding of how consumers compare products can indicate what products are being sold at a premium and which are being offered at a bargain. The key is in identifying characteristics that other consumers are using as a reference or standard, and realizing that products that products that are above the standard will be offered at a disproportionate discount because the incremental increase in price does not keep up with increases in the utility of the characteristic. In practice this means that better products may cost more, but they are priced lower than they rationally should be. Simply put – buy better than average and you get more than you pay for.

For practitioners on the marketing (selling) side, this research provides an explanation of consumer decision-making regarding quality, explains quality reference points and emphasizes the importance of identifying the proper quality reference points. Such knowledge could be practically applied in positioning and/or promotional efforts. For example, sellers could attempt to influence the external reference points to affect the framing of consumer decisions. If the quality reference point is very high, then all the goods below that reference point would be coded as losses, and if the quality reference point is low, all the goods above that point are coded as gains. While the objective difference remains the same, the difference in utility will be much steeper if the lower quality goods are coded as losses than if the higher quality goods are coded as gains.

Therefore, sellers of superior quality goods should attempt to upwardly influence consumer's reference quality point rather than maintaining that they are better than average. Consider two strategies: first, accept a lower general expectation or standard and position your product as vastly superior to the standard or second, raise consumers expectations and standards and position your product as meeting these high standards. Our findings indicate that the second strategy – making efforts to raise consumer standards rather than positioning above a lower standard - will ultimately bring a higher market price for your product. In the used car market, this means that raising expectations of all used cars, such as portraying or establishing as standards 'certifying' used cars, providing warranties, service agreements and such will bring higher prices than providing such things and positioning your lot as exceptional because of it. Rather than showing consumers that they exceed the existing standards, used car retailers are better off convincing consumers that they should have higher standards and you meet those higher standards. This change in reference point will ultimately lead to higher used car prices.

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EXAMINING THE EFFECTIVENESS OF PROPOSED CIGARETTE PACKAGE WARNING LABELS WITH GRAPHIC IMAGES AMONG U.S. COLLEGE STUDENTS

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ABSTRACT

The smoking rate among U.S. college students is much higher than the national average. College is a time when many young adults try smoking and see smoking as having social benefits. Most of these new smokers believe that they will quit smoking once they leave campus, but many of them find it difficult to do so, and they become life-long smokers. The U.S. government, along with governments of most developed countries, is keenly interested in curbing the smoking rate for numerous reasons, including the physical and social welfare of its citizens and to reduce government expenditures subsidizing healthcare costs for smokers who become ill. One avenue for accomplishing this is the mandating of on-pack warning labels detailing the health hazards of smoking. Warning labels used in the U.S. are relatively small and repetitive, and the described health risks are pallidly stated compared to labels used in many other countries, most notably Canada.

An online experiment was conducted examining the effectiveness of Canadian-style cigarette package warning labels currently proposed for adoption in the U.S. The proposed package warning labels include a full-color picture complementary to the content of the message. The major goal of the study was to assess the effectiveness of these more detailed and vivid health warning messages among a U.S. at-risk population (college students). Another goal was to determine the efficacy of the (pictorial) element specifically, while holding the text message constant. In a sample of young adults, the proposed package warning labels were shown to outperform the current U.S. warning labels in aided recall, depth of processing, and perceived argument strength. When graphic and no-graphic versions of the proposed labels were compared, the graphic version was rated as more credible. Current smokers rated the arguments in all package warning labels as weaker than nonsmokers, as expected.

INTRODUCTION

Cigarettes are often cited as the only legally-marketed consumer good that, when used as directed, is known to cause harm to its users. Moreover, cigarettes are successfully marketed to a group of consumers (at least in the U.S.) who are probably well aware of the negative health effects

of smoking. Anti-smoking campaigns in the U.S. are routinely targeted to children as young as seven years old. Despite these education efforts, however, the Center for Disease Control and Prevention reports that 22.5% of American adults currently smoke cigarettes (Center for Disease Control 2004). A significant proportion of these smokers are young, educated adults who have been exposed to anti-smoking messages from a very young age.

Casual observation on college campuses in the U.S. seems to suggest that the percentage of traditional-age college students who smoke has been increasing over the last several years. At least two recent empirical studies confirm this supposition. A comprehensive national study of college students at U.S. four-year colleges conducted by Harvard in 2001 showed that 29.8% of the respondents reporting that they were currently smokers (Moran, Wechsler, & Rigotti 2004). This percentage is much higher than the overall level of smoking in the U.S. reported above (22.5%). In fact, adult smoking in the U.S. has decreased over the period from 1993-2000 for all age groups except young adults between 18 and 24 years old (Center for Disease Control 2002). Similarly, in earlier waves of this same Harvard study, results showed that between 1993 and 1997, cigarette use by college students increased from 22.3% to 28.5% (Wechsler, Rigotti, Gledhill-Hoyt, & Lee 1998).

The comparatively high prevalence of smoking among these young, educated adults is especially troublesome. These individuals would in all likelihood have been exposed to significant anti-smoking information in their formative years, yet they elect to start smoking in spite of their knowledge of smoking's negative effects and addictive properties. Increasingly, college appears to be a time when many students begin to experiment with smoking. Many of these individuals think of themselves as "social" smokers and believe they will stop smoking after college. Unfortunately, many of these social smokers will find quitting difficult. Indeed, one published study showed that 41.5% of college student who have tried smoking continue on to become regular smokers (Everett et. al 1999). Numerous public health researchers have called for immediate action to address this trend toward smoking among college-age adults (Hammond 2005; Wechsler et. al 1998; Rigotti, Lee, & Wechsler 2000; among others).

As in the U.S., governments of most developed countries around the world are trying to reduce smoking among their citizens with varying degrees of success. Indeed, one of the major health objectives in the U.S. is to reduce the adult smoking rate to less than 12% (U.S. Department of Health and Human Services 2000). With nearly 30% of college students picking up the cigarette habit during early adulthood, meeting this goal seems unlikely. One common tactic aimed at reducing smoking is the mandated placement of warning labels on cigarette packages. In the U.S., warning labels appear on the side of every cigarette package, and contain one of the following four warning messages (used on a rotating basis):

1) Cigarette smoke contains carbon monoxide;
2) Smoking causes lung cancer, heart disease, emphysema, and may complicate pregnancy;
3) Quitting smoking now greatly reduces serious risks to your health;
4) Smoking by pregnant women may result in fetal injury, premature birth, and low birth weight.

These particular warnings have been mandated since 1984. The actual content of these U.S. warning messages is comparatively pallid and the labels themselves are small, compared to those used in most other developed countries. For instance, Australia requires warning messages that cover 25% of the front of the cigarette package, 33% of the back panel, plus one entire side of the package. In January 2001, Canada enacted legislation requiring warning labels covering 50% of the front of the cigarette package, containing graphic pictures illustrating the negative effects of smoking (Canadian Cancer Society 2005).

In a bid to strengthen U.S. tobacco warning labels, Senator Dick Durbin (D-Illinois) has proposed a bill requiring U.S. cigarette packages to carry warnings similar in size and content to those now used in Canada. This bill, titled "Stronger Tobacco Warning Labels to Save Lives Act," is currently under consideration in the Senate Committee on Health, Education, Labor and Pensions.

The current Canadian tobacco warning labels contain one of sixteen rotating messages accompanied by related photographic images. For example, one of the sixteen messages is a label with the statement: "Smoking causes mouth diseases" accompanied by a large, full-color photograph of a badly diseased mouth. This warning label, in particular, was shown to be the most effective of all sixteen labels in a survey sponsored by the Canadian Cancer Society (2001). Other warnings include messages and graphic images referring to tobacco's effects on lung cancer and strokes, the addictive properties of nicotine, the increased occurrence of impotence among male smokers, and the dangers of second-hand smoke. The complete set of sixteen Canadian package warning labels can be viewed online at http://www.hc-sc.gc.ca/ahc-asc/media/photogal/label-etiquette/index_e.html.

So far, the impact of these new Canadian warning labels appears to be promising. A survey of 2000 Canadians sponsored by the Canadian Cancer Society in Fall, 2001 found that 44% of Canadian smokers polled reported that the new warning labels increased their motivation to quit smoking. In addition, 38% of Canadian smokers who attempted to quit smoking in 2001 said that the graphic warning labels were a factor in their desire to quit (Canadian Cancer Society 2001). Furthermore, the survey shows evidence that a significant number of Canadian smokers were embarrassed by the warning labels on their cigarette packages. Twenty-four percent of smokers admitted to putting a cardboard sleeve or otherwise covering their cigarette packages to hide the warning labels from others.

Similarly, a telephone survey conducted in October, 2001 (10 months after the new warning labels were implemented) showed that 91% of smokers not only reported having read the warnings, but they also demonstrated a thorough knowledge of the warning content (Hammond et al. 2003). This study also showed that smokers who reported reading and thinking about the warning label contents were more likely to have quit smoking, reduced their smoking, or attempted to quit smoking in a follow-up survey three months later. Clearly, the evidence to date suggests that the Canadian warning labels are having desired effects on smokers' behaviors and attitudes.

Our major goal in the current study is to assess the likely effectiveness of the Canadian-style cigarette package warning labels among U.S. college students. The labels will be compared to the U.S. tobacco warning labels currently in use, and the relative effectiveness of several specific messages will be examined in an online experimental setting. Specifically, we examine the memorability, credibility, and persuasiveness of the labels among young adults, including smokers, former smokers, and nonsmokers. We also investigate the impact of the photographic image on the label by comparing consumers' responses to the new labels (including the photographic image), compared to their responses to labels with the identical text message without the image.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

While there are debates about the effectiveness of package warning labels, there is little doubt that the impact of any given warning message suffers over time from adaptation, or wear-out, as consumers are repeatedly exposed to it. Eventually, often-seen messages of any kind fail to draw attention, as consumers adapt to their continued presence in their environment. The novelty (newness) of the Canadian warning labels in and of itself probably explains, at least in part, their strong effects found in the study discussed above conducted by the Canadian Cancer Society less than a year after the new labels were introduced.

A series of studies demonstrating the power of newness in warning messages was conducted by Krugman, et al. (1994) and Fisher et al. (1993). In several published articles based on these studies, these authors compare the efficacy of new warning messages to currently mandated (existing) warning messages included in tobacco advertisements (rather than on-package warning labels, the topic of the present study). In their 1994 study, eye-tracking measures revealed that adolescents paid more attention to new warning messages compared to old messages, and they noticed the new messages 1 to 2.5 seconds earlier during an ad exposure. These results indicate that changing the size, content, and appearance of package warning labels is likely to increase their effectiveness, if for no other reason than for the novelty the change generates, and the resulting increase in the message's tendency to catch consumers' attention.

In addition to their newness, however, the proposed Canadian-style graphic cigarette package warning labels are also larger and more colorful than existing U.S. warning labels; they appear on the front (top) of the package rather than on the side panel; their message content is more detailed and varied; and they contain photographic images to support or complement the message. For all of these reasons, we expect the proposed warning labels to perform better than existing warnings in terms of attention and post-exposure recall. Note that we make this prediction in spite of the fact that the existing warning labels have the advantage of repeated exposures over a long length of time (potentially years), especially among smokers. This superiority in consumer recall of the message content is predicted both for the new warning labels with color photographic images, and identical labels without the photographic images.

H1: Compared to the existing warning labels, the proposed new warning labels will be:
a) recalled better;
b) processed more deeply;
c) perceived as making stronger arguments; and
d) perceived as more credible.

As stated earlier, the proposed Canadian-style warning labels contain full-color photographic images that are relevant to the specific message content in the label. These graphic images are in some cases quite powerful, and are likely to garner significant attention in and of themselves. Prior research supports this contention. In a study of alcohol package warning labels, Laughery, et al. (1993) showed that both color and pictorial elements significantly increased the noticeability of the warning labels. Thus, we make the following predictions:

H2: Warning labels with photographic images will be more effective than the identical warning message without the photographic images. Specifically, the labels containing pictures will produce higher scores on:
a. aided recall;
b. perceived credibility; and
c. perceived argument strength.

Tobacco warning labels use fear appeals to: 1) increase smokers' or potential smokers' perceptions of the risks associated with smoking, and 2) induce feelings of threat or fear about the negative effects of smoking on health in hopes of motivating the individual to stop smoking or never to start. To these ends, warning labels typically present one or more negative consequences of smoking such as increased rates of lung cancer, stroke, emphysema, and heart disease among smokers. Some warning labels also strive to generate feelings of guilt by pointing out the negative effects of second hand smoke (passive smoking) on others, including children and unborn children.

Marketing researchers have studied the effectiveness of fear appeals in advertising extensively over the years. The general purpose of most fear appeals is to generate unpleasant tension and arousal, which can be relieved by following the recommendations specified in the message. In the current context, the behavior recommended, either explicitly or implicitly, is to quit smoking or never to start. While the literature on fear appeals is extensive, the reported findings are quite mixed (see Rotfeld 1988). Some researchers have found that inducing a greater fear arousal almost always results in greater persuasion (LaTour & Rotfeld 1997, LaTour, Snipes, & Bliss 1996, among others). Other fear appeal studies have shown that generating too much negative arousal or tension is counterproductive. Individuals who find a message extremely threatening and unpleasant may generate defense mechanisms against the message, which typically take the form of discounting or disbelieving the message, or avoiding the message altogether.

In health related messages such as tobacco warning labels, instilling too high a degree of fear and thus activating these defense mechanisms has been shown to lead to maladaptive coping

responses (MCRs) (Eppright, et. al. 2002; Janis 1986; Rippetoe & Rogers 1987). For smoking, these MCRs could include consciously choosing not to think about the health effects of smoking ("I'm going to die of something, it may as well be cancer"), discounting the likelihood of the consequences ("That won't happen to me"), or even feelings of anger and rebellion toward the source of the message ("They can't tell me what to do – I'll smoke if I want to"). (For empirical studies demonstrating these effects in the consumer warning literature, see de Hoog, Stroebe, & de Wit (2005); Gleicher and Petty (1992); and Liberman & Chaiken (1992)).

Studies have also shown that certain individual characteristics of the receiver will influence how much fear is too much. These personal characteristics include the individual's locus of control (Holt et al. 2000) and level of self efficacy (LaTour & Rotfeld 1997; Rogers 1983, among others). A person with an internal locus of control and a high level of self efficacy will presumably be able to handle a higher degree of threat before defending against the message, since they believe they have the ability to perform the advocated behavior (e.g., stop smoking) to avoid the negative consequences.

Recent research (Schneider et al. 2001) indicates that warning messages using strictly negative framing (i.e., messages that present only the negative effects of smoking) may be less effective than messages presenting the negative effects of smoking as well as the positive effects that would be incurred by stopping smoking. This research showed that gain-framed messages focusing on the benefits of quitting smoking were accepted more readily by consumers, and were more effective at reducing temptations to smoke and smoking frequency among smokers. This pattern of effects persisted even six weeks after exposure to the messages.

The sixteen proposed warning labels (currently in use in Canada) present health risks that U.S. consumers may not be aware of (mouth disease, stroke, heart disease, and impotence), and generally present health risks in a much more vivid and graphic manner than U.S. warning labels. For this reason, smokers in the U.S. will undoubtedly find many of these new messages more threatening and frightening than the current warning labels. While the current study is not designed to study fear appeals per se, a key goal is to examine whether these fear-inducing warnings are likely to result in desirable behaviors (e.g., quitting or reducing smoking) or in undesirable responses (e.g., defensive reactions such as MCRs). Because of the fine line between too little and too much fear and arousal, at a minimum, we will show that it is imperative that individual warning labels be carefully pretested to determine their effectiveness.

Of the sixteen proposed warning labels, eleven messages depict smoking consequences that are relevant to smokers in all demographic groups. For example, the warning that smoking increases risks of heart disease, emphysema, stroke, lung cancer, etc. would apply to all smokers, at least to some degree. However, the other five warnings depict the effects of smoking on specific demographic groups, including children. One warning label shows a pregnant woman holding a lit cigarette and outlines the short-term and long-term effects of smoking on babies when the mother smokes while pregnant. A male smoker probably does not feel as personally affected by these

consequences as would a pregnant woman or a woman of child-bearing age. Similarly, another warning label reports the finding that cigarette smoking can lead to male impotence, and would thus apply to males much more directly than females.

Because of significant differences in personal relevance or self-connections of various warning messages, consumers in the target group for a particular warning message are likely to pay more attention to that warning than those not in that target group. Involvement in the message will increase as the personal relevance of the depicted health consequences increases. In particular, we investigate the warning message involving cigarettes' effects on male impotence in our study, making the following prediction.

H3: Males will process the warning message related to smoking's effect on impotency more deeply than will females.

It is important to note, however, that greater attention may not always lead to increased persuasion. To the extent that personal connections to the negative outcome depicted in a fear-based warning message are very strong, the perceived threat level also increases, possibly eliciting the defensive response and maladaptive coping behaviors described earlier. Therefore, although a highly relevant message is hypothesized to increase attention, its effects on perceived message credibility and perceived warning label effectiveness are left as research questions, rather than directional hypotheses.

The proposed warning label messages vividly present the negative health consequences to the smoker him/herself, or present the negative effects of the smokers' behaviors on others. Therefore, smokers (compared to nonsmokers) will feel a much higher level of perceived threat and experience a higher level of fear-induced arousal from these messages and images. To protect themselves from these strong perceived threats, we believe that many smokers will generate defensive reactions and MCRs in response to the proposed stronger warnings. Indeed, several studies of alcohol warning labels have shown that consumers who had positive attitudes toward drinking prior to seeing the warnings tended to disbelieve the threats presented in the warning messages (Andrews, Netemeyer, & Durvasula 1990; 1991; for a review of this literature, see Andrews 1995). Although smokers are likely to vary widely in their responses to the warning labels, compared to nonsmokers we predict that they are more likely to defend against the warning messages, thus perceiving the warnings as less strong and credible.

H4: Current smokers will rate the strength of arguments made in warning message as: a) weaker and b) less credible than will non-smokers.

METHOD

To test the hypotheses, a between-subjects online experiment was used in which subjects viewed an image of a single cigarette package featuring one of seven different warning labels. The size and placement of these labels on the package was identical to the guidelines in the federal mandates (as currently legislated in the U.S. or as outlined in the proposed U.S. legislation, depending on the experimental cell). Three of these labels were exact replicas of the current Canadian warning labels that have been proposed for use in the U.S., with the exception that the "Health Canada" tag was removed from the photographic image. Because the number of cells would be too large if we included a cell for each of the sixteen rotating Canadian warning labels, we chose three of the labels for the experiment, which will be described later. Three more label conditions were created by removing the photographic image from these same three Canadian labels, such that only the text appeared in the warning label, with the label size remaining constant.

The seventh cell represented a control condition. It included a warning label stating that cigarette smoke contains carbon monoxide, which is one of the four current warning messages currently used in the U.S. This particular warning message was selected from the four current U.S. warnings simply because it contained the shortest text, which maximized visibility and readability of the warning label on the cigarette package mock-up used as the experimental stimuli. This was advantageous given that the current U.S. laws mandate that the warning label appear only on the narrower side panel of the cigarette package, thus making the warning label much smaller than the proposed warning labels used in the other cells.

Subjects were randomly assigned to one of the seven experimental conditions using randomly distributed handouts containing a link to a website containing the stimuli and survey pertaining to a particular experimental condition. The first screen of the online survey contained an informed consent statement on which the participants checked a box indicating their willingness to participate in the experiment. As part of this informed consent, subjects were told that they could choose to participate in an alternate activity to earn the offered bonus points by contacting their instructor if they preferred not to participate in the experiment. None of the potential subjects elected to exercise this option.

Subjects

A total of 467 student subjects participated in the experiment. These subjects were recruited from introductory and upper level marketing classes at a large southeastern university in the U.S. during two consecutive semesters. For their participation, subjects were offered bonus points in their marketing class. The subjects represented a wide range of majors, with the majority being business majors. The subjects electing to participate represented 79% of the total (591) students

enrolled in these classes. The study was announced during several class periods to ensure that the maximum number of students was given the opportunity to participate in the study.

Subjects were fairly evenly distributed across the six test and one control conditions, with a minimum of 61 respondents in each. Slightly over half of the respondents were male. The racial makeup of the sample was representative of the population. As might be expected of a college student sample, the average respondent was just under 22 years old; the youngest was 19 and the oldest was 39. Slightly more than one in five were currently smokers, while 59.7% have never been smokers. There were no significant demographic differences among the experimental groups except for smoking behavior. While these differences could be due to random chance, it is possible that the nature of the scenarios may have impacted willingness to disclose smoking behavior. This will be discussed later in the paper. The demographics of the respondents are shown in Table 1.

Table1: Demographics by Experimental Cell

	Impotence with graphic	Addictive with graphic	Mouth disease with graphic	Addictive no graphic	Impotence with graphic	Mouth disease no graphic	Current warning
	%	%	%	%	%	%	%
Male	51.7	55.1	62.7	54.1	57.6	43.8	54.1
Female	49.3	44.9	37.3	45.9	42.4	56.3	45.9
White	84.1	89.6	84.0	89.3	90.6	84.1	86.7
African-American	11.6	7.5	14.7	10.7	7.8	14.3	13.3
Asian	4.3	3.0	1.3	0	1.6	1.6	0
Smoking behavior *							
Never a smoker	69.0	59.4	61.3	62.3	45.5	56.3	63.9
Smoker in past	14.1	24.6	13.3	21.3	27.3	10.9	14.8
Current smoker	16.9	15.9	25.3	16.4	27.3	32.8	21.3
Age (mean)	22.1	21.8	21.9	21.4	21.5	21.8	22.2

*Marginally significant differences among groups based on Chi-Square analysis (p=.068)

Measures

The major dependent variables used in this study are aided recall, depth of processing, perceived argument strength, and perceived credibility. Aided recall was assessed by presenting subjects with a list of five sentences summarizing five different warning messages, one of which is the one they were actually exposed to. Subjects indicated which message they saw on the package they had viewed. This response was coded as correct/incorrect.

Argument strength was measured with a three-item scale commonly used in the marketing literature. These items included the following semantic differential questions (1-5 scale): unpersuasive/persuasive, uninformative/informative, and weak/strong (Cronbach's alpha = .84). Depth of processing was measured with a four-item Likert scale (1-5) also commonly used in published marketing studies. These items included measures of attention, concentration, thought, and careful reading of the warning message (Cronbach's alpha = .91). Perceived credibility was measured with a single-item (1-5 scale) semantic differential question with endpoints labeled "Not believable/believable."

RESULTS

Our first hypothesis predicts that the proposed (new) warning labels will outperform existing warnings in terms of aided recall, depth of processing, perceived argument strength, and perceived credibility. This hypothesis is supported for all variables except perceived credibility, for which there were no significant differences between the old and new warning labels. See Table 2 for the mean values and t-tests for depth of processing, argument strength and perceived credibility. Aided recall (the ability to correctly pick the message from a list of five possible messages) was higher for the new warning messages as a group than the current message serving as the control condition, but at a marginally significant level (p<.058) (see Table 3 for the aided recall scores).

Table 2: Mean Scores for Old and New Warning Labels

Variable:	Existing Warning Labels	New Warning Labels	t-value (465 d.f.)	Significance Level
Depth of Processing	3.15	3.61	3.14	p<.002
Argument Strength	2.33	3.56	8.73	p<.000
Perceived Credibility	3.77	3.66	.66	P<.510

Table 3: Comparing Aided Recall of New Warnings vs. Current Warning

	New vs. Old Warnings	
	New Warnings	Current Warnings
	%	%
Aided Recall*		
Correct recall	94.8	88.5
Incorrect recall	5.2	11.5

*Marginally significant differences among groups based on Chi-Square analysis (p=.058)

Further investigation showed that both the graphic and non-graphic forms of the new warning labels outperformed the current warning label on depth of processing and argument strength (See Table 4.) Aided recall was also examined within each of the new message subgroups individually. As seen in Table 5, aided recall for each of the new warning labels was higher than for the control (current) message. Table 6 shows the mean ratings of all the experimental cells on perceived argument strength, depth of processing, and perceived credibility. As can be seen in this Table, the new labels uniformly outperformed the current labels on these variables with the exception of perceived credibility.

Table 4: Comparing Mean Ratings by Warning Message Type

	Graphic Mean	No Graphic Mean	Control Mean
Depth of Processing	3.64	3.59	3.15[1]
Perceived Argument Strength	3.62	3.50	2.33[1]
Perceived Credibility	3.77	3.54[2]	3.77

[1] Significant differences from other groups based on ANOVA with Bonferroni post hoc tests (p=.005)
[2] Marginally significant differences from other groups based on ANOVA with Bonferroni post hoc tests (p=.06)

Table 5: Comparing Recall of New Messages Individually with Current Warning

	Impotence with graphic	Addictive with graphic	Mouth disease with graphic	Addictive no graphic	Impotent no graphic	Mouth disease no graphic	Control
Aided Recall:							
Correct recall	94.4%	94.2%	94.7%	95.1%	95.5%	95.3%	88.5%
Incorrect recall	5.6%	5.8%	5.3%	4.9%	4.5%	4.7%	11.5%

In H2, we hypothesized that the inclusion of the pictorial element in the new warning labels would generate superior aided recall, deeper processing of the message, and greater perceptions of credibility and argument strength, compared to the identical text warning with no graphic. This hypothesis was supported only for perceived credibility. For the warning label with a graphic element, the mean credibility rating was 3.77, compared to 3.54 for labels without the graphic element (t_{404}=1.91, p<.03). No significant differences were found for perceived argument strength or depth of processing. See Table 4 for the mean values of these variables within the graphic, no-graphic and control conditions. For aided recall, there was no significant effect of the presence/absence of the graphical element of the warning label (χ^2=.16, p<.69).

Table 6: Comparing Mean Ratings of Warnings Across Specific Labels

	Impotence with graphic	Addictive with graphic	Mouth disease with graphic	Impotent no graphic	Addictive no graphic	Mouth disease no graphic	Control
	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Perceived Argument Strength	3.50 [a/c]	3.54 [a/c]	3.80 [a/c]	3.54 [a/c]	3.51 [a/c]	3.45 [a]	2.33 [b]
Depth of Processing	3.67 [b]	3.60 [b]	3.66 [b]	3.74 [b]	3.47 [a*]	3.54 [b]	3.15 [a]
Perceived Credibility	3.25 [a]	3.77 [b]	4.25 [c]	3.02 [a]	3.61 [b]	4.03 [b/c]	3.77 [b]

Statistically significant differences base on MANOVA with Bonferroni post hoc tests (p=.005).
Within each factor, labels with different letters are significantly different.
*Not significantly different from control.

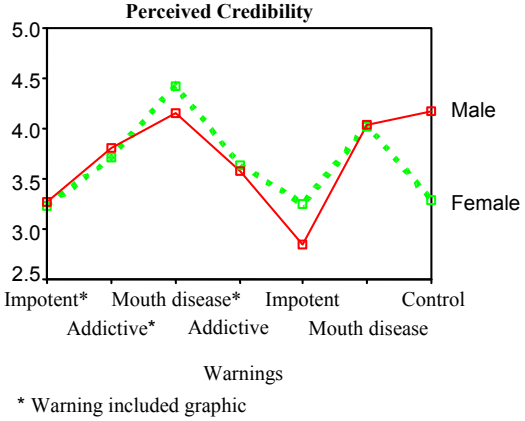
In H3, we predicted a difference between men and women's tendencies to deeply process the new warning about smoking's effects on impotence. This hypothesis was supported at a marginally significant level ($p<.10$). The mean depth of processing score (on a 1-5 scale) for women was 3.57, compared to a mean score of 3.81 for men ($t_{135} = 1.30$, $p<.10$). Although no specific gender differences were hypothesized *a priori* regarding credibility and perceived argument strength for the impotence warning, we performed post hoc analyses to explore these variables. For perceived credibility of the impotence message, there were no significant differences based on gender ($Mean_{Men}=3.05$, $Mean_{Women}=3.24$, $t_{135}=.85$, $p<.39$). Similarly, there were no significant gender differences observed in perceived argument strength for the impotence message ($Mean_{Men}=3.46$, $Mean_{Women}=3.58$, $t_{135}=.58$, $p<.56$).

When we examined gender differences involving the impotence warning labels separately for those labels containing a graphic image (vs. text only), some interesting results were found. Recall that the graphic associated with the impotence warning showed a cigarette with a long string of ash drooping downward. Men reported greater levels of processing involvement for this warning (Mean=3.92) than did women (Mean=3.41), a statistically significant difference ($t_{69}=.1.84$, $p<.07$). However, women rated the message argument as stronger than did the men ($Mean_{Men} = 3.27$, $Mean_{Women}=3.73$, $t_{69}=1.86$, $p<.07$). One plausible explanation for this pattern of effects is that fear arousal caused by the visual element was too great for men and triggered a defensive response. Interestingly, although men seemed to discount the strength of the arguments presented regarding smoking's effects on impotence, they did not differ from women in terms of their perceptions of the credibility of the argument ($Mean_{Men} = 3.28$, $Mean_{Women}=3.23$, $t_{69}=.17$, $p<.87$). When the impotence

warning label was text-only (no graphic), there were no significant gender differences in argument strength, credibility or depth of processing.

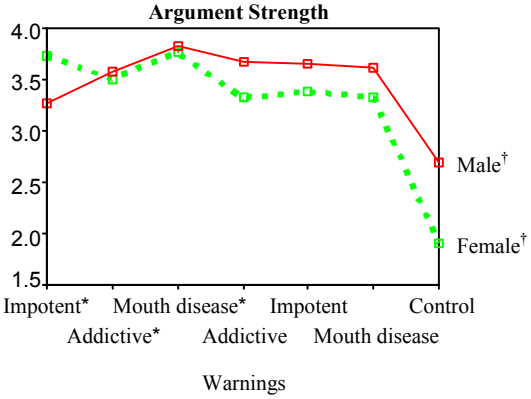
Additionally, Figures 1-3 show the means of perceived argument strength, credibility, and depth of message processing by gender for all of the warning messages used in the experiment. These charts show that in terms of perceived credibility, the only significant gender differences were for the control label—men rated the existing U.S. warning message as more believable than did women. Men were also more likely than women to agree that the control label presented a strong argument, as shown in Figure 2.

FIGURE 1
Perceived Credibility



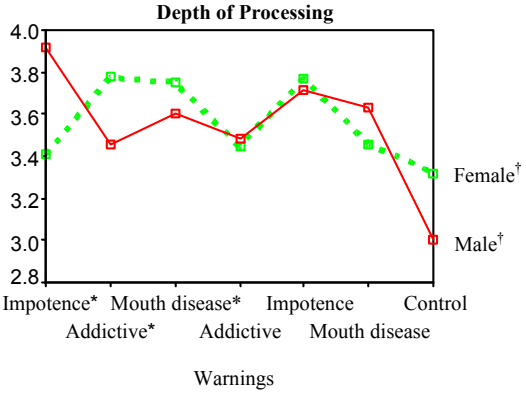
* Warning included graphic

Figure 2
Argument Strength



*Warning included graphic.
†Significant difference between the sexes only for control

Figure 3
Depth of Processing



* Warning included graphic.
†Significant difference between the sexes for Impotence with graphic warning.

We expected that smokers might have a defensive response to the new warning labels, rating the arguments presented in the warning messages as weaker and less credible than nonsmokers, on average (H4). The following results should be interpreted with caution, however, because a large number of subjects chose not to answer the question as to whether they currently smoke cigarettes. Only 186 out of 467 subjects chose to answer this question, presumably because of the social undesirability of smoking. This was the only question that a significant number of subjects did not answer on our survey. With this caution in mind, our results showed that current smokers did rate the arguments made in the warning messages as weaker than did nonsmokers ($Mean_{Smokers}$=3.34, $Mean_{Nonsmokers}$=3.60, t_{186}=1.62, p<.05), supporting H4a. However, no significant differences were found between smokers and nonsmokers for perceived credibility of the messages ($Mean_{Smokers}$=3.70, $Mean_{Nonsmokers}$=3.63, t_{186}=.40, p<.7). Therefore, H4b was not supported. These findings were identical whether the new warning labels were analyzed separately, or if all label conditions (including the old warning labels) were included in the analysis.

Additional Post hoc Analyses: Although we did not make specific hypotheses regarding the effects of respondents' parents' smoking behaviors, we performed post hoc analyses on this data. Thirty-seven percent of respondents reported that one or more of their parents was a smoker. We found that, similar to the effects of their own smoking on perceived argument strength, respondents with either or both parents who smoked rated the warning label messages as weaker, on average than did respondents with non-smoking parents (3.49 vs. 3.24, t_{465}=2.44, p<.015, two-tailed). Again, this is consistent with a defensive reaction to the negative consequences outlined in the warning messages, even though the threat was not to the respondent themselves, but to loved ones. There

was no significant interactive effect of the respondent's own smoking and their parents'smoking on perceived argument strength.

DISCUSSION AND CONCLUSIONS

In general, our results support the superiority of the proposed graphical tobacco warning labels over the current labels in use in the U.S. among college students, a population of great concern to public policy makers because of their young age and high likelihood of smoking adoption during their college years. The new labels outperformed the current labels on aided recall, depth of message processing, and perceived argument strength. This was true even when the graphical element of the warning label was removed. The arguments made in the new labels, even without the pictorial element, were viewed as stronger than current warning messages.

Although we expected the warning labels with the pictorial element to outperform the same message without the picture, this was shown to be the case only for perceived credibility. However, we believe we may have experienced a ceiling effect on some of our measures. Both the graphical and nongraphical forms of the new warnings produced high scores on depth of processing and aided recall, thus making it more difficult to detect significant differences between the two groups. Based solely on our results, however, it appears that it is the size, location, and message in the warning label that may account for the majority of the superior performance of the new labels over the old, rather than the graphical element of the warning label.

The male college students in our study paid much closer attention to the warning regarding smoking's effects on male impotence, as expected, but, perhaps in a defensive reaction, they rated the arguments made in that warning label as weaker than did the women. This was especially true when the impotence-related warning label contained a picture of a limp cigarette accompanying the text. These results suggest that although a strong personal identification with a warning's content may draw attention to the warning, it does not always translate into increased effectiveness. Although men did not seem to doubt the warning's credibility, they perhaps doubted that the consequences would happen to them, personally. Thus they rated the arguments as weaker than did the women, who were presumably less personally threatened by the warning content. This is a classic defensive reaction to a too-strong fear appeal.

Consistent with past research in the general area of product warnings, users of the product (cigarettes) discounted the warning arguments, rating them as weaker than nonsmokers. This finding is quite similar to the defensive reaction displayed by men who were confronted with the impotence warning. This may suggest that package warning labels may be more successful at preventing nonsmokers from starting to smoke than at affecting current smokers' habits.

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MARKET SEGMENTATION FOR ONLINE COURSES IN THE COLLEGE OF BUSINESS

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ABSTRACT

The purpose of this article is to analyze the market segments of students enrolled in undergraduate online business courses at a regional state university. By understanding the defining characteristics of these students, universities may be able to more effectively recruit and retain students in these market segments. A survey of undergraduate online students was conducted and analyzed to determine the various market segments being served, and a predictive model was prepared that incorporates key independent student variables that can forecast student demand for courses and degree programs online.

INTRODUCTION

With the concept of distance education, a paradigm shift has occurred with the university now traveling to the student instead of the student traveling to the campus. This paradigm, however, requires more flexibility and decentralization (Sherry, 1996). The concept of strategy development for the university and the individual colleges is to provide educational services for their students. Some authors believe that a first mover advantage in online course development will provide them with new or expanded markets in the product life cycle curve (see for example Burnside, 2001; Clayton, 2000; Schofield, 1999; and Willis, 2000), while others view it as a necessity in order to maintain market share (Willis, 2000). The current state of affairs in online education can be summarized as follows: "if you do not develop online courses, then someone else will". Therefore, many universities believe they are being swept along with this tide of events (Clayton, 2001; Kidwell, Mattie & Sousa, 2000 and Oblinger, 2000)

One universal question is to determine if strategy follows product development, or if product development follows strategy (Farrington & Bornak, 2001 and Hezel & Dominguez, 1999). The rationale for this question is at the heart of online course development. If one selects to construct the strategy first, then determining the target market segmentation is critical as well as the demographics and characteristics of the market segment. The reverse would be to construct the

online courses over a period of time and then ascertain the market(s) that is/are purchasing the online courses, and evolve a strategy.

Market segment identification is critical for the college in crafting a strategy and to design a business model that allows for successful implementation and execution of the strategy (Kidwell, Mattie & Sousa, 2000; Morrison & Rossman, 2003; and Oblinger, 2000). The business model presents information to the administrators on the economic viability of their strategy. Therefore, it is imperative to select the type of segment that the college plans to service. Alternate educational strategies will vary based on the segment identified by the college that it wishes to serve, and the demographics as well as the behavioral characteristics will vary according to the market segment strata selected (Oblinger, 2000).

The demographic profiles of online students and traditional students have begun to be reported in literature in determining market segments for strategy formulation. Demographics allow investigators to compare and contrast traditional classroom student data to distance education student data. Although the results of such descriptions vary, the stereotype of an older part-time student has gained widespread acceptance, and persists for consumers of distance education (Clayton, 2001). Preston and Booth (2002) and Szulc (1999) claim that distance education demographics have become clearer and a detailed portrait is emerging. Moreover, some would argue that the distance education market is becoming homogeneous, while others would counter that it is very heterogeneous (Morrison & Rossman, 2003 and Oblinger, 2000). Does a "typical learner" exist in the traditional and online consumer market? At best, the data collected on demographics and behavioral characteristics is ambiguous (Peters, 2001). To be successful when implementing a strategy for an undergraduate online program, colleges within the university need to develop demographic and characteristic analysis of the market segment they wish to serve.

The purpose of this study is to examine the demographic and characteristic aspects of students enrolled in undergraduate online business courses. To help quantify the importance of demographics on demand, a dynamic empirical model is employed. The predictive model reveals that several segmentation variables significantly impact online demand.

LITERATURE REVIEW

Capturing student data has been a hallmark of universities since their inception (Clayton, 2001; Richards, 1997 and Szulc, 1999). Demographic data can help formulate a successful university educational strategy (Oblinger, 2000). However, when a university and its colleges determine that online education will become a component of its educational portfolio then strategy refinement for the university and individual colleges is required. According to Kidwell, Mattie & Sousa, 2000 and Carr (2000), market segmentation, demographics and behavioral characteristics are key criteria for strategy refinement.

Table 1 summarizes the learner segments paradigm with respect to demand classifications. A changing environment for education has resulted in emerging market segments above and beyond traditional college students. These new segments create market opportunities for colleges and universities.

Table 1: Education Market Segment

Market Segment	Motivation for Education
Life fulfillment learners	Interested in education for its own sake
Corporate learners	Career advancement with their employer
Professional enhancement learners	Career advancement and/or re-skilling
Degree completion adult learners	Seeking to complete a degree later in life
College experience learners	Traditional student, 18 –24 years of age
Pre-college (K-12) learners	High school students taking college courses

Diaz (2000), Gibson and Graff (1992) and Thompson (1998) agree that online students are usually older, have higher grade point averages, and accomplish more college credit hours as well as degree programs. Szulc (1999) contends the literature of case studies, evaluations and dissertation research illustrates that distance education students are slightly different than traditional students by being older, have more professional working experience, as well as families and careers. However, Clayton (2001) challenge this "older part-time" student stereotype through demographic surveys conducted. Richards (1997) estimates that forty percent of the student population in higher education can now be classified as non-traditional.

Demographics impact attitude toward distance education (Peters, 2001). Student learning and outcomes are highly correlated to attitude (Clayton, 2001). Behavioral characteristics analysis assists in determining attitudes of consumers who are more favorably attracted to distance education.

Students who exhibit the following common characteristics: higher levels of self-motivation and self-organization, excellent time management skills, confidence utilizing the computer, maturity, enjoy class discussion and analysis, goal driven, independent learning style, disciplined, student/educational preparation, and isolation aversive, are more successful distance education students (Diaz and Cartnal, 1999; Diaz, 2002; Gibson, 1998; Gibson and Graff, 1992; Oblinger, 2000; and Sherry, 1996). Behavioral characteristics provide more refined information to administrators concerning the market segment that the college serves or wishes to serve with their online courses.

Educators are trying to forecast which segments of the student market are attracted to distance education and who will be successful. Demographic information and behavioral characteristics provide greater knowledge of the market segment and future segments to which the individual colleges wish to market their distance courses.

METHODOLOGY

This study focuses on students enrolled in four undergraduate business courses at a Division II regional university located in the southwest US. The online courses and programs at this university began in 1997. The university now offers a complete online MBA program; however, no undergraduate online degree is offered at this time. Thus, the current online courses serve as alternative outlets for taking selected required classes. The fact that there is a limited number of online class offerings provides an opportunity to gauge emerging market segments for undergraduate business education.

The data for this manuscript were collected in February 2003 from four online courses: Two undergraduate economics courses, and two undergraduate marketing courses. A standardized online survey form was utilized; students were asked to participate, but not required to do so. The final sample had 180 unique undergraduate respondents.

THE RESEARCH MODEL AND HYPOTHESES

Based on the research cited above, the following model is posited: Desire to take college courses or programs online (D) is a function of: age (A), marital status (MS), pc literacy (PC), children at home ©, the number of hours per week the student works (W), grade point average (GPA), income (I), gender (G), and distance from campus (DST). Specifically,

$$(1) \qquad D = f(A, MS, PC, C, W, GPA, I, G, DST).$$

The dependent variable (D) was measured using a Likert scale response assessing student desire to complete courses and/or degrees online. Two of the four courses in this study had other on-campus sections available; thus, students had the ability to choose which learning method best suited their situation. The other two courses were offered only online during this particular semester, and are required courses in their respective majors.

The result was a student sample consisting of both opt-in online learners, and some who did not have a choice at the time. This guarantees a variety of responses in the dependent variable, and avoids having an in-grown sample. Several hypotheses follow:

Age: Szulc (1999), Block (2003), Diaz (2000), and others note that online students tend to be older than traditional-age students. These students are more likely to be employed, as well as married and/or with children. Age was measured with an ordinal scale with 10-year increments above the traditional college category of 18-24. We thus hypothesize:

H1: Age is positively related to the desire to enroll in online courses and programs.

Marital Status: Szulc (1999) demonstrated that online students are likely to be married and to have families. Given the increasing age of college students (Richards, 1997), and the reported average age at this university (age 27), it stands to reason that a large number of these students will be married. Thus, for this binary response variable we hypothesize:

H2: Being married is positively related to the desire to enroll in online courses and programs.

PC Literacy: Gerlich and Neely (2005) found PC literacy to be an important factor in the enrollment of, and satisfaction with, online courses. This is intuitive, because a high degree of computer usage is expected in the online course. This variable was measured using a self-ranking of computer proficiency, yielding an ordinal variable with interval characteristics. Based on the prior research at the university, we thereby hypothesize:

H3: PC literacy will be positively related to desire to enroll in online courses and programs.

Children at Home: Szulc (1999) and O'Malley and McCraw (1999) show that online students are likely to be older than traditional students, and more likely to have families. The presence of children, along with marital and employer responsibilities, add many demands to students. Online courses thus become an attractive option. We thus hypothesize:

H4: Having children at home is positively related to the desire to enroll in online courses and programs.

Work Hours Per Week: O'Malley and McCraw (1999), Block (2003), and others show that college students are more likely to work than before, and also work more hours than before. This reflects an underlying shift in the traits of college students in general. Preliminary research showed that a vast majority of the student sample worked, and 85-percent worked 21 or more hours per week. This variable was assessed with an ordinal response question, broken into 10-hour increments. We thus hypothesize:

H5: The number of hours worked per week is positively related to the desire to enroll in online courses and programs.

GPA: Diaz and Cartnal (1999), Diaz (2002), Gibson (1998), and others demonstrate that the most successful distance learning students are those with the most maturity, discipline, and drive. These traits are also those of students in general with the highest grade point averages. This variable was assessed with an ordinal scale using a standard 4-point GPA range, broken into 0.5 increments. We hypothesize the following:

H6: Grade Point Average (GPA) is positively related to the desire to enroll in online courses and programs.

Income: Although Szulc (1999) showed that distance students tended to be older and have professional experience, which leads to the conclusion that they would have higher incomes than "traditional" students, the students polled in this study worked 20-40 hours per week, and were not employed in high-paying jobs. Online courses allowed them to earn their degrees, while at the same time freeing up more sizeable periods of time during which they could work. We thus hypothesize the following:

H7: Income will be negatively related to desire to enroll in online courses and programs.

Gender: Block (2003) and others report that there are more females enrolled in college, as well as in online courses. Given that women are nearly as likely to work as are men, and are often caring for children either in a married- or single-parent family, the convenience of taking courses and programs online is attractive. Thus, we hypothesize the binary response:

H8: Gender is positively related to the desire to enroll in online courses and programs.

Distance: Gerlich and Neely (2005) indicated that the student's physical distance from campus indicated their demand for online courses and programs. The nature of the nearby community and adjacent region certainly influence this finding. The university is located in a small bedroom community of 12,000 people, and is 15 miles from a town of 175,000. The outlying area is very rural, with scattered small towns. The entire region is approximately the size of Ohio, and has about 360,000 residents. We hypothesize the following:

H9: Distance from campus is positively related to the desire to enroll in online courses and programs.

RESULTS

A multiple regression was performed on the data. The results are presented in Table 2 below. The results above indicate that the number of hours worked per week (W), the presence of children at home (C), and distance (DST) from the university are significant predictors of the desire to enroll in online courses and programs. We thus retain H4, H5, and H9, while rejecting the remainder. None of the variables had a correlation coefficient above 0.5, suggesting that multicollinearity is not a problem.

Table 2: Demographics and Online Demand					
Hypothesis	Variable	Coefficient	St. Error	*t*-Statistic	*P*-value
--	Constant	2.832	0.577	4.899	0.000
1	A	0.023	0.088	0.255	0.799
2	MS	-0.180	0.164	-1.101	0.273
3	PC	-0.168	0.117	-1.435	0.153
4	C	0.502	0.162	3.089	0.002
5	W	0.093	0.045	2.072	0.040
6	GPA	0.026	0.065	0.402	0.688
7	I	-0.007	0.081	-0.082	0.935
8	G	0.374	0.130	0.286	0.775
9	DST	0.139	0.072	1.931	0.055
R^2=0.24					

There are numerous studies in the literature outlining the various market segmentations and the strategies to capture these segments in online education. One of the surprises that we discovered in our research is that several of the national studies concerning the demographics of online students report that the students are older (35) and seeking online courses for career development. Our research, however, suggests that many of our online students fit the demographic profile of the traditional college age (18 - 24) student. This corresponds to recent investigations of public universities in the literature, which look somewhat like our university.

Furthermore, this supports the concept that we are providing a service instead of a degree online. This is a valid strategy in retention efforts due to a key demographic characteristic occurring on our campus as well as other campuses across the United States. Students are working many more hours. Students view higher education as being more expensive with validation of this view by current costs incurred, and the drive by students to retain the least amount of debt possible before graduation.

What was interesting in our research is the cost of online courses did not appear to have any significance. This can be interpreted that we may be under-pricing our product, but the strategy of the organization (university) would dictate this final pricing determination. In the literature many universities price their online courses the same as their traditional courses ("chalk and talk"). The consumer segmentation the university wishes to sell to in the market will have a bearing on the infrastructure costs and capital required to compete in that market.

MARKET SEGMENTS FOR ONLINE BUSINESS COURSES

The results reported above indicate that the university at which this study was conducted is serving multiple market segments. Prior to this study, no effort has been made to determine the various market segments, nor has there been an effort to develop strategies to reach them. Online courses have grown in popularity of their own accord, not the result of any concentrated marketing strategy.

The following market segments have emerged as distinct groups of customers that are currently enrolled in online business courses at the university:

Segment 1: Adults with families and careers. The results indicated that the presence of children as well as number of hours working were significant predictors of online course demand. The combination of these two variables results in a market segment likely to be older than traditional college age, with the added responsibilities of career and family.

Segment 2: Single working parents. While marital status itself was not a significant predictor of online course demand, it is possible to conclude that for the reasons listed with the market segment above that single working parents would also be a viable segment. Anecdotal evidence provided by students in the authors' courses suggests that single parents are not at all uncommon in the online class. The absence of a spouse makes the appeal of online learning even greater than for those who are married.

Segment 3: Traditional-age college students with jobs. This is probably the most surprising finding, for it includes on-campus as well as off-campus students. Anecdotal evidence gathered from faculty at the university suggests some regrets that online courses are being taken by students living in on-campus dormitories. While this may lead to dismay with academic traditionalists, it should be noted that the students participating in this study were highly likely to work 20-40 hours per week. Thus, regardless of whether they live at home, off-campus with friends, or on-campus, online courses offer a time-saving convenience that allows them to simultaneously work toward their degree, and be gainfully employed to pay for the costs of being in college.

Segment 4: Distance learners. This segment is the one that was assumed from the beginning by most universities entering the online arena. The region in which this university is located is one of great geographic distance between cities. The university's primary market consists of about 350,000 people, of which a little over 225,000 live within 25 miles of the campus. The remaining persons live up to 130 miles from campus. Furthermore, residents throughout the state, which may be up to 700 miles away, can enjoy in-state tuition and be able to take courses from home (without any travel costs, relocation costs, etc.)

These four segments can often be served equally well by one general course and/or program offering, yet each segment has characteristics that make them unique. The takeaway from this study, though, is that by identifying these segments, marketing programs can be built to try to penetrate each segment.

CONCLUSIONS

Understanding why current students enroll in courses and programs defines the market. Identifying and capitalizing upon the market allows the college and the university to recruit and retain its customers (students). In many respects the data developed from the research confirms the investigators' beliefs and is congruent with the literature on demographics and behavioral characteristics of the online undergraduate student market segment.

In other aspects of the research findings the data was somewhat surprising. What becomes apparent is that the online undergraduate college of business student at this university is subsumed in the larger, traditional student population. The online undergraduate business student takes a combination of traditional courses and online courses. Whether this is the outcome of online course supply limitations; due to the lack of resources, costs, expenses and so on or the strategic decision process is an important criterion to recognize. However, the literature and our research illustrate that the traditional student is older, married, non-residential, works more hours, and more likely to be female than male. In addition, the enrollment in online courses is rising, which supports distance education as a viable industry, although there have been some shakeouts (Carnevale and Olsen, 2003; and Clayton, 2000).

The college of business is using online courses as a retention strategy in order to provide flexibility for the traditional undergraduate business student. The research results confirm that the college is accomplishing this objective of retention. Incorporating a retention strategy for online course development has clearly defined the strategy and the components to employ for the college while

In the final analysis when colleges in a university understand individual backgrounds and experiences of the online student market segment this will afford greater knowledge of those who succeed and those who fail. It is hoped that this knowledge gained will contribute to a strategy that addresses the needs of online students and produces higher success rates. The success rate of online students translates into financial achievement for the colleges and the institution. The value of continuous and constant demographic and behavioral characteristics research of the online student market segment allows the colleges to attract and retain their customer group (students) by developing the correct strategy and remaining close to the mission of the university. If the college and the university are clear as to the strategic policy problem or issue that they are trying to resolve and the market segment (students) they serve with distance education, then the ability to develop strategy and policy is greatly enhanced and enriched.

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THE INCOME EFFECT IN PERSONAL SHOPPING VALUE, CONSUMER SELF-CONFIDENCE, AND INFORMATION SHARING (WORD OF MOUTH COMMUNICATION) RESEARCH

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ABSTRACT

Theory predicts that income should influence a complex set of relationships involving personal shopping values, consumer self-confidence, and word of mouth communication. Nevertheless, irrespective of income level, findings indicate that social self-confidence mediates the effects of hedonic experiences upon word of mouth communication. Similarly, the direct effects of utilitarian value upon personal self-confidence are also invariant across income groups. Findings involving the effects of personal confidence upon word of mouth communication are inconclusive. However, income does influence the nature of the relationships between hedonic experiences and social self-confidence as well as the significance of the effects involving utilitarian value and social self-confidence. The implications for these findings are discussed from the perspectives of retail management, site location decisions, and the direction of future research efforts.

THE INCOME EFFECT IN PERSONAL SHOPPING VALUE, CONSUMER SELF-CONFIDENCE AND INFORMATION SHARING RESEARCH

The marketing discipline's sustained stream of research into the nature of hedonic and utilitarian constructs has produced a significant body of literature that has enhanced knowledge about effective marketing practices. For example, Kozinets et al. (2002) emphasized that retail environments should incorporate hedonic and epistemic (utilitarian) designs (cf. Titus & Everett, 1995) when formulating retail themes. Such recommendations rested on solid empirical grounds. To be more specific, research indicates that the level of the shopping environment's hedonic value contributed significantly to explaining differences in shopper's reactions to mall and store atmospheres (Babin, Darden & Griffin, 1994; Michon, Chebalt & Turley, 2005; Wakefield & Baker, 1998). Similarly, findings indicate that utilitarian value is a factor in clarifying the nature of purchasing behavior (Babin & Attaway, 2000; Babin, Darden & Griffin, 1994).

The effects of hedonic and utilitarian experiences upon shopper's responses to marketing activities extend beyond immediate reactions to the shopping milieu. That is, hedonic experiences and utilitarian outcomes have been researched as antecedent variables in word of mouth communication. A significant causal relationship between hedonic atmosphere and patronage intentions included the shopper's willingness to recommend the store to a friend (Grewal, Baker, Levy, &Voss, 2003). Other research (Paridon, 2005a, 2005b) suggests the viability of a model in which utilitarian value directly affects personal outcomes confidence while hedonic value influences social outcomes confidence. However, only social outcomes confidence has been found to mediate the effects of hedonic value upon information sharing.

The aforementioned contributions to the discipline's understanding of interpersonal influence notwithstanding, research suggest the possibility of extending the significance of those initial results involving word of mouth communication. To be more specific, interest in the potential for demographics to moderate findings in the area of consumption and interpersonal influence is not unknown. For example, Holbrook and Hirschman (1982) postulated an income effect and an income difference was expected but not confirmed in research on hedonic shopping motivations (Arnold & Reynolds, 2003). Other research has hypothesized and confirmed the interaction effects of hedonic/functional usage, social/personal consumption context, and income upon purchasing behavior (Wakefield & Inman, 2003). Since purchasing behavior frequently precedes word of mouth, this study examines income as a possible moderator in research involving personal shopping value, consumer self-confidence, and word of mouth communication.

CONCEPTUAL DEVELOPMENT

Building upon a number of studies about the availability of product information, merchandising practices, and store design, Titus and Everett (1995) proposed the consumer retail search process model. It postulates that the search for product information may be guided by epistemic and hedonic constructual systems. The epistemic system, representing the shopper's system of logic, gives rise to a need for the design of in-store information displays and merchandising practices, the sine qua non of the epistemic system. In other words, such displays and practices enable the shopper to focus upon utilitarian needs. In turn, fulfillment of these task oriented needs leads to a satisfactory utilitarian experience, an experience that has been defined as the "…work…" (Babin, Darden, and Griffin, 1994, p. 646) associated with shopping. The emotionally laden hedonic system is the sensate orientation that accompanies the shopping experience. This sensate orientation enables the shopper to experience hedonic value, which is defined as the emotional response attributable to the "… potential entertainment and emotional worth…" of the shopping event (Babin, Darden, and Griffin, 1994, p. 646). The retail search model suggests that the individual and the combined effects of these two constructual systems may lead to an efficient, pleasurable, and satisfying shopping experience.

Mall and store research supports the aforementioned hedonic and epistemic (utilitarian) postulates of the model. In a mall study, a sensate environmental factor was causally related to the excitement associated with the shopping trip and a desire to continue shopping (Wakefield & Baker, 1998). Similarly, olfactory impressions generated a favorable response to the mall environment as well as product related effects (Mattila & Wirtz, 2001; Michon, Chebat & Turley, 2005). In store research, a positive emotional state explained one's satisfaction with the shopping experience (Babin & Darden, 1996). In other store research, shopper's hedonic reaction to, and utilitarian orientation towards, the shopping experience were associated with their overall satisfaction with the marketplace offerings (Babin, Darden & Griffin, 1994; Griffin, Babin, & Modianos, 2000). In other mall research, Shim and Eastlick (1998) report a composite measure of knowledge about the attributes of one's most frequently shopped mall, arguably utilitarian based. Emotional variables contributed to one's overall frequency of shopping and average monthly mall expenditures. Knowledge based and emotional variables contributed also to an increase in the amount of time and money spent in shopping (Babin, Griffin & Boles, 1997).

Efficient, pleasurable, and satisfying shopping experiences are thought also to contribute to the consumer's personal and social confidence in making decisions (Bearden, Hardesty & Rose, 2001). According to the authors, consumer self-confidence is the "…extent to which an individual feels capable and assured with respect to his or her marketplace decisions and behaviors" (p. 122). Since the decision to shop involves explicit marketplace behaviors, one's hedonic and utilitarian shopping experiences should influence the consumer's personal and social self-confidence. Stated somewhat differently, a shopper who feels capable and assured in her shopping experiences will experience a minimal level of doubt about her consumption related social and personal self-confidence (cf. Folkes & Kiesler, 1991). Thus, the first research hypothesis is:

H1: Hedonic and utilitarian shopping experiences will positively influence personal and social self-confidence.

Consumer Self-Confidence

When consumers interact successfully with shopping environments, their acquisition of personal and social information is grounded in their hedonic experiences and their utilitarian outcomes. In turn, this information, in the form of word of mouth communication (Feick, Price & Higie, 1986; Paridon, 2005a; Reynolds & Darden, 1971; Summers, 1970), is passed along to their friends and acquaintances (Titus & Everett, 1995; see also Higie, Feick & Price, 1987). Nevertheless, this transmission should not be thought of as automatic. That is, since the personal and social nature of the shopping experience (Tauber, 1972) leads to the acquisition of information that will influence one's personal outcomes and social outcomes self-confidence (Bearden et al., 2001), and since self-confidence influences word of mouth communication (Reynolds & Darden,

1971; Summers, 1970), one's personal outcomes and social outcomes self-confidence should influence one's word of mouth communication. Accordingly, the following research hypotheses appear tenable:

H2: Word of mouth communication will be positively influenced by consumer social outcomes and personal outcomes confidence.

H3: Hedonic value and utilitarian value operating through social outcomes confidence and personal outcomes confidence will positively effect word of mouth communication.

Income Effect

Theorists and researchers have postulated a differential income effect involving hedonic and functional consumption and usage. For example, Holbrook and Hirschman (1982) recognized the possibility that income might contribute to explaining differences in hedonic consumption. Similarly, in discussing hedonic consumption situations, Caldwell (2001) and Richards (1999) emphasize the potential for an income effect. Support for this effect exists. To be more specific, Blanchflower and Oswald (2004) report that income influences one's happiness in life, with happiness generally considered one indicator of an orientation towards hedonic consumption (Batra & Ahtola, 1990; Voss, Spangenberg, and Grohmann, 2003).

The relationship between income and utilitarian orientation is not so straightforward. For example, in discussing the complex nature of relationships between income and experiential as well as utilitarian orientations, Okada (2005, p. 50) states, "…it might be predicted that financial constraints will increase the need for justification of choice and therefore amplify the magnitude of the reversal in relative preferences between hedonic and utilitarian alternatives." Specifically, any effect of income upon hedonic and utilitarian choices might be subject to the purchase consumption situation. Direct evidence for such a relationship exists. Wakefield and Inman (2003) hypothesized a hedonic/functional usage, a consumption related social and personal self-confidence, and an income effect upon purchasing behavior. In discussing their findings, the authors report that the social/personal consumption context, the intended usage - hedonic or functional, one's income, and the quantity purchased interact in contributing to understanding differences in the price's shopper's pay. An income effect was associated with one's intended usage—hedonic/functional—as well as the social personal context of the consumption situation. When income was taken into consideration, the causal nature of the findings was altered.

While the preceding research involving an income effect is conceptually significant, the findings do not enable the formulation of specific income effect hypotheses in this study. Nevertheless, the research indicates that income has the potential to contribute to understanding

shopping behavior. This potential to contribute appears to be related to income's role as a moderator or "… a qualitative (e.g. sex, race, class) or quantitative (e.g. level of reward) variable that affects the direction and/or the strength of the relation between an independent or predictor variable and a dependent or criterion variable" (Baron & Kenny, 1986, p. 1174). Accordingly, the final research hypothesis is:

H4: Income will moderate the effects of personal shopping value and consumer self-confidence in word of mouth communication research.

METHODOLOGY

Data Collection

Marketing students enrolled in an advanced marketing course at a southwestern regional university were trained and given instructions in personal interviewing procedures and techniques. Since female shoppers account for approximately 80 % of total retail expenditures, women were the subjects in the study. In two surveys spaced approximately six months apart, students contacted their adult non-student female friends and acquaintances and asked them to complete a self-administered structured questionnaire about their department store shopping behaviors. Respondents were asked also to provide a first name and telephone number for verification purposes. Students were instructed to remain content neutral and answer only questions about the instructions for completing the questionnaire.

For each survey, a quota-sampling plan was adopted in an attempt to obtain a representative demographic cross section of respondents (cf. Bearden, Hardesty, & Rose, 2001). An analysis of the demographic data for the 458 respondents, 258 from the first study and 200 from the second study, revealed that the typical respondent is white, has at least one child, is employed at least part time, and is thirty-nine years old. She resides in a household with an annual average income of $40,000.00 dollars and has attained at least a partial college education. A convenience sample of 60 respondents, two per student interviewer, was contacted by telephone and asked to verify their participation. All interviewees responded that they had completed the questionnaire.

Testing for an income effect required partitioning the sample of 458 into two or more groups. Since structural equation modeling was the preferred mode of analyzing the data, statistical considerations associated with the technique influenced the partition decision. When the general rule of thumb for a sample of size 200 for structural equation modeling is considered along with research suggesting that the minimum acceptable size to evaluate SEM fit statistics is 150 (Hu and Bentler, 1998), the respondent base of 458 could be partitioned into either two or three groups.

Since three groups would involve a partition of approximately 150 per group, the bare minimum to assess the fit statistics, the decision was made to split the respondents into two groups.

A review of Census Bureau statistics for the MSA indicates that approximately fifty percent of the households reported an annual household income of less than thirty five thousand. Accordingly, this value was used as the partitioning point. The partitioned database consisted of 222 respondents with income less than thirty five thousand, and 236 with income equal to or greater than thirty five thousand.

Scale Indicators

Recent research in measuring latent constructs has documented acceptable values of reliability and validity coefficients for unipolar scales (Bearden et al., 2001; Clark & Goldsmith, 2005; Dabholkar, Thorpe & Rentz, 1996; Darden & Babin, 1994; Feick & Price, 1987; Kim & Jin, 2001). Preliminary research involving the measurement of information sharing was consistent with those findings: unipolar construct measurement generated comparable internal consistency and construct reliability values. Similarly, initial research into the viability of the proposed model indicated that improvements in construct reliability could be attained by using shortened unipolar measures (Paridon, 2005a; 2005b). The original sets of construct indicators for the model were modified accordingly. The first change was the deletion of the "gift giving," and the "agonizing over purchasing" measures from the original personal and social self-confidence scales, respectively (Bearden et al., 2001). Responses to the remaining four indicators for each self-confidence construct were obtained by asking interviewees to indicate on a seven point Likert-type scale the extent to which they agreed that the statement characterized them.

Similar issues involving reliability resulted in selecting four hedonic orientations, and four utilitarian value indicators (Babin et al., 1994; Griffin et al., 2000) that demonstrated, by their standardized factor loading, an acceptable level of construct validity. However, previous research by Paridon (2005a; 2005b) suggested that deletion of a negatively worded hedonic construct indicator would result in improved reliability and variance extracted values. Further research into utilitarian measurement (Voss, Spangenberg & Grohmann, 2003) suggested an improvement in the original four indicator utilitarian scale might be realized by incorporating satisfaction as a new measure. The decision to include satisfaction was guided in part by findings indicating that satisfaction was significantly and positively related to utilitarian value (Babin, Darden, & Griffin 1994). Other research suggests that satisfaction may also be a viable indicator when measuring market place experiences. Bagozzi, Gopinath, and Nyer (1999) state (p. 201), "We suspect that previous studies finding discriminant validity for measures of satisfaction can be explained by the way the items were presented on the questionnaire (e.g. separation of measures of satisfaction from measures of other positive emotions) or the lack of a sufficient number of positive emotions." A context effect (cf. Podsakoff, MacKenzie, & Lee, 2003) can be expected when using satisfaction as

an indicator, and the findings of Babin, Darden, and Griffin (1994) confirm the potential for such an effect, thereby suggesting the viability of satisfaction as an indicator for utilitarian measurement.

One additional change was incorporated into the set of indicators used to measure utilitarian value. Research involving retail information sharing (Paridon 2005a; 2005b) indicated that deleting the negatively worded utilitarian statement "I couldn't buy what I really needed," a product related measure, could lead to improved measurement statistics. Thus, utilitarian value was assessed using two original utilitarian value indicators and two substitute measures of satisfaction and usefulness. For these eight personal shopping value measures, using a conventional seven point Likert type format, respondents were asked to indicate the extent to which they agreed with the item.

The final set of construct measures emerged from research in retail information sharing (Paridon, 2004), and word of mouth communication (Feick et al., 1986; Higie et al., 1987). Three of the ten indicators from the retail information sharing scale were adopted and supplemented with one item that explicitly addressed the altruistic nature of word of mouth communication (Feick et al., 1986; Higie et al., 1987; Paridon, 2006). For each of the four indicators, participants were asked to rate the extent to which they agreed, on a seven point Likert type scale, with the statement.

Although not developed as a conceptual complement to or as a theoretical foundation in this study, the questionnaire also contained, for comparison purposes, the complete market maven scale (Feick & Price, 1987), an accepted measure of one's propensity to engage in general marketplace conversations. In addition to the previously discussed, standard semantic anchors, the indicators for all five constructs and the market maven measures contained numeric anchors with one representing the least favorable interpretation of the statement and seven indicating the most favorable interpretation of the statement. Standard demographic measures—gender, age, marital status, employment status, annual household income, education, and ethnicity—were included also.

ANALYSIS AND RESULTS

As an initial analysis for evaluating multiple indicator scales, Hair, Anderson, Tatham, and Black (1998) recommend using the Bartlett test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. For each of the five constructs in both income groups, the significance level for the Bartlett test was less than .01. In the lower income (upper) group, the KMOs were as follows: hedonic orientation, .82 (.83); utilitarian value, .81 (.84); information sharing, .79 (.80); social confidence, .80 (.73); personal confidence, .75 (.69). (Comparable statistics characterize the original two data sets.) Sets of indicators whose KMO value is .80 or greater are characterized as meritorious while KMO values that exceed .70 are considered adequate.

For both income groups, the significance levels for the Bartlett tests for the market maven scale were less than .01. The KMO values were .82 and .83, lower income group and upper income group, respectively. Accordingly, an initial statistical comparison of the five constructs and the market maven scale made use of Pearson product moment correlations. The resulting pattern of

coefficients, summarized in Table 1, suggests an acceptable level of agreement between the market mavenism and the constructs of interest in this study. One would expect that shoppers who share information about their shopping experiences; exhibit social confidence; enjoy shopping; and shop for what they want would also score high on the market maven scale. Furthermore, the correlation between personal confidence and market mavenism is in partial agreement with expectations: the negatively worded personal confidence should correlate negatively with market mavenism. This pattern holds for the lower income group but not the higher income group. The remaining correlations of Table 1 are offered as descriptive measures of the relationships between the five constructs of interest in this study.

Table 1. Product Moment Correlations.

	Market Maven	Information Sharing	Social Confidence	Personal Confidence	Hedonic Orientation	Utilitarian Value
Market maven	31.6/31.5 (6.51)/(6.52)					
Information sharing	65[a] /.70[a]	23.3/27.6 (3.87)/(5.02)				
Social confidence	62[a]/.62[a]	54[a]/.72[a]	20.8/20.2 (4.44)/(4.32)			
Personal confidence	-.21[a]/-.01	-.18[a]/.07	-.23[a]/.01	12.8/11.3 (6.26)/(5.36)		
Hedonic orientation	.36[a]/.40[a]	.31[a]/.44[a]	.40[a]/.40[a]	-.05/.04	20.7/19.8 (5.48)/(5.54)	
Utilitarian value	.40[a]/.27[a]	49[a]/.20[a]	.44[a]/.21[a]	-.34[a]/-.26[a]	.47[a]/.41[a]	22.8/23.0 (4.32)/(4.56)

Note: Main diagonal values are means with standard deviations in parentheses. Income less than 35k/income equal to or greater than 35k

[a] $p < .01$, two tail test.

Structural Equation Model Analysis

Non-nested model testing is appropriate for comparing covariance structure models across groups (Jöreskog & Sörbom, 2001; Rust, Lee, & Valente, 1994). Accordingly, the conceptual model depicted in Figure 1 was subjected to LISREL 8 (Jöreskog & Sörbom, 2001) group analyses.

Prior to testing the hypotheses, a SEM analysis focused upon comparing the two original data sets using the group analysis procedures advocated by Jöreskog and Sörbom (2001). The analysis involved freely estimating the structural equation coefficients for each group. It generated an overall minimum fit function chi square of 918.32 with 326 degrees of freedom, $p < .01$, indicating a lack of exact fit. The goodness of fit statistics for this analysis were: a comparative fit index (CFI) .94; a root mean square error of approximation (RMSEA) of .09; and a standardized root mean square residual (SRMR) of .07. Comparing the observed CFI and SRMR values with findings that reasonable true (nonzero factor covariance), simple (indicators loading only on one factor), and robust (measured variables not multivariate normally distributed) models of sample sized 150 to 5,000 (True, simple, and robust characterizes all models and data sets used in this study.), should generate CFI values of .90 to .96 and SRMR values of .06 to .11 (Hu & Bentler 1999, p. 16), leads to accepting the model as reasonable. This conclusion is buttressed by Hu and Bentler's finding that RMSEAs and SRMRs of .09 and .07 for true, simple, and robust models lead to acceptable Type 1 error rates (1999, p. 26).

Accordingly, each structural equation coefficient was examined for invariance across the two survey groups. The procedure required a series of LISREL 8 SEM analyses that constrain each structural equation coefficient to be equal across the two groups (cf. Babin and Darden, 1995). The chi square value of the freely estimated analysis is then subtracted from the chi square value of the constrained analysis. If this chi square value with one degree of freedom is statistically significant, the groups differ with respect to the constrained coefficient. (Acceptable values of CFIs, RMSEAs, and SRMRs should also characterize the constrained analyses. As expected, each of the six analyses involved in this modeling generated CFIs, RMSEAs, and SRMRs of approximately .94, .09, and .07.) The chi square difference values are summarized in Table 3. It should be noted that the survey groups differ with respect to the effects of social confidence upon information sharing, and utilitarian value upon social confidence. Since no major changes in the macro environment occurred during the six month interval between administering the surveys, these differences are most likely attributable to variation between the two survey groups.

The modeling procedures for testing the hypotheses were similar. In the first LISREL 8 analysis of the income group data, the structural equation coefficients for both income groups were constrained to be equal. The minimum fit function chi square was 829.13 with 332 df, $p < .01$. In the second income group analysis, the six structural equation coefficients for both groups were freely estimated. This analysis produced a chi square value of 805.68 with 326 df, $p < .01$, with a CFI of .95, a RMSEA of .08, and a SRMR of .07. The chi square difference of 23.45 with 6 degrees of freedom is significant beyond .01. Since this chi square difference test indicated that income effects the magnitude of the structural equation coefficients, six additional structural equation models were analyzed in order to identify the invariant structural relationships.

As before, the analysis for income effects requires testing of chi square difference values derived from the constrained and the freely estimated structural models. However, since the

measurement properties of the indicator variables influences the confidence that may be placed in a SEM analysis, an evaluation of these measurement properties prior to structural analysis appears warranted. The standardized factor structures and loadings of the freely estimated baseline model contained in Table 2 were used to evaluate the reliability and discriminant validity of the constructs. Using the commonly accepted standard that factor loadings of an indicator serve as a measure of its construct validity, an evaluation of the loadings in Table 2 suggests each indicator attains an acceptable (greater than or equal to .50) level of construct validity. Construct reliability estimates were calculated using standardized factor loadings (Fornell & Larcker, 1981). The reliability estimates (coefficient alpha in parentheses) for the lower/upper income groups are: hedonic shopping orientation, .86/87 (.85/.87); utilitarian value, .88/.91 (.88/.90); social outcome confidence, .86/.83 (.86/.82); personal outcome confidence, .90/.84 (.90/.85); and information sharing, .81/85 (.81/.84). For both income groups, the more conservative average variance extracted values of the five constructs exceeded the commonly accepted value of .50. The specific lower/upper income values are: hedonic shopping orientation, .60/.62; utilitarian value, .65/.71; social outcome confidence, .60/.55; personal outcome confidence, .69/.58; and information sharing, .52/.58.

The average variance extracted values were used to evaluate the discriminant validity of the constructs. The structural equation model test for discriminant validity requires the square of the construct correlations to be less than both variance extracted values (Fornell & Larcker, 1981). For each income group, the results of this comparison test indicated the existence of discriminant validity for all ten pairwise comparisons.

Structural Equation Effects

Hypotheses one and two require consideration of direct structural equation effects, while hypothesis three requires indirect hypothesis testing. These three hypotheses were tested by using the structural equation coefficient values generated by the freely estimated LISREL 8 income group analysis or the baseline model. Hypothesis four involved the aforementioned chi-square difference test for moderation. Testing the latter hypothesis required the use of the baseline model as well as six additional LISREL 8 models.

The direct standardized structural equation coefficients and the statistical significance of the LISREL 8 estimates obtained from the separate income groups in the aforementioned freely estimated baseline analysis are contained in Figure 1. Numerous similarities and differences across the income groups are evident. First, a hedonic orientation effect upon both social confidence and personal confidence characterizes the upper income group while the lower income group exhibits significant hedonic orientation and utilitarian value effects upon social confidence. Both income groups are characterized by a significant relationship between utilitarian value and personal outcomes confidence. The negative sign between the utilitarian and the personal outcomes constructs

is consistent with the wording conventions of both constructs. Thus, research hypothesis one is supported in part.

Table 2. Factor Structure and Standardized Loadings.			
Hedonic Orientation	**Factor Loading**	**Personal Outcomes Confidence**	**Factor Loading**
The shopping trip was truly a joy.	.83/.84	I never seem to buy the right thing for me.	.95/.59
The shopping trip truly felt like an escape.	.80/.80	Too often the things I buy are not satisfying.	.90/.61
I had a good time because I was able to act on the spur of the moment.	.78/.76	I often wonder if I've made the right purchase selection.	.72/.91
I enjoyed the shopping trip for its own sake, not just for the items I may have purchased	.67/.74	I often have doubts about the purchase decisions I make.	.72/.87
Utilitarian Value		**Information Sharing**	
The shopping trip was useful.	.87/.88	When my friends give me shopping advice I can use, I usually act on it.	.78/.78
I was satisfied with the items I purchased.	.87/.83	When I help a friend by telling her about my shopping experiences, I feel good about myself	.73/.69
I accomplished just what I wanted to on the shopping trip.	.76/.85	My friends and I enjoy talking about the styles and fashions we see on shopping trips.	.70/.75
While shopping, I found just the item(s) I was looking for.	.70/.82	When we find quality service in a store, my friends and I let each other know	.68/.83
Social Outcomes Confidence			
I impress people with the purchases I make.	.83/.85		
I get compliments from others on my purchasing decisions.	.81/.66		
My friends are impressed with my ability to make satisfying purchases.	.79/.87		
My neighbors admire my decorating ability.	.67/.56		
Note: Income less than 35k values/income equal to or greater than 35k values.			

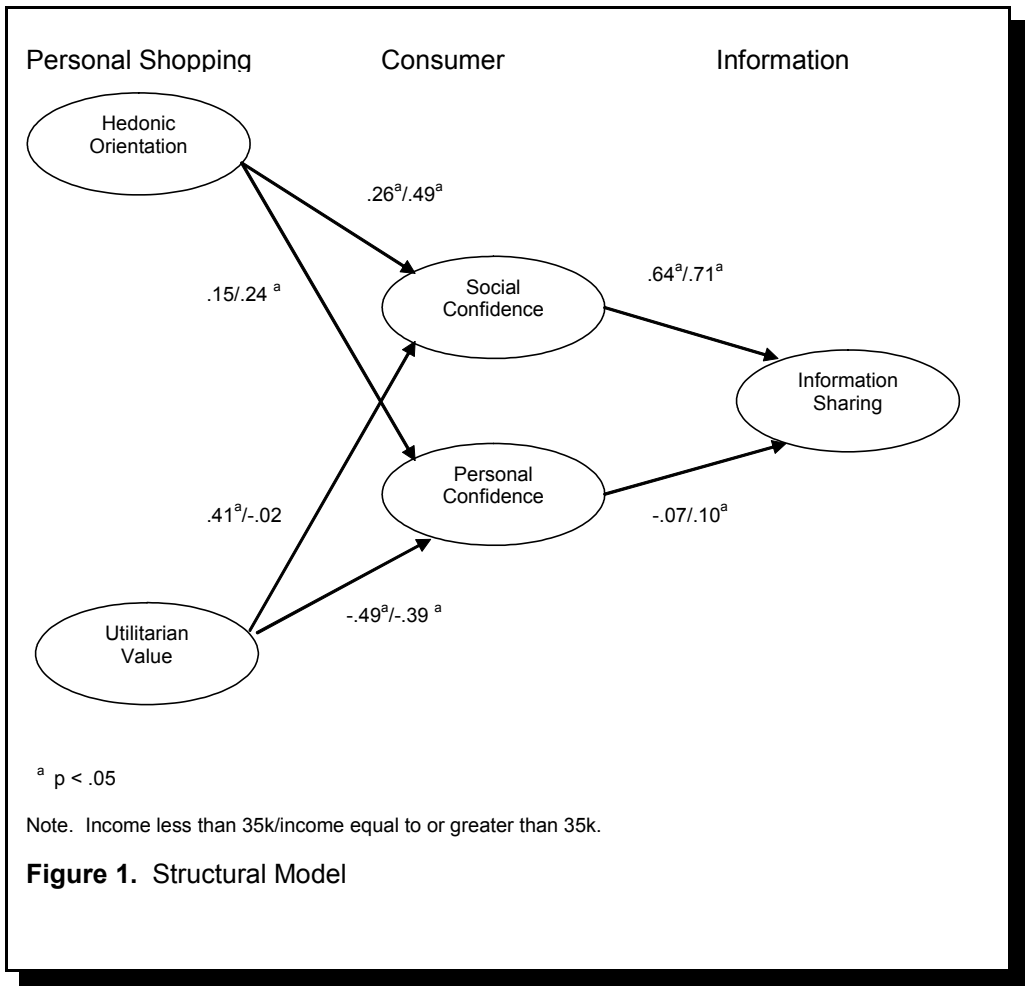

Figure 1. Structural Model

Hypothesis two is supported in part also. The effects of social confidence upon information sharing are strong and significant for both income groups. However, the nonsignificant lower income effect of personal confidence upon information sharing does not support hypothesis two. For the upper income group, the magnitude of the effect of personal value upon information sharing, while statistically significant with a value of .10, may not contribute to the managerial importance of this specific relationship.

For research hypothesis three, only the indirect social confidence effects were confirmed. For the lower income group, the indirect effects of utilitarian value and hedonic orientation operating through social confidence upon information sharing behavior, based upon the direct maximum likelihood LISREL estimates and calculated in accordance with Bollen's (1987) guidelines, were .25 and .13 respectively, attaining statistically significant Sobel (1982, 1986) test statistics of 4.04 and 2.90, respectively ($p < .01$). For the upper income group, the indirect effect

of one's hedonic orientation operating through social confidence upon information sharing, magnitude .24 and a Sobel statistic of 4.84, attained a similar level of significance.

Finally, for research hypothesis four, the results of the chi-square difference tests appear in Table 3. For each reported chi square difference statistic, the baseline model chi square value of 805.68 with 326 degrees of freedom was subtracted from the chi square value obtained when testing for equality of the specific structural equation coefficient. Each of the latter chi squares possessed 327 degrees of freedom and generated CFIs, RMSEAs, and SRMRs that did not differ by more than .01 from the baseline values of .95, .08, and .07, respectively. Although each model qualifies as a reasonable model (Hu & Bentler, 1998) the analysis indicates that income acts as a moderator for the effects of utilitarian value upon social confidence, and for the effects of hedonic value upon social confidence. All other tests for income as a moderator are not significant.

Table 3: χ^2 Difference Tests for Survey Group and Moderating Effects

Invariant	Original Groups		Income groups	
Path	χ^2 Difference	sig. level	χ^2 Difference	sig. level
Hedonic → Social	1.31	ns	4.39	.05
Hedonic → Personal	.18	ns	.92	ns
Utilitarian → Social	4.34	.05	15.38	.01
Utilitarian → Personal	2.90	ns	.93	ns
Social → Sharing	4.63	.05	.06	ns
Personal → Sharing	2.63	ns	2.97	ns

DISCUSSION

In addition to similarities across the income groups, the results confirm the existence of a differential income effect that influences or at the very least accompanies one's orientation towards shopping. The observed similarities and differences possess the potential to further the discipline's understanding of shopper's experiences.

The results indicate that both the lower and the upper income groups gain personal self-confidence when they are able to purchase the functional items they require. Both groups engage also in favorable word of mouth communication as a result of a positive hedonic experience that is mediated by one's favorable social self-confidence. In other words, irrespective of one's level of income, one's confidence in their ability to elicit favorable responses from their friends depends upon their enjoyment of the shopping event, and the effects of this pleasure induced social confidence will translate into an increase in information sharing behavior.

Despite these similarities, the income groups differ when considering the magnitude of the effects of hedonic orientation upon social confidence and utilitarian value upon social confidence. When compared to the lower income group, the upper income group's social confidence exhibits the effect of being influenced more by hedonic shopping experiences. On the other hand, when compared to the upper income group, the lower income group's social confidence is influenced by utilitarian value. The upper income group shows no such effect. This latter dependency in the lower income group involving social confidence and utilitarian value contributes to the emergence of word of mouth communication. Thus, in the lower income group, social self-confidence mediates the effects of hedonic and utilitarian shopping experiences upon word of mouth communication. For the upper income group, social confidence mediates the effect of hedonic experiences only upon word of mouth communication.

When customers' shopping and confidence profiles match the profiles of the shoppers in this study, managers should plan merchandising efforts in order to foster specific positive outcomes. First, managers should focus upon the utility needs of the shopper. This practice should lead to an increase in the personal outcomes confidence associated with shopping decisions for both income groups. In addition, when lower income group shoppers believe that their utility needs are met, their consumption related social confidence will increase and lead to an increase in favorable word of mouth communication. Second, when retailers manage shopping environments, they should focus also upon creating enjoyable shopping atmospheres. The pleasurable experiences associated with such environments will influence the social confidence of both groups and differentially influence the social confidence of the upper income group. Thus social confidence will mediate the effects of hedonic experiences upon word of mouth communication with the upper income group being more receptive to enhanced hedonic experiences.

The theory and findings apply also to site location decisions. For example, spatial competition is a conceptual foundation of site location decision making (Karande & Lombard, 2005) with two strategies predominating. A proximity strategy is one in which the site is selected in order to capitalize on the principal of cumulative attraction. The result is that when stores are concentrated, with higher store density one outcome of the proximity strategy, higher income shoppers are presumed to be more likely to engage in price comparison shopping. However, they are unwilling to engage in price comparison shopping at the expense of their shopping enjoyment (Marmorstein, Grewal, and Fishe, 1992). Since the findings of this study do not negate the latter findings, it is suggested that developers and designers should insure that merchandise price comparisons are possible for higher income shoppers but not ignore shopping enjoyment.

On the other hand, a distancing strategy geographically disperses stores in an attempt to gain a differential advantage (Karande & Lombard, 2005). The latter emphasizes accessibility and time spent shopping, correlates of a utilitarian shopping orientation (cf. Babin & Attaway, 2000). When this strategy targets lower income shoppers, the the utilitarian value generated by the shopping experience will influence social confidence and lead to word of mouth communication. However,

since hedonic experiences also influence the social confidence of lower income shoppers, providing them with a "favorable" hedonic experience will also lead to increased social confidence and word of mouth communication. Developers should recognize these relationships and include the appropriate level of hedonic experience when planning and designing stores.

The preceding findings and recommendations notwithstanding, studies should continue into extraneous variable effects upon personal shopping value, consumer self-confidence, and word of mouth communication. One possible extension could involve large sample studies designed to study the potential moderating effects of social class on word of mouth communication. These additional studies should focus also on identifying and clarifying specific hedonic conditions (e.g. Turley & Milliman, 2000) and other antecedent variable relationships. Future research could investigate the effects of scents, lighting, layouts, and merchandising practices upon hedonic experiences and utilitarian behaviors. Continued study of these cause and effect relationships should further the discipline's understanding of the theoretical and the managerial significance of designing and managing shopping environments because the economically competitive advantages generated by optimal shopping environments can be substantial.

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