Advances in Marketing

**PROCEEDINGS OF THE ANNUAL MEETING OF THE
ASSOCIATION OF COLLEGIATE MARKETING EDUCATORS
DALLAS, TX**

MARCH 2-6, 2010

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Tennessee State University

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Prairie View A&M University

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Program Chair

Proceedings Co-editors

EDITORIAL PREFACE

This year my co-editor and I have received over 60 papers. We hope that inclusion of papers from variety of marketing topics

We would like to thank everybody who participated in, helped with, and arranged 2010 Association of Collegiate Marketing Educators proceedings. We want to acknowledge all track chairs for their masterful handling of the reviewing process in the given time, and would also like to thank all the reviewers for their expert critiques.

We would like to thank all authors and co-authors for their timely submissions and adherence to our proceedings standards. Without your efforts our task would have been next to impossible.

Last, but not least, we wish to acknowledge the assistance of A-CME Program Chair Kishwar Joonas in helping us with finalizing these proceedings, especially during the final stages of the process.

Vaidotas Lukosius, Ph.D.   Grant Aguirre
2010 ACME Secretary and Co-Editor   Co-Editor
Tennessee State University,   New Mexico State University,
Nashville, TN   Las Cruces, NM

MESSAGE FROM THE PRESIDENT

Greetings to all and welcome to Dallas and the best ACME meeting ever!

Yes, it is true, this will be the best Association of Collegiate Marketing Educators meeting ever and yes, it is true, we will say that about next year's meeting. Every year, thanks to the hard work of officers and members, our organization and annual meeting just get better and better.

Program Chair Kishwar Joonas has put together an excellent program this year. Please join me in thanking her for the many, many hours she worked to assemble an outstanding program. Thanks also to all track chairs, workshop organizers and special session organizers for your efforts. A big thanks also to Proceedings Editor Grant Aguirre.

It has been an honor and privilege to have served as the 2009-2010 ACME President. Please know this organization has an outstanding team of officers and that it has been a pleasure working with each of them. I offer my sincere thanks for your service, advice, ideas and friendship to Past-President Maxwell Hsu, Program Chair Kishwar Joonas, Vice-President Sharon Thach, Secretary and Webmaster Vaidas Lukosius and Treasurer Dennis Emmett.

My colleagues in the School of Business at East Central University have been most helpful and supportive over the past four years as I have served as an ACME officer and I thank them for that. The final, and by far most important and biggest thanks, goes to my wife Usha and son Nathan for their tolerance and understanding as I took time for ACME business that could have been and, in many cases, should have been family time.

I am already looking forward to next year's meeting in Houston and hope you are as well. It will be the best one ever and we hope to see you there!

Patrick D. "Pat" Fountain, D.B.A.
2009-2010 ACME President
East Central University, Ada, Oklahoma

MESSAGE FROM THE PROGRAM CHAIR

Welcome to the 2010 Association of Collegiate Marketing Educators (ACME) Conference in Dallas, Texas. We have managed to put together an excellent conference program featuring four workshops and special sessions, as well as 73 technical papers spread over 20 "regular" sessions. A highlight of the conference will be hearing from the recipient of the 2010 Outstanding Educator Award, Sarath A. Nonis, at the luncheon meeting on March 5th.

Congratulations to the authors of all accepted papers including the Best Papers in Track, and the Distinguished Paper. I am grateful to Denny Bristow, Gopala Ganesh, John Knapp, and Madhav Pappu- each of them has organized a workshop or special session. The Outstanding Educator Award acceptance speech and four workshops and special sessions will support the technical papers, in offering our participants a panoramic snapshot of current education and research in marketing.

It was truly an honor for me to serve as the 2010 Program Chair for this leading marketing conference, and to have an opportunity to work with some of the best in the field. I am thankful to several colleagues in the success of this year's conference. First of all, I would like to thank President Patrick "Pat" Fountain, upon whom I have relied quite heavily all through the year in developing the program. I appreciate the timely help and support of Vice President Sharon Thach, Treasurer Dennis Emmett, and Secretary Vaidas Lukosius, who also served as Webmaster. In addition, my thanks go to Grant Aguirre, the 2010 Proceedings Editor, for helping create a great conference program. Further, I owe a debt of gratitude to the 21 (co)track chairs, who worked relentlessly to recruit quality submissions in their area, and to marshal outstanding peer reviewers. I would also like to thank the authors for choosing our conference as a research outlet.

I sincerely thank past ACME Presidents Kimball Marshall and Maxwell Hsu for offering guidance and encouragement. Thanks are also due to my colleagues at the Prairie View A&M University, College of Business, and especially the Department of Management and Marketing, for accommodation during the current year. Their support greatly facilitated my efforts for this conference.

It is my sincere hope that participants will appreciate the strong technical program of this year's conference as well as make the most of networking opportunities with colleagues from near and far. Next year promises to be another exciting ACME conference as an affiliate of the Federation of Business Disciplines. Finally, I call upon you to rally your support for Sharon Thach as she takes over the reins as Program Chair for the 2011 conference in Houston. I hope to see you there!

Sincerely,

Kishwar Joonas, D.B.A.
ACME 2010 Program Chair
Prairie View A&M University, Prairie View, Texas

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Advertising and Communications Track
The Effect of Culture on the Context of Ad Pictures and Ad Persuasion:
The Role of Context-Dependent and Context-Independent Thinking
Beichen Liang, East Tennessee State University
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Business to Business and New Product Development Track
The Effectiveness of Visual Metaphors in Business-to-Business Advertising: A Research Proposal
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Consumer Behavior and Customer Relationship Management Track
Capturing Consumer Heterogeneity in Loyalty Evolution Patterns
Kanghyun Yoon, Long Island University
Thanh V. Tran, University of Central Oklahoma

E-Commerce and Pricing Track
Marketing Supply Chain Using B2B Buy-Side E-Commerce Systems: Does Adoption Impact
Financial Performance
Jap Efendi, University of Texas at Arlington
Michael R. Kinney, Texas A&M University
Katherine T. Smith, Texas A&M University
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The Impact of Prescription Drug Inserts On Consumer Awareness Of The Side Effects
Dennis Emmett, Marshall University
Ashish Chandra, University of Houston - Clear Lake

International Marketing and Cross-cultural Studies Track
Global Brands in Central and Eastern Europe: A Comparison of Hungarian and Bulgarian
Consumers
Al Rosenbloom, Dominican University
James E. Haefner, University of St. Francis

Marketing Education
Student Satisfaction with Online Classroom Experience: Interactive Effects of Student,
Instructor, Technology
Sarath Nonis, Arkansas State University
Gail Hudson, Arkansas State University
Shane Hunt, Arkansas State University

Marketing Research Track
An Application of Conjoint Analysis in the Context of Consumer Evaluation of Co-branded Products
Junhong Min, Michigan Technological University
Madhav N. Segal, Southern Illinois University- Edwardsville
M. Deniz Dalman, Ithaca College

Marketing Strategy and Entrepreneurship Track
Prescription for Medical Outsourcing Success: A Marketing Strategy Approach
Ravi Jillapalli , Texas State University- San Marcos
Regina Jillapalli, Texas State University- San Marcos

Retailing and Services Marketing Track
Determinants of Tourism Destination Competitiveness in China
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Organizational Culture and Employee Performance: An Investigation of the Mediating Effect of Customer Orientation
Turkan Dursun, West Texas A&M University
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Not-for-Profit Marketing and Social Marketing Track
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THE EDUCATOR OF THE YEAR AWARD

GETTING STUDENTS TO TAKE RESPONSIBILITY FOR THEIR OWN LEARNING AND ACADEMIC SUCCESS

Sarath A. Nonis, Arkansas State University

"There are few things more beautiful than a University.
It is a place where those who hate ignorance may strive to know,
Where those who perceive truth may strive to make others see,
Where seekers and learners alike, banded together in search of knowledge,
...in the undying cause of bringing thought to the world.
To be a member of one of these great societies must ever be a glad distinction..."

John Masefield

INTRODUCTION

Teachers who have the subject expertise and who can also make a difference in their students' lives have always played an important role in our educational system. Today, they are more important than ever before. It is not a secret that some college students lack the basic academic preparation, focus, motivation, or maturity to succeed in college and the available data supports this. For example, American College Testing (2008) reports a drop rate of 27.1% for all four year public colleges and almost 50% for all two year public colleges between freshmen and sophomore years. The same report also showed that students were taking longer to graduate. Based on available data, 38% to 64% of students pursuing an undergraduate education were taking longer than 5 years to complete their college education (American College Testing, 2003). A variety of reasons such as financial difficulties and not having clearly defined goals have been mentioned (Olson 1990; Dunwoody and Frank 1995), but one of the most compelling reasons cited has been low social skills and self-esteem possessed by these academically at risk students (Coleman and Freedman 1996; Call, Hendricks, and Jones 1990). These issues are not uncommon in business or marketing students either. Across business majors, marketing majors are more likely to experience academic trouble than other majors (Smart et al., 1999). So what can we do as instructors? I believe we can help students identify the problems created by their lack of preparation and let them take more responsibility for their own actions. The following paragraphs outline how I do it.

On the first day of class, I get to know each student in terms of the two most significant antecedents of learning and academic success. I provide this feedback to each student so that they are able to better understand themselves. Two variables, student motivation or drive and ACT composite score (used as a surrogate for ability) are arguably the two best predictors of

academic success. From a short survey of 7 items administered on the first day, I gather from each student his or her level of motivation (Spence, Pred, & Helmreich, 1989) and their ability. This allows me to know each student in terms of their academic readiness based on a model that I have developed and validated (these variables explain close to 55 percent of the variance in grade point average). The following diagram depicts academic readiness using motivation and ability from a course I taught last semester.

Histogram

Mean =0.17
Std. Dev. =1.042
N =39
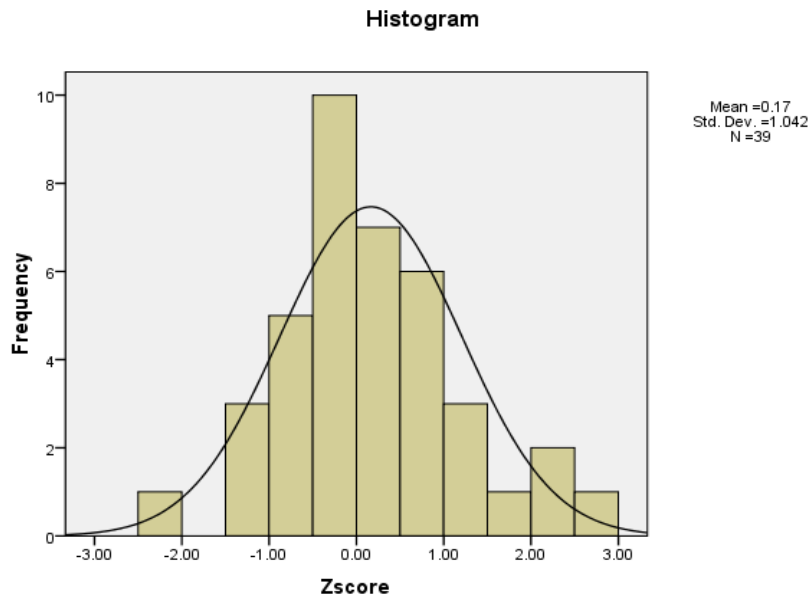
Figure 1. Student Academic Readiness

[1] *Readiness can vary between -3 and +3. Close to -3 are the students most at risk and closer to +3 are the strongest students. A value close to zero indicates an average student in terms of academic readiness.*

I am able to effectively use this information in the classroom (e.g., making sure weaker students understand the material and do not get behind). Also, when a student comes to see me for assistance, I am able to determine if the problem is more related to student motivation or ability or both and assist him or her accordingly. This is depicted in table 1 that follows.

Each student is also provided his or her motivation score along with the norms for motivation and ACT composite so they understand where they are in terms of the two variables. I briefly explain in class how the variables together will influence their learning and academic success as shown in figure 2. Each student is in control of his/ her level of ability and motivation (drive) and I can have absolutely no impact on their learning if they do not do their part as a student.

Table 1   **Motivation Level, ACT Score, Readiness for College Courses, and Suggested Approach for a sample of students.**

Student	ACT Score (mean = 22.6)	Motivation (mean=3.4)	[1]Zscore (Readiness)	[2]My Approach Based on Data
1.00	19.00	4.20	-0.06	Be patient, encourage
2.00	20.00	3.83	-0.64	Encourage
3.00	19.00	3.17	-1.25	Pass responsibility to student
4.00	18.00	4.33	-0.21	Be patient, encourage
5.00	19.00	3.67	-0.37	Find ways to motivate student
6.00	21.00	4.50	0.76	Be patient, encourage
7.00	21.00	3.00	-0.50	Challenge the student
8.00	27.00	2.33	0.29	Challenge the student
9.00	15.00	3.00	-2.26	Pass responsibility to student
10.00	19.00	4.00	-0.18	Be patient, encourage

[1] *Close to -3 are the students most at risk and closer to +3 are the strongest students. A value close to zero indicates an average student in terms of readiness.*

[2]*These are simply first guesses only. My approach to the student will change as needed once I get to know the student better as the semester progresses. It is amazing as to how accurate these predictors are.*
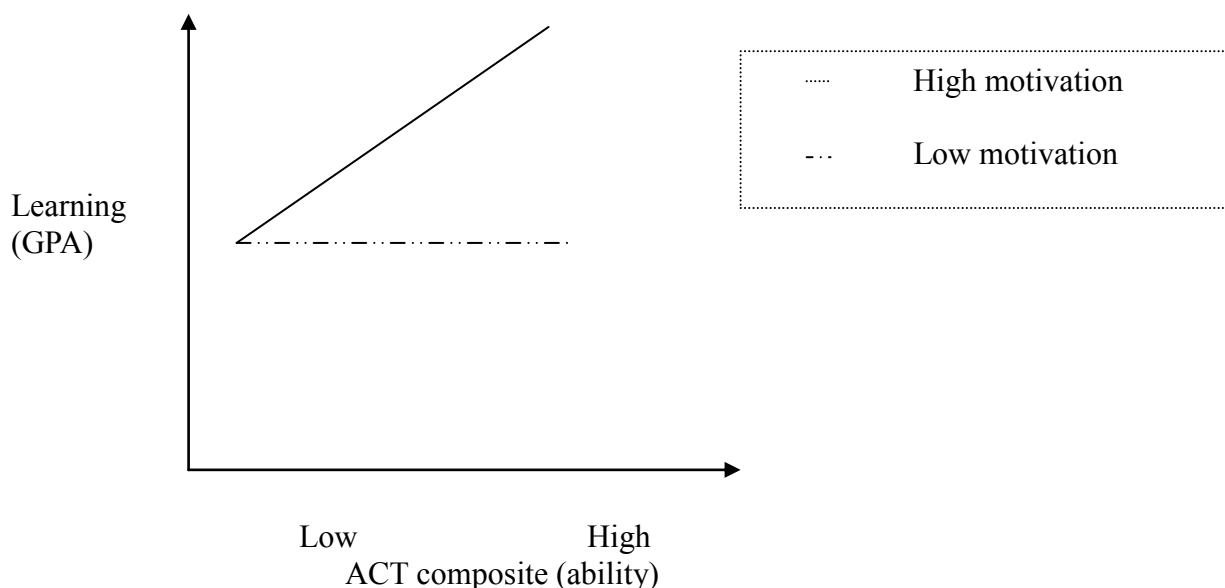
Figure 2. Interactive Effects of Motivation and Ability on Student Learning

This information really gets the students' attention. It helps each student to know what he or she needs to do (not the instructor) to reach his or her academic goal. For example, if a

student is average in ability (average ACT composite) he or she could still do very well academically if their motivation is high. Simply being smart is not sufficient without motivation.

It is said that a problem correctly identified is half solved. One goal of a good teacher will be to spark intellect and encourage students to pursue knowledge on their own. Here I have explored why this may not be happening in some students. I explain to students in a way they can understand that they are in control of their own learning.

Maybe each of you can develop your own model to predict the academic success of your students. This will help both you and the student to focus more on the problem and not the symptoms. Once this is addressed, you are ready to provide the knowledge and develop the skills our students need to be successful in their careers and in their lives.

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ASPECTS OF TRADE SHOW SUCCESS: AN ANALYSIS FROM THE U.S. MEXICAN BORDER

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Tom Coyle, University of Texas Brownsville

ABSTRACT

Trade shows are an important part of the marketing mix especially for industrial companies. Due to globalization and the industrialization of Mexico the Maquila industry has begun implementing trade shows. This paper studies survey results from a local border trade show to explore the goal orientation of attendees and their subsequent rating of the trade show's success. Previous research shows that indirect goals are more higher rated than direct goals. This study reaffirms this finding with some contingency effects.

INTRODUCTION

The U.S. / Mexican border has suffered during the recent US recession; both sides of the border have been impacted. Contributors to this are the loss of manufacturing business from Mexico to China (Sargent & Matthews, 2007; Mireles, 2004; Forero, 2003) and border violence due primarily to organized drug activity (Stratfor, 2009). In an effort to improve business activity, the local Maquiladora Association in a northeastern Mexican city has begun having annual trade expos as a mechanism to promote business. Mexico, since the creation of NAFTA, has become a regional and international industrial power. With increasing industrialization one would also expect an increase in sophistication in marketing methods. Trade shows are an integral part of the marketing mix (Kerin and Cron 1997) and, as such, the use of trade show implementation by the Maquila association demonstrates increased marketing sophistication.

While trade shows or business expos have been used to promote a business's offerings (Trade Show Bureau, 1983; Kerin & Cron, 1987) and they have had some success, their effects on regional cross border effectiveness has not been studied. There has been a cross national study that showed differences between European and U.S. Trades shows (Dekimpe, Francois, Gopalakrishna, Lilien and Van de Bulte ,1997); however, this study does not look at the inter regional effects nor at a developing region but at the measurement aspects of trade shows.

This research is in its preliminary form and will be somewhat descriptive due to the level of data available; however, this will be used as the basis to develop more appropriate variables for further research. The purpose of this research is to 1) determine the goals of the exhibitors, 2) measure the overall effectiveness of the show and 3) determine the effectiveness of regional expos in attracting new business. The study will assess the comparative responses of surveys issued at a trade show that was conducted in 2008 and 2009 in Matamoros, Mexico. The 2009 survey data will be analyzed to determine effectiveness and aspects of measuring effectiveness.

LITERATURE REVIEW

Maquiladora Background

The "maquiladora" or offshore assembly industry has its origins in a 1966 law that allowed component parts to be imported into Mexico, assembled and reexported with taxes paid only on the value added. Currently tax payments are computed based on OECD transfer price methodology, which has the benefits of removing disincentives to increasing wage rates and of "leveling the playing field" across the developing world labor market. This policy has resulted in sustained growth financed mostly by U.S. capital of maquiladoras not only along the 2000 mile U.S./Mexican border, but also deep into the interior of Mexico. The labor force of this industry was once almost exclusively made up of young women, although recently enough men have been hired to make up almost half of the total maquiladora labor force (MacLachlan & Aguilar, 1998). The height of maquiladora employment was 1,347,803 workers in October, 2003 (INEGI, 2003).

The recession of 2008 has had a reduction in total worker population, which has intensified the job loss in the Mexican manufacturing sector. Forero (2003) noted that by 2003, 500 of Mexico's 3,700 Maquila facilities had closed resulting in the loss of 218,000 jobs. The vast majority of these jobs were a result of facilities moving from Mexico to China. The Mexican government has changed its labor reporting statistics so exact employment numbers for the Maquiladora sector are no longer available; however, in discussing employment with Maquila executives, the current employment is projected at approximately one million workers.

The primary driver for most manufacturing firms leaving Mexico was the lure of very cheap labor in China (Purdam, 2004). Labor rates in Mexican maquiladora firms were in the $2.00 / $2.50/hr range (Michelini, 2003) and there were reports that China labor was $0.33/hr, although Dewhurst and Meeker (2004) note that such low labor rates may be unsustainable. The generally accepted China labor rate during this time was about $0.50/hr (Purdam, 2004).

The sharp rise of oil during 2005 – 2008 resulted in many firms reanalyzing their cost structure resulting in a reanalysis of total cost of ownership (TCO), (Ellram, 1993). Kumar and Kopitzke (2008) did a total cost of ownership for a hand tool manufacturer and determined that the added cost of shipping and inventory resulted in China's not being as attractive as Mexico for total cost of operation. As other manufacturers began to look at the TCO concept, it became apparent to local officials that Mexican manufacturing had a niche and these officials began to try to attract business back to their specific regions, thus the interest in trade shows or expos.

Trade Show Literature

Trade shows are undeniably an important part of the marketing mix. In the United States they account for 10% of marketing budgets and up to 20% of the marketing budgets in Europe (Dekimpe et al., 1997). The use of trade shows has been increasing with growth rates of 30 % a year (Cope, 1989). They are ranked the second most important marketing element after direct selling for industrial product companies (Parsuraman, 1981; Kerin and Cron, 1987). Despite the importance of trade shows as a marketing tool, there has been a noticeable dearth of research in

this area (Gopalakkrishna, Lilien, Williams, and Sequeira, 1995; Dekimpe, Francios, Gopalakrishna, Lilien and Van de Bulte 1997, Kerin and Cron 1987). There is also very little research on cross national and international trade shows (Dekimpe, Francios, Gopalakrishna, Lilien and Van de Bulte 1997) which is another glaring omission given the rapid increase in international trade catalyzed by globalization.

One of the reasons for this lack of research is due to the nature of trade shows themselves and the exhibitors and attendees. As Bonoma (1983) states, trade shows are "sloppy". They are sloppy in that many companies do not engage in clear enough activities to plan and prepare for trade shows or take appropriate follow up action (Gopalakrishna et al 1995). Part of this problem is due to the fact that many are not clear or have varying goals of what they want to achieve at a trade show. Thirdly it is very difficult to evaluate the success of trade shows as it is difficult to isolate the effects of trade show marketing from the other marketing elements. Ultimately, return on investment is an important part of any marketing strategy and Gopalakrishna et al. (1995) believe they have found a way to measure return on investment but the appropriate data for this analysis is not available for this study but may be incorporated in the future.

Trade shows serve many functions with some easier to measure than others. The primary purpose of trade shows is to directly create leads and, therefore, create sales. However, measuring sales is difficult as one can not readily differentiate from new sales, incremental sales or previously planned sales (Dekimpe et al 1997). This leads us to the indirect goals which are even more ethereal, such as corporate image, client relationship building and simply attending because competitors are there (Kerin and Cron 1987). Given the difficulty of measuring these items, it has been found that executives rate the indirect aspects more highly than the more directly measurable items (such as sales at the show which may be limited) (Konopacki 1978).

The first set of goals is to directly impact sales and lead generation. The second set of goals is indirect such as corporate image, client relationship building and response to competitors (Gopalakkrishna, et al 1995). The effectiveness of these goals is difficult to measure due to the interaction effects of other marketing efforts (Bonoma 1983, Dekimpe, et al.1997). In this paper we will look at the responses of participants relating to both the direct and indirect goals.

HYPOTHESES DEVELOPMENT

Based on the aforementioned literature, several hypotheses related to the direct and indirect effects are developed for this study. The main hypotheses are directly related to previous hypotheses studied. The sub hypotheses are the sub measures used to test the validity of the main hypotheses. For example in Hypotheses 3 each hypotheses test is a more indirect measure of trade show success. Theoretically as the measures become more indirect the perceived success of the show should rise. The goals of the hypotheses are to determine which has a greater impact on perceived show success for the attending vendors. Among those factors will be to determine whether it is true that the less clear the goal and measureable the goal, the more positive the assessment (Konopacki 1978).

H1:	Direct sales leads to a greater score on expo recommendation
H2:	Indirect factors lead to a greater score on the expo recommendation
H2 A	Future expo recommendation to my own company is dependent upon the information and service provided at the expo
H2 B	Future expo recommendation to my friends' companies is dependent upon the information and service provided at the expo
H3:	The more immeasurable a goal, the higher the rating of the show
H3 A	Finding new customers is more important that servicing current customers
H3 B	Servicing current customers is more important than enhancing our corporate image
H3 C	Enhancing our corporate image is more important than enhancing company morale
H3 D	Enhancing company morale is more important than gathering information on competitors

THE STUDY

The instrument for this survey was constructed using questions shown to be valid by Kerin & Cron (1987). In addition, standard demographic questions were added to better obtain data relating to the region. The actual English version of the instrument is shown in Appendix A. The instrument was prepared in Spanish by having one bilingual translate the instrument into Spanish and a different individual translate the Spanish version back into English. The translations were then compared and discrepancies corrected. This is the recommended method of preparing an instrument for use in another language (Shigenobu, 2007).

The data was collected as convenience data by having Expo workers designated to walk the isles of the show and solicit surveys from participants. The actual questionnaires were filled out by the individual participants and not the Expo workers. Of the 137 exhibitors and approximately 700 attendees, a total of 97 surveys were collected over a two day period. After adjusting for missing or incomplete data, there were 75 usable surveys. Of the total 97 surveys, 50 were from returning exhibitors (51.5% of total respondents).

DATA ANALYSIS

Demographics

A total of 97 surveys were collected from the participants of the expo. Of the 97 collected 50 surveys were from returning participants of the 2008 show (51.5%). Survey results regarding show quality collected from returning participants is shown in Table 1 below.

Table 1
Returning respondents report on the quality of the show

Better than 2008	60.0%
About the same as the 2008 show	22.5%
Worse than the 2008 show	17.5%

Table 2
Participant Type and Firm Size

Firm Description	Number Reporting	Per Cent
Maquiladora	11	12.9
Vendor	27	31.9
Service Provider	36	42.3
Other	11	12.9

Firm Size	Number Reporting	Per Cent
0 - 10	17	20
Nov-50	27	31.8
51 - 100	15	17.6
101 - 200	14	16.5
>200	12	14

Hypothesis Tests

Hypothesis 1 was evaluated using regression analysis. The independent variable was question 8 on the survey: found new business. The independent variables were questions B1 and B2: I would recommend this expo. The test hypothesis was accepted showing that direct sales leads to increased expo recommendation. The statistics for this analysis were as follows: R^2=.498, F=35.76, sig.=.000. The data also shows that only one of the independent variables was significant: recommending the expo to my company. It is interesting that if a firm developed new business, firm members would not necessarily recommend the expo to friends in other companies. No explanation for this is offered but it is perhaps a point for future investigation.

Hypothesis 2 was subdivided into two testable hypotheses and was evaluated using discriminant analysis. The dependent variable was again question 8 and the independent variables were questions B3, B4 and B7. The results show that the test hypothesis H2a was supported. The statistics for this analysis were Box's M=46.12, sig.=.000, Wilks' Lambda=.350, X^2=71.29, sig.=.000. Interestingly, H2b was not supported. The implications of not recommending the expo to a friend's company are not understood and should be investigated more fully in later research.

Hypothesis 3 was subdivided into five testable hypotheses. These hypotheses were tested using multiple regressions and evaluating the standardized coefficients. Using standardized coefficients allows for direct comparison of the magnitude among the variable parameters (Hair et al., 1998). The overall equation was significant with the following statistics: R^2=.538, F=16.05, sig. =.000. Table 3 below shows the values and significance for the individual parameters.

Table 3
Evaluation of Parameters for Hypothesis 3

Parameter	Unstandardized B	Standardized B	t-value	Significance
Found new customers	.785	.609	4.96	.000
Service customers	.712	-.082	-.734	.466
Enhance image	-.081	-.105	-.872	.386
Enhance morale	-.116	.308	2.54	.017
Competitor information	.104	.024	.224	.823

The data in table 3 shows that only hypotheses 3a and 3d are supported and 3b and 3c are not supported.

Hypothesis Summary

H1:	Direct sales leads to a greater score on expo recommendation	Supported
H2:	Indirect factors lead to a greater score on the expo recommendation	Partially Supported
H2 A	Future expo recommendation to my own company is dependent upon the information and service provided at the expo	Supported
H2 B	Future expo recommendation to my friends' companies is dependent upon the information and service provided at the expo	Not Supported
H3:	The more immeasurable a goal, the higher the rating of the show	Partially Supported
H3 A	Finding new customers is more important that servicing current customers	Supported
H3 B	Servicing current customers is more important than enhancing our corporate image	Not Supported
H3 C	Enhancing our corporate image is more important than enhancing company morale	Not Supported
H3 D	Enhancing company morale is more important	Supported

DISCUSSION

In general the hypotheses testing tends to support the general argument of the paper that the more indirectly measurable a goal, the higher the rating of the trade show; however, there are some caveats to the support given the lack of support for some of the hypotheses. The primary issue is that the question "I will recommend this trade show to my friends" is probably a bad question. It assumes that one's friends are also in the same industry which is an assumption that may not be relevant. There may be confusion between colleagues and friends especially in the cross-cultural context of this paper. Further studies should either omit this question or rephrase it to better capture the true goal of the question which is to determine if attendees would recommend the show to relevant colleagues.

Hypothesis Three was written to capture the hierarchal level of goals based on level of indirectness or difficulty of measurement with the least difficult or indirect first and the most

difficult last. It is of interest to note that the first goal, direct measurement, and the last goal, most indirect measure, were the two significant results of the study. This shows that the underlying premise of the paper is correct but that the intermediate variables within the hierarchy may not be important or significantly differentiated as compared to the two end points.

Although generating leads is admittedly the primary goal of companies attending these events, the data shows that enhancing morale is also an important consideration. This is definitely a difficult goal for companies to directly and immediately measure, but it is one of the significant measures in this study. There may be contextual effects at work given the recessionary economy. Companies may view any activity as positive while companies wait for the economy to more fully recover. This poses an interesting question for future research. What impacts do market conditions have on the hierarchy of goals in marketing communications in general, and trade shows in particular?

CONTRIBUTION

This study reaffirms the previous findings of Konapacki (1978) that indirect factors are rated more highly than directly measurable factors which reinforces the difficulty found in measuring trade show performance in general (Kerin & Cron, 1987). This paper also adds to the pool of research on trade shows and to the meager pool of international research on trade shows Gopalakkrishna, et al 1995. It demonstrates that current tradeshow success measures can be used in an international context and in industrializing markets. The study also raises an interesting question for further research on what impact market conditions play in determining trade show goals. There is currently no research on this aspect of trade show success measurement.

IMPLICATIONS

Marketing managers should not underestimate the value of trade shows, especially if they are operating in multiple international markets or in developing markets. This study also reaffirms the importance of having clear goals when attending trade shows and that these goals may not necessarily be direct goals such as lead generation but there may also be other, valuable goals depending on the current market conditions.

LIMITATIONS

The primary limitation of this research is the convenience nature of the sample and the limited, one show collection. This study cannot be generalized to the broader tradeshow market but does represent a solid foundation on which to build further research studies both on tradeshows and cross border tradeshows.

A second limitation is that this data was collected from an expo which was organized and executed by manufacturing executives who have limited or no marketing experience. Also, the expo organizers did not consult with a marketing firm for advice. The data reflects the lack of understanding by the expo organizers of trade show goals and the mechanisms for accomplishing these goals. This point may highlight a fundamental lack of understanding of the interrelationships of marketing and operations. While researchers have long noted the

importance of close cooperation among the major firm functions; finance, operations and marketing (Stevenson, 2007; Russell and Taylor, 2006), this data suggests that this fundamental may have been overlooked.

RESEARCH FOLLOW UP

As a follow up to this research, the expo committee has seen the data and was very encouraged at the results. Of particular interest was the number of respondents reporting that they found new business at the expo. However, it was also apparent to the organizing committee that several opportunities were missed, as noted by the questions that could not be answered from the survey. Based upon these results, the organizers have asked the authors to become involved much earlier in assessing the questions to be answered and the mechanism for determining these questions. This opportunity should allow for a better understanding of the role in expos in an international environment.

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APPENDIX
Survey Instrument

A. The first questions are for those who <u>participated</u> in last years Expo.
1. How does this year's show compare to last years? Better   About the same Not as good
2. If you are a manufacturer did you develop any new vendors based upon last years show? Yes / No
3. If you a vendor did you develop any new business based upon last years show? Yes / No
B. This section is for all individuals to complete. Please answer ALL questions in this section using the following ranking -
1. I would recommend we attend this Expo to my company in the future.
2. I would recommend this Expo to my friends in other companies.
3. The information packet I received was helpful to me at this show.
4. The information I received at this show met my expectations.
5. At this expo I definitely found a source of direct materials.
6. At this expo I definitely found a source of indirect materials.
7. At this expo I definitely found a source of services.
8. At this expo I definitely found new customers.
9.   My company can best be described as follows: Maquiladora Vendor Service Provider Other
10. Total Employees 0-10, 11-50, 51-100, 101-200, More than 200
C. This section is for vendors
1. How many other trade shows will your company participate in this year? _____
Vendors please answer all the questions in this section using the following ranking -
2. The purpose of my company's participation in this expo can be described as prospect identification.
3. The purpose of my company's participation in this expo can be described servicing current customers.
4. The purpose of my company's participation in this expo can be described enhancing corporate image.
5. The purpose of my company's participation in this expo can be described new product introduction.
6. The purpose of my company's participation in this expo can be described new product testing (test market for us)
7. The purpose of my company's participation in this expo can be described enhancing corporate morale.
8.   The purpose of my company's participation in this expo can be described gathering competitor information.
9. The purpose of my company's participation in this expo can be described selling at shows.

ADVERTISING ON SOCIAL MEDIA: AN EMPIRICAL INVESTIGATION OF FACEBOOK ADVERTISEMENTS DIRECTED TO CHILDREN

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Melinda W. Lyons, Berry College

EXTENDED ABSTRACT

Many academic articles have been written about children's advertising. Previous research has confirmed that children are influenced by the advertising they see (Abelman 1989, Bandura 1977, Bush, Martin and Bush 2004, Martin and Bush 2000, Ward 1974, Wilson 1993). Furthermore, advertisements directed toward children do not always contain content which is ideal (Albers-Miller and Miller 2005, Greenberger, Chen and Bean 1998). Academic researchers have reported that children and teenagers are bombarded with sexual images in the media and advertising (Kilbourne 2005).

The intensity of sexual images in advertising has intensified. Researchers have indicated that "graphic sexual images seem more extreme, more pervasive and more perverse than ever before" (Kilbourne 2005). Sexual images readily available in family media and online have been compared to pornography" (Kilbourne 2005).

Unfortunately, children often do not respond negatively toward sexual images in advertising. Research has reported that young people are more tolerate of sexual appeals than older people (Liu, Cheng and Li 2009). The exposure to sexual images in advertising has been reported as harmful to children and teens (Kilbourne 2005).

Social media, such as Facebook and My Space, provide advertisers with an ideal environment for individually targeting prospects. Users of social media typically supply birthdays, sex and other personal information which can be used to tightly target messages. A parent and a child sitting side-by-side, playing the same online game on a social media site might well be exposed to entirely different advertising messages.

The purpose of this study is to determine the degree to which advertisements directed toward children in social media are different from advertisements directed toward older participants. In this study, fictitious Facebook members were created across a range of ages from 14 to 45. At each age point, both a male and a female account were created. Differences in advertising content among age groups and between sexes are report. Public policy implications are provided.

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INTERNET AND REGIONAL PRICING: A COMPARISON OF PRICES ON PRODUCTS MARKETED TOWARD CHILDREN:

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EXTENDED ABSTRACT

The Robinson-Patman act was passed to ensure that differences in prices could be attributed to differences in cost associated with supplying a good. Unfortunately the parameters of the law are not clearly defined and have led to confusion (Anderson, DePalma and Thisse 1992). Despite the law, historically companies have often utilized geography to establish prices for different locations which are not directly attributable to transportation costs. In the past, companies often charged different prices for the same good in different locations (a location price). This approach allowed companies to charge what the market would bare region-by-region.

The Internet appears to have had an impact on the ability of companies to maintain regional prices approaches. Consumers are increasing more sophisticated about obtaining pricing information (Sahut 2009). The Internet serves as both a source of pricing information and a location to obtain products (Ratchford 2009). Products sold online conceivably have a lower cost of supply (Tang and Gan 2004), but Internet pricing information readily available to consumers makes it difficult for brick and mortar stores to charge more than online prices. Prices are converging (Tang and Gan 2004).

Unfortunately, not all products are readily available online. Some products, often sold as impulse products, are rarely available online. The nature of the purchase (impulse) also makes the purchase of the product online and/or a price search highly unlikely. It is possible that consumer perceptions of an appropriate price for some goods may be less likely to be affected by the Internet than others.

Additionally, not all consumers are sophisticated about using pricing information. Very little research has been conducted examining how children gather and evaluate information about pricing. Evidence from this small body of literature indicated that children rationalize their decisions (Damay 2008).

The purpose of this study is to examine prices for children's products in a number of geographic markets. The data for this study were collected both online and in brick and mortar locations in a variety of states. Data were collected from a number of chain stores. Products readily available online were compared to products unavailable online. Managerial and public policy implications are offered.

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TRANS FATS IN FOOD PRODUCTS MARKETED TOWARD CHILDREN: THE TRUTH BEHIND PACKAGE LABELS

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EXTENDED ABSTRACT

Children in the United States see a great deal of advertising for food items, including fast food, snacks, cereals, etc. (Taylor and Albers-Miller 2006); many ads are for products that are not particularly healthy for a child's diet (Albers-Miller and Miller 2009). Children are influenced by the marketing messages to which they are exposed (Albers-Miller and Miller 2005), and as a result, they may choose foods that are unhealthy. Very conceivably, food items promoted to children may be linked to the increase in childhood obesity and other health issues.

Albers-Miller and Miller (2009) found that foods targeted toward children in Europe were nutritionally better than similar and identical products sold in the United States. In their content analysis of food labels between comparable foods sold in the United States and Europe they discovered different labeling requirements. The lack of standardization of serving sizes in the United States creates potential problems for consumers.

In Europe, all contains must list the nutrition content for a single serving and must also list all nutritional information for a standardized 100 gram amount (Albers-Miller and Miller 2009). In the United States, serving sizes are based on guidelines for a Reference Amount Customarily Consumed (RACC) (FDA 2009). The FDA has established RACCs for 139 food product categories which are supposed to represent the actually amount of food customarily consumed at one eating occasion by a diverse population group (FDA 2009). The RACCs are considered to be guidelines and not requirements (Electronic Code of Federal Regulations 2009). Additionally, even though labeling claims are "strictly defined by the government" (Kellogg's Nutrition), the loopholes in the laws leave a great deal of flexibility for food companies to "hide" undesirable ingredients.

The federal government ties the reporting of trans fats (which come from partially hydrogenated oils), to the serving size selected by the producer:
Trans fat content must be expressed as grams per serving to the nearest 0.5-gram increment below 5 grams and to the nearest gram above 5 grams. If a serving contains less than 0.5 gram, the content, when declared, must be expressed as "0 g." (FDA 2009)

If a product contains partially hydrogenated oils, a manufacturer can legally "hide" the trans fats in the nutrition label and claim "Zero Trans Fats" by selecting a serving size small enough that the amount of trans fats per serving is less than 0.5 grams.

The purpose of this study is to content analyze food products marketed toward children in the United States and determine the degree to which these products contain partially hydrogenated oils. Additionally, this study examines the propensity to claim "Zero Trans Fats"

when the product actually contains partially hydrogenated oils. This study also reports how often the "hidden" trans fats would be uncovered with standardized labeling requirements similar to Europe. Managerial and public policy implications are offered.

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AFTER RETAIL EXCESS INVENTORY CHANNEL AND SUPPLY CHAIN ECONOMICS IN US

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ABSTRACT

Missing sales target and over production are common in any supply chains. Most of these excess products find their way into the US through a secondary market known as the after retail excess inventory channel. The main players in this market include companies like Ross, TJMaxx, Woot!, Overstock among others. Each company has a unique business model and they offer distinct advantages to both consumers and manufacturers. In this paper, we explore the differences, their effect on product life cycle and supply chain economics.

INTRODUCTION

After retail excess inventory (AREI) channel is used for distributing/selling excess inventory after it has been through the retail cycle so that manufacturers can recoup a portion of their investment by getting costly products off their shelves and into their revenue stream. It is sometimes known as secondary market, liquidation market, excess inventory channel, off-price market or just after retail channel. This channel is gaining increased prominence and recognition and as you will learn from this paper the players in this channel have had excellent growth opportunities over the last few years in US. Previously, this channel was referred to as the liquidation industry and terms like "distressed merchandise", "odd lots", and "steep discounts" were common. Now it is typically called asset recovery and is a vital part of the company's business model. In fact, some businesses have begun appointing individuals such as Vice President of asset recovery and reverse logistics managers [1].

The AREI channel is not new, in fact Marshalls Inc, a company now under the TJ Maxx flagship, was created in 1956 during the post world war II economic boom. In 1970's, the American economy was in recession and, as is natural, the recession affected the spending habits of most shoppers. As a result, the AREI channel began gathering momentum at this time and soon enough; the channel had reached prominence and became common consumer practice [4]. The channel continued to evolve as technology grew, the advent of Internet ushered AREI into a new era. In this era, online AREI retailers such as overstock.com have gained a real foothold. The move also marked a shift in the types of products AREI retailers could effectively sell. Since brick and mortar retailers are constrained by store space, online retailers have expanded their SKUs to include more varieties.

The common perception of an AREI retailer is that it occupies a space at the end of the traditional supply chain (Figure 1).
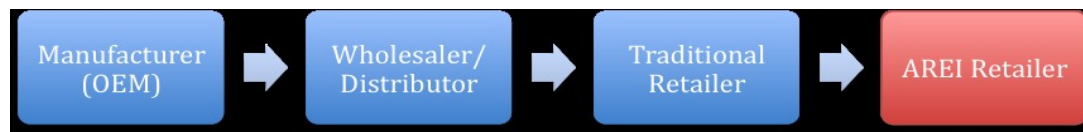
Fig 1. Traditional view of an AREI channel

This is a simplistic view of the AREI channel, considering there can be a multitude of other players that handle products and take a margin before they finally reach the hands of an AREI retailer. This perception is also wrong because products rarely follow the route as shown above. They also differ from the traditional retail supply chain in the procurement practices. For example, in the traditional supply chain, a retailer will order products based on perceived consumer demand, order lead-time, and current inventory levels. The AREI channel on the other hand, operates around the traditional retail channels mistakes. While traditional retailers typically know when, what, and how much of a product they are getting, the AREI channel typically does not. For this reason, the AREI channel does not always utilize all of its players. For example, if an excess product becomes available only in small quantities, there is no reason to include a player upstream because their core function of breaking bulk quantities is unnecessary. Differences continue to arise when you consider that some products entering the channels are returns. In fact, 4% of retailer's revenues consist of customer returns [2]. An AREI channel member can also be the refurbishment partner for the manufacturer. This member of the AREI channel receives those unwanted products and repairs them or salvages them for parts. The exhibit below serves as a more accurate representation of the players within the AREI supply chain. The route an excess inventory item takes in order to reach the end customer is dependent on the item itself, how large the quantity is, where the item is in the life cycle, how many substitute products are in the market, and a number of other variables, the majority of which will be discussed in detail in later sections.
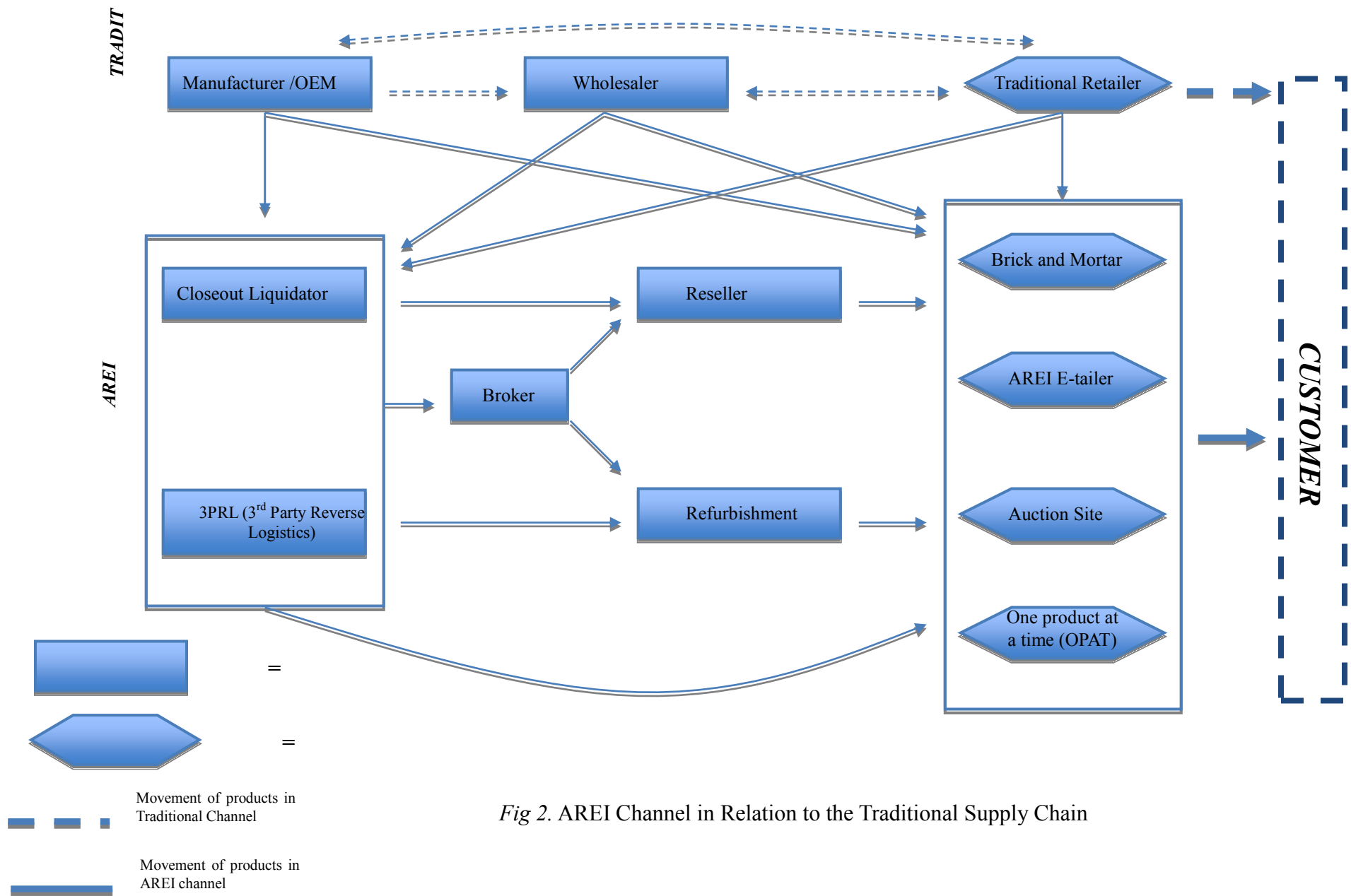
Fig 2. AREI Channel in Relation to the Traditional Supply Chain

BUSINESS MODEL OF AN AREI CHANNEL

The players in the AREI channel make their money off the volatility in retail consumer demand. They rely on manufacturers and retailers to overestimate product demand. Over the last few years the inventory risk has shifted from retailers to manufacturers. Some of the dominant retailers exercise their power to cancel orders mid-production or return unsold merchandise [3]. These factors contribute to increased amounts of excess inventory that an AREI retailer has the opportunity to buy and sell. The companies in the AREI channel must focus on improving four key factors in order to maximize profits: their scale, their operational expertise, their vendor relationships and their understanding of the uncontrollable variables dictating consumer response and product management.

Scale - The ability to increase their scale and thus increase their purchasing power is an obvious advantage for any retailer. This ability becomes even more important considering companies within the AREI channel must sell in large volumes to compensate for their low margins on individual products.

Operational Expertise – As AREI retailers operate on such small margins; the room for error or capacity to absorb major losses is almost negligent. For this reason, decision-making and effective forecasting techniques are absolutely essential to success.

Vendor relationships – In order for manufacturer and traditional retailers to sell off their excess inventory at prices low enough to give an AREI retailer their preferred margin they must have a strong business relationship. Both retailers and manufacturers want to work with an AREI partner that effectively maintains price and brand integrity.

Understanding the uncontrollable variables – An affective AREI retailer should understand the factors that are beyond their control and structure their business so that they can flexible and responsive.

Growth of AREI channels

When analyzing the dynamics of a specific marketplace/channel one of the most important elements to understand is how the market reacts to different economic conditions. Traditional retail channel follows a relatively predictable line in relation to the economy. With the recent economic downturn, stock prices of retail companies have seen a considerable decline. With the US consumer saving more and spending less it is easy to see why these business sectors perform in this pattern. AREI retailers, on the other hand, react differently. In a down economy, consumer behavior is invariably oriented towards bargain shopping and therefore AREI retailers typically expect to see an increase in demand for their products.

At the same time manufacturers reduce their production levels. This is evident in the graph below which shows the Institute of Supply Management's Purchasing Managers Index for Manufacturing (PMI). Levels above 50 are consistent with growth in the manufacturing segment of the US economy. As a result of this decline in manufacturing levels, excess inventory levels may be lower and AREI retailers may see a reduction in their purchasing selections. Also,

research, design, and development of new products drastically decrease during recession effectively causing products to maintain a longer life cycle and avoid obsolescence. So, considering all these variables, how does the AREI channel react to the economy?

In 2009, traditional retailers have seen a decrease in activity with their overall sales falling 2.9 percent as of the last quarter compared to a growth in sales the same time last year in 2008. This is just an average and many retailers have done considerably worse. For example, Abercrombie and Fitch Co., a high priced clothing retailer, posted a 29 percent drop in sales [5]. On the other hand off-price retailers have continued to show growth. TJX Co., the parent company of the T.J. Maxx and Marshalls chains, reported a growth in sales of five percent. These numbers surprised investors, not because of their growth, but because of their level of growth [6].
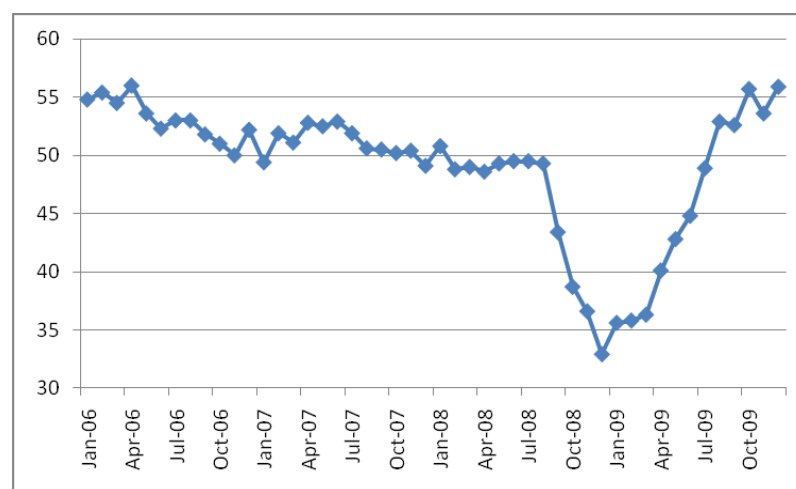
Fig 3. PMI for Manufacturing from 2006 to 2009 (Source: ISM)

Some may assume that in order for an AREI retailer to succeed, the economy must be in a downturn. Shoppers will choose to shop at an AREI retailer only if they don't have money to go somewhere else. This is untrue, in fact, data from 1997, when America was in the midst of a booming economy, shows that AREI retailers showed considerable growth. These growth numbers outpaced even the traditional retail industry [7]. There are also other uncontrollable variables like product seasonality and obsolescence, and competition which affect an AREI retailer's strategy and performance. There is not much academic research done in this area.

AREI channels effect on the supply chain

One of the main benefits and value add services AREI retailers offer is the ability to shorten the product life cycle. The four stages of the product life cycle are introduction, growth, maturity and decline. Most of the products that enter the AREI are in the maturity (end stages) or in decline. Typically, a manufacturer or traditional retailer do not like to deal with a product in the decline stage, because sales are low and the speed in which it leaves the shelves is reduced significantly. An AREI retailer has the ability to cut the amount of time the product spends in this stage and thus pass on revenue to the retailers and manufacturers and savings to the consumer.

Since the AREI retailer can reduce the time a product spends in the decline stage, they are able to reduce the LCC or Life Cycle Cost. The way in which the product life cycle is reduced by different AREI retailers is discussed in later sections. Some methods of AREI retail even have the capability of beta testing products that have yet to reach the market.

Occasionally, AREI retailers can also have a negative effect on the supply chain if used in the wrong way. Complications can arise when AREI retailers stock product that is in earlier stages of the product life cycle, they can potentially hurt both brand and price integrity. This scenario is more prevalent in the fashion retail business (although it does happen in other industries) where it is common to find the same exact dress in both a traditional retailer and an AREI retailer. As result, traditional retailers would reduce prices in an attempt to win back the business they are losing to AREI retailers. These price cuts have adverse effect on the brand integrity [8]. This represents a common misuse of the AREI channel. The short term benefits of selling to the AREI retailer may seem beneficial, but they can adversely affect the margins and the brand image in long term.

As branded company become more and more aware of how AREI retailers can affect their brand integrity, some brands have already begun reducing the products they allow to be sold through the AREI channel and some are pulling their brand entirely. This risk became painfully evident in 2007 when popular clothing maker Polo Ralph Lauren pulled their menswear from all Stein Mart and Marshalls stores, both of which are brick and mortar AREI retailers. In the clothing maker's 2003 annual report they described the maneuver as "a targeted initiative that will give us better control of the brand and protect the long-term strength of the brand".   This action paid off for Ralph Lauren reporting higher net sales and improved gross margins, while sales at AREI retailers were adversely affected. According to William Moll, the executive vice president and chief merchandising officer, once the Polo sportswear was pulled, it contributed to a decrease in store sales of 6 percent for the next quarter [10].

TYPES OF AREI RETAILERS

Traditional (Brick and Mortar)

Traditional brick and mortar AREI retailers (commonly referred to as Off-Price Retailers) are the oldest members of the AREI channel. The main retailers in this category are TJX Company, which is by far the biggest, dominating the east coast and posting revenues above $17 billion, Ross Stores, TJX's closest competitor with revenues around $5 billion, and Big Lots, who has a similar market share to Ross [9]. The majority of products sold are clothing, shoes, and accessories. TJX and Ross, the two biggest players in this category, both focus exclusively fashion products while Big Lots, the third largest, sells everything from furniture and appliances to electronics and video games.

Ross Stores Inc, in its 2008 annual report listed several factors that affect their business model. Some of the key ones, that sheds light on the business model where change in the availability, quantity or quality of brand-name merchandise at desirable discounts, potential changes in the level of consumer spending on or preferences for apparel or home-related merchandise, an increase in the level of competitive pressures in the retail apparel or home-

related merchandise industry and potential disruptions in the supply chain.

As seen earlier in the case of Stein Mart, Marshall and Polo Ralph Lauren, the change in availability of branded products does adversely affect the sales of an AREI retailer. Ross Stores Inc. also included in their annual report that they may lose business due to increases in competitive pressure among other retailers. In recent years, action of many retailers has shown that this risk is no longer potentially harmful but rather a reality. Department stores have begun radically slashing prices, a response to both the economy and a need to compete with AREI retailers. Although many analysts deem the move by traditional retailers as a "rare phenomenon" it is still something AREI retailers are concerned about.

AREI E-TAILERS

A classic example of an AREI e-tailer is Overstock.com. The main advantages of AREI e-tailers are the wide variety of SKUs and low upfront cost. In a physical retail store location, the buying practices are relatively restricted. With limited display space and the additional costs associated with their brick and mortar store, traditional AREI retailers favor buying excess inventory in large quantities to increase economies of scale and reduce the number of display locations they must create. On the other hand, online AREI retailers provide an ideal outlet for manufacturers with smaller quantities of excess inventory.

AREI e-tailers can also display as many products as they desire and in any quantity at a lower cost [12]. An excellent example of how an AREI e-tailer utilized this opportunity is Bluefly, an AREI e-tailer focused on clothing and apparel. They are able to offer a shopping experience that they describe as "fundamentally better than that offered by off-price retailers" because they carry a wider range of higher quality, brand named products that are often more in trend than those found in TJ Maxx, Ross, or any other traditional AREI retailer. This is because they can buy a limited quantity of excess dresses or shoes from a small but highly regarded brand. These products fall outside of the traditional AREI retailers buying capability because they simply can't afford it [12].

Overstock.com is another AREI e-tailer that demonstrates an extremely diversified product line. Shortly after they started in 1999 they only offered 100 different SKUs but as of today they offer more than 450,000 BMMG (books, music, movies, games) products and over 201,000 non-BMMG (home and garden, electronics, clothing, etc.) [13]. Online AREI retailers also provide fulfillment for manufacturers. For example, Overstock had only 21% of their orders fulfilled through their warehouse meaning 79% were fulfilled by a third party supplier. Overstock never owns any of the products sold through fulfillment and, in fact, never even touches it. This is one of the main advantage of an AREI e-tailer, the 3rd party has the ability to sell off some of their excess inventory in a reliable and easy manner while the online AREI retailer receives revenue from a product they never had to assume inventory-carrying costs for [13]. They store the portion of their products that are fulfilled through them in their 795,000 square foot warehouse. In contrast Walmart uses a 197,000 square feet store to display products from over 21,000 suppliers [14].

Another advantage of an AREI e-tailer is that they have better opportunities to promote

their product offerings or engage their customers through unique promotional campaigns. For example, the AREI e-tailer SmartBargains.com created their "Next-Sell" Customer Retention program in 2006. SmartBargains.com's "Next-Sell" program exceeded average promotional campaign performance; it resulted in a 50 percent increase in revenue-per-recipient and a high rate of future purchases [15]. Finally, online retailers have the huge benefit of having round the clock store hours and a product could be seen or bought by anyone with an Internet connection. The AREI e-tailer uBid.com, an auction website, receives an average over 2.1 million visitors a month, while Overstock attracts over 10 million visitors a month [16].

The disadvantage relates to how an online retailer can display their products. E-tailers are restricted to pictures, graphics, and text-based product descriptions. The inability to pick up and touch the product combined with the lack of face-to-face interactions with sales staff that customers get by shopping at a physical business location combine to put a large burden on e-tailers [11]. The level of competition is no lower and is quite possibly higher than the level of competition a traditional AREI retailer sees. It is much easier to change the URL address on your browser and flip between websites than drive from location to location.

This industry, sometimes known as online liquidation sites, is still in its formative years. Only about 1 percent of the country's surplus inventory is liquidated online. Overall, in 2008, there are about 11,000 registered market liquidators that bid on surplus business inventory in US. Although all of them basically fit into the model described in this paper, some have a few differences offering online auctions or acting as a business to business retailer rather than business to consumer. The following is a brief description of the four leading online liquidation sites and how they differ.

eBay is the most widely recognized third-party Internet retailer in the world but very few recognize its potential as an AREI retailer. Several companies have started listing their excess "D" inventories for sale in ebay. Ebay also provides opportunities for such customers to develop their own marketplace through its Prostores option.

Liquidation.com is a business-to-business bulk marketplace. Its network of buyers and sellers source and sell bulk inventory in a wide range of categories, including clothing and accessories, computers, electronics, industrial equipment, jewelry, and vehicles. Liquidation.com sometimes sells directly to individual consumers only for high-value items such as vehicles.

Overstock.com purchases excess merchandise from catalogs, distributors, importers, manufacturers and retailers. It also purchases inventories in bankruptcy settlements. It is a business to consumer (B2C) website.

uBid.com is a commission-based online merchant focusing on business-to-consumer sales. Most uBid.com auctions begin at $1, enabling market dynamics to set the price [17].

OPATS

OPAT (One Product At a Time) is definitely the newest and possibly the most innovative business model in AREI channel. These websites are commonly referred to as Daily Deal or

Deal of the Day websites. The general business model is simple. The websites sell one product for a specific period of time, typically one day, until that item is sold out or the time period expires and the product is replaced. If a product sells out during its run, a sold out sign will be displayed and the next item will not appear until the specified time limit is over. Therefore, even if a product sells out within an hour, the consumer may have to wait an additional 23 hours (assuming the specified time period is one day) before they can see the next product. Products are never announced beforehand and once the specified time period is over the consumer loses the privilege to buy that specific product. Other specifics may vary from one OPAT to another but this is the basic model used by all.

One of the first companies to try and implement this business model/tool was Buy.com in 1999. They found little success and the OPAT method found minimal use until 2004, when an electronics distributor known as Synapse, based in a suburb of Dallas, tested the OPAT method to reduce excess inventory in their warehouse. This website, Woot!, the original self proclaimed "employee store/market testing type of place", quickly took on a life of its own [1]. By 2007 they had shown growth of almost 5000%, increasing their 2004 revenue numbers from $2.3 million to $117.4 million. In 2008, they continued growing, earning $164 million in revenue, and were named the 25th fastest growing company in the US by Inc. Magazine as well as the fastest growing retailer [18]. Other examples of OPAT websites include The Daily Deal.com and Easy Street Deals.

Since 2004, hundreds of OPATs began springing up on the web. The explosion of web-based retailers using the OPAT model itself is a testament to its profitability and effectiveness.
One of the main advantage of an OPAT model is the unrivaled ability to reduce the life cycle of a specific product, and it is also offers the highest level of security concerning brand integrity than any other AREI method. A number of factors work together to create a different type of shopping experience, which makes this model successful. One such factor is the bounce rate. Woot! experiences a bounce rate of 85% meaning that 85% percent of the visitors to this site, which is over a million a day, leave the site within one minute. This figure would spell disaster for other retailers but the Woot! is very proud of this statistic. Since OPAT retailers only offer one product at a time, customers can typically decide if they are interested in it or not within sixty seconds. OPAT websites receive such high volumes of traffic because everyone has at least one minute to spare in their day. This is the equivalent of putting a rack of highly discounted product in the middle of the busiest intersection in America. Everyone will see it as they drive buy, even if only for a second, and even if ninety percent of the people have no interest in buying it, the ten percent that do will easily clear out the inventory. Shoppers can visit this website at any time of the day and quickly see what product is for sale.

Just like any AREI retailer, OPAT retailers focus exclusively on excess inventory. The inventory turnover rate for an OPAT retailer and there sales per square foot is higher than traditional retailers. As a result, OPAT retailers are paying lower taxes on inventory because they stock it for shorter periods of time. For a manufacturer OPATs provide an unmatched protection of brand/price integrity. The price the product will sell for is typically negotiated with the manufacturer based on a number of variables including, where the products sits in the marketplace, the quantity to be sold, the number of competing products, and the number of products currently in or about to enter the marketplace that will replace the product.

Manufacturers are typically hesitant to sell products for too low as they are worried their brand may see negative shift in consumer expectations. Yet OPAT websites have an edge over other AREI business models. Consumer perceptions toward brands are never drastically changed because the deal lasts only for a specified period of time and will not remain on shelves discounted at the same price for weeks. It is akin to the marginal effects on consumer expectations seen on "Black Friday", the day after thanksgiving where retailers typically offer deeply discounted prices for one day only. Consumers understand that the discount is temporary and limited. Certain OPAT retailers may also go as far as labeling the product as refurbished, even if it is brand new, in order to protect the manufacturer even further. In a personal interview with Woot! executives [1], the OPAT retailer admitted occasionally using this method to protect the brands that value their price integrity. Typically the OPAT retailers strive to purchase the entire allotment of excess inventory in order to protect the market and price of the product. It is more complicated than it appears, as manufacturers have many channels/partners selling the same inventory and it hard to tell where all the products are in the supply chain.

One of the unique advantages OPAT provides a manufacturer is their ability to reduce the life cycle of a declining or end of life product. Figure 4 is an illustration of how an OPAT retailer can shorten the bell curve and add value to supply chain. While all AREI retailers reduce the life cycle of the product, OPAT provides the steepest and quickest decline (refer to final Table 1 and Figure 5 for comparisons).

Many OPAT retailers are backed by a wholesale business. If the OPAT retailers fail to sell the entire quantity of the product during the specified time period, they would sell the remainder of product through its wholesale business rather than selling the product again in the website at another time. They can't afford to relist the products again in their website as it would frustrate customers and alter their expectations. Some OPAT websites like Woot! is a fulfillment partner with both Amazon and Buy.com. Woot! can sell some of their excess inventory that may have failed to sell out during the release on their website through these partners. Therefore an OPAT retailer that doesn't have a wholesale operation can't buy the entire remaining product and risk a loss in brand integrity or are forced to sell the product multiple times in their website, or incur a loss if the product doesn't sell within the specified period of time.
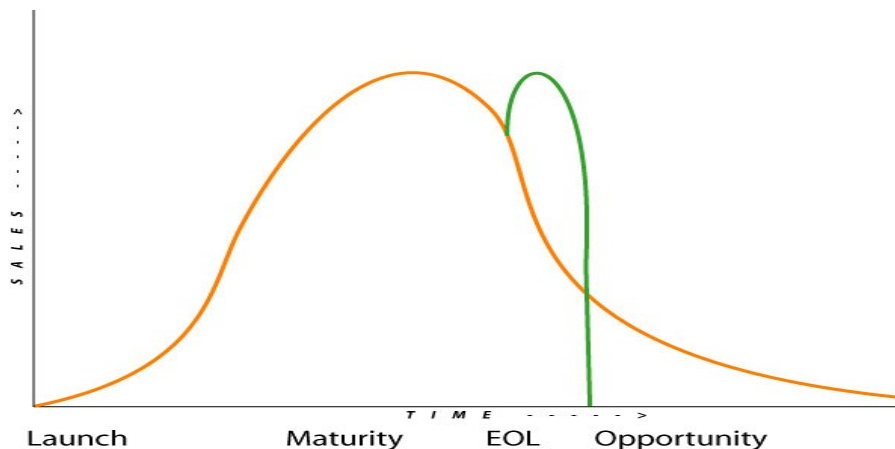
Figure 4. OPAT's effect on product life cycle [19]

One of the main constraints for the OPAT company is also restricted by their business model. An OPAT retailer cannot expand operations or begin selling more products on its website as it would move them away from its business model. Over time the model will continue to evolve like including additional time limits, creating lightning rounds, displaying more or less information, creating exclusivity through invitation only auctions, among others ([1], [19]).

There are several reasons for the success of OPAT websites; they include the psychological effect of time limit, limited stock and lower prices. The number of choices available affect the consumer behavior, their chances of purchasing the product is higher when the choices are limited [20]. Also there is an unknown formula that equates to their success! [1].

CONCLUSION

Table 1 summarizes the differences between the different AREI channels and figure 5 depicts their effect on the product life cycle. The AREI channel is an excellent method of inventory reduction and companies like eBay and Best Buy, and others are moving into channel. This channel also has proven record of surviving economic depression. Today, the two largest brick and mortar firms in the AREI channel, TJX and Ross, have combined to grow sales at a compounded annual growth rate of greater than 10% over the past five years, well above the average annual growth rate of other retailers (around 4%). These numbers could be dependent on the state of the economy but also heavily rely on consumer behavior. From the numbers, it is safe to say that the common consumer is becoming increasingly oriented towards bargain shopping, and many members of the AREI channel predict growth similar to the previous five years [9]. AREI channels are here to stay for a long time as they benefit both the customers (with their lower prices) and manufacturers (clear their inventory, release their capital and make way for newer products) and there is great need to understand their effect on supply chain and product economics.

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Table 1 Comparison between AREI retail channels

AREI Retailer	Description	Advantages	Disadvantages	Product Focus	Product Quantity	Inventory Turnover rate*	Brand/Price Integrity*	Sales per Sq. Foot*	Examples
Brick And Mortar	Physical store with displayed products ready for immediate purchase and take home.	• Consumer can physically inspect product • Presence of live customer support • Large economies of scale	• Odd sizes and mixed quantities common • Same risks as normal retailer • Increased price competition from traditional retail	• Large focus on fashion and apparel • Small focus on home furniture and goods • Restricted by buying practices	• Large quantities with stock held both in store and out.	3	4	3	• TJX Comp: $18.6 Billion • Ross Stores: $6.5 Billion • Big Lots: $4.6 Billion
AREI E-tailer	Online marketplace (No physical storefront)	• Open around the clock • Shop from home • "Unlimited Display Space" • Fulfillment • Ease of use • Able to purchase smaller quantities • Easier inventory management • "Next sell" programs	• Lack of physical store • Huge competition • Most of site traffic due to customers researching product • Fulfillment returns	• Huge product diversification • Long tail inventory	• Extremely large • Less stocked product due to third party fulfillment	4	3	2	• Overstock: $834 Million • Bluefly: $27.39 Million
Auction Site	Online (occasionally at auction house). Product goes to highest bidder.	• Achieve understanding of market (not always a true indication) • Reduce product life cycle quickly • Easy to operate	• Hardest to estimate effect on brand integrity • Consumer price control • Possibility competition acquires product	• No particular focus • Few apparel items	• Limited • Product rarely held by auction sites themselves	2	2	* (Product rarely held by auction site)	• Ubid: $31 Million • Liquidation.com: $264 Million (B2B only)
OPAT	Online retailer in which only one product is sold at a time at a low fixed price. Typically back by physical store or wholesale operation	• Niche marketing • Strong psychological effect on consumer • Cognitive dissonance • Very high gross margin • Beta testing	• Revenue constrained by business model • Typically odd products • Heavy competition • Must be backed by physical operation	• Focus dependent on individual site • Each site has extremely narrow focus or theme • "Niche marketing"	• Low • Fixed numbers • Sell outs frequent	1	1	1	• Woot! : $170 Million

Figure 5. Different AREI channel's effect on Product Life cycle
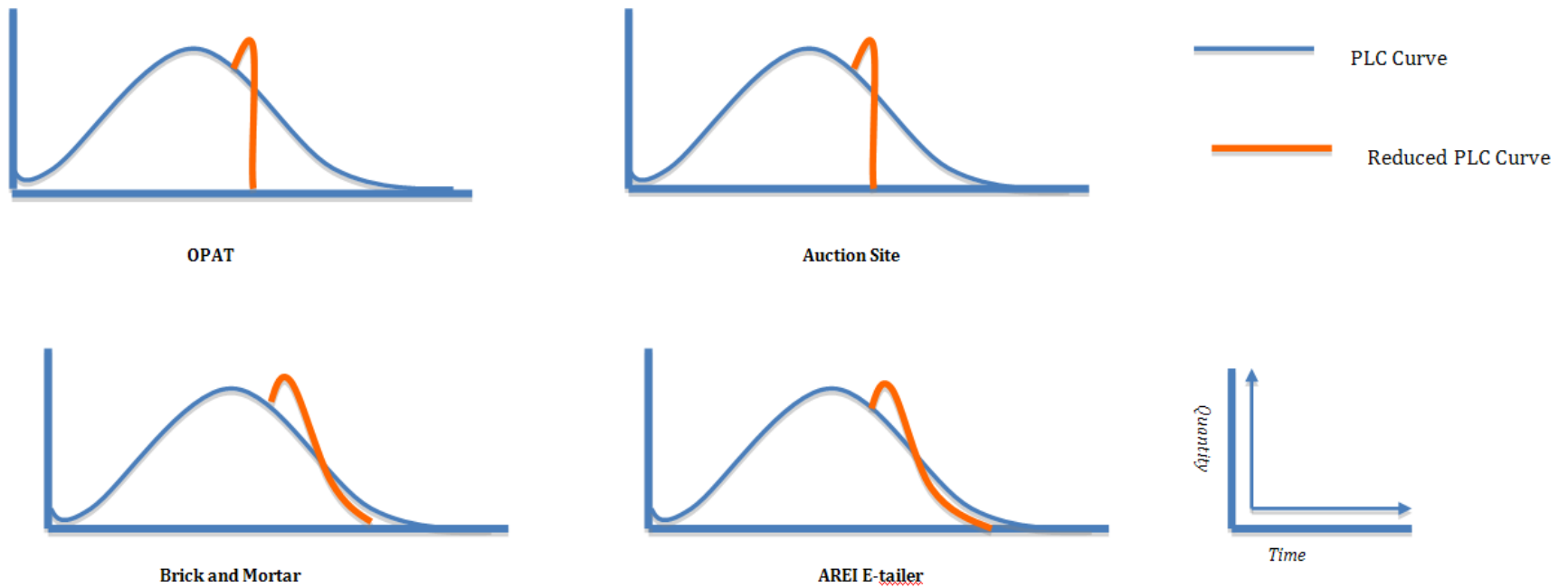
CONSUMER RESPONSE TO HIGH FASHION ADVERTISING: AN EXPERIMENT

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EXTENDED ABSTRACT

Readers of fashion publications would probably not argue that the look and layout of high fashion advertising is distinctly different from advertisements for clothing from an average department store. High fashion advertising often pushes the limits of cultural norms. Models often have distinctive looks and may be extremely thin. The sex of the model in a high fashion layout may be indeterminate.

While the fashion industry has embraced this new look, it is extremely unclear how consumers respond to the advertisements. Little to no academic research has been conducted looking at the effectiveness of high fashion advertising. A primary focus of the little research on fashion advertising has been examining the representation of female models (Shoop, Luther and McMahan 2008). At least one study researched consumer responses to fashion advertising and found that similarity between the consumer and model increased the effectiveness of the advertisement (Kozar and Damhorst 2008). Their study, which focused on older female consumers, gives rise to a question of the effectiveness of high fashion advertising.

The purpose of this research is to examine differences in how consumers react to high fashion advertisements and common name brand advertisements. In order to determine the ads to which consumers respond most favorably, respondents were randomly assigned to treatment and control groups. Measures of attitude toward the ad and intention to buy measures were tested. Managerial implications for fashion industry are provided.

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TRAVEL CONSUMPTION BEHAVIOR: A COMPARISON OF ADULTS TRAVELING ALONE AND WITH CHILDREN

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EXTENDED ABSTRACT

The tourism industry is one of the fastest growing industries in the world and tourism is one of the world's largest economic sectors (Sausmarez, 2007). Tourism has a mass market appeal and the marketing of tourist destinations is a commonly accepted practice (Riege and Perry 2000). During difficult economic times, spending on travel is often reduced. As such, it is even more important for marketers and travel industry managers to have a clear understanding of the specific needs, expectations, characteristics, and behaviors of target consumers.

Additionally, demographics are changing and it is important that the hospitality marketers understand and take notice of all its potential audiences (Dotson, Clark, and Dave, 2008) and (Formica and Olsen, 1998). Research indicates the traditional family units are decreasing (Formica and Olsen, 1998). Lifestyles changes have created different styles of how, when, and where people travel. The shrinking number of traditional families combined with an ever decreasing birth rate is forcing the traditional family destinations to change their image and marketing strategies to become more appealing to singles and older.

The purpose of this study is to compare two groups of travelers to amusement park destinations: adults traveling with children and adults traveling without children. This research will expand current knowledge through a more in depth look at specific elements required for travel. There are five general construct areas of consideration for this research and include qualifications, influence and control, planning logistics, activities and amenities, and emotions and desired outcomes. Managerial implications for strategic planning are provided.

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CASH FOR CLUNKERS: CAN CASH IN THE POCKET CREATE CONCERNED CONSUMERS?

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EXTENDED ABSTRACT

Cash rebate programs, offered by the government, are a new attempt at encuraging consumers' sustainable behavior. Cash rebates are defined as "money refunded to customers who buy merchandise from retailers within a specified time; the rebate allows dealers to clear inventories without cutting list price" and rebates are defined as "a temporary price reduction to encourage immediate purchase (Bradmore 2009a, 2009c). This year, United States citizens already witnessed a government rebate program that offered an unprecedented amount of monetary incentives designed to not only stimulate a large sector of the economy, but to promote consumers' green behaviors. Under the current United States government administration, other tactics are being investigated to implement not only economic stimuli, but stimuli that are actually green (Hendricks and Goldstein 2008). With increasing concerns over global climate change, and governments from around the world coming together to agree on a plan to reduce and limit greenhouse gases, more programs like the Car Allowance Rebate System (CARS), more popularly known as the Cash for Clunkers program, may be on the horizon.

Rebate programs, both one-time and ongoing rebates, have been used successfully by automobile and appliance manufacturers, homebuilders, credit card companies, and utility companies to encourage consumer purchases and loyalty. Although cash rebate programs have been successful in the aforementioned examples, and the Car Allowance Rebate System program has been reported as being successful in creating a positive economic impact (Puzzanghera and Zimmerman 2009), little is known about how such programs impact the green behaviors of consumers who participate in them. To date, no research has been done on the use of one-time consumer rebates.

The goal of this research paper is to explore the effects of a one-time cash rebate on consumer behavior in regards to long-term and ecologically-friendly behaviors. First, I look at the history of the Cash for Clunkers program and how it was implemented as well as government, expert, and consumer responses to it. Second, I examine the extant literature on the use of consumer rebates (Tat, Cunningham III, and Babakus 1988). Third, I look at being deal prone (Blattberg et al 1978, DelVecchio 2005) versus being environmentally conscious (Kinnear, Taylor, and Ahmed 1974; Schlegelmilch, Bohlen, and Diamantopoulos 1996) as a factor for participation in programs like Cash for Clunkers. Lastly, I explore how participation in such programs may, or may not, have behavioral carryover into other areas of environmentally-friendly consumer practices. This research paper also develops a series of research propositions and plans for future research.

This research will be important for public policymakers since public policy is currently the dominant tool for dealing with green issues. Due to the amount of money that will be spent on future programs to address sustainability, I believe it is better to design programs with lasting

change in mind, rather than going after a one-time response that will have little, if any, carry over into other ecologically friendly behaviors. Therefore, knowing what kind of programs will encourage long-term green consumption, as well as how and why consumers react to them, will be beneficial.

For business this research will be important as well. For marketers, the importance is twofold. First, an ecologically concerned group may exist in a size large enough to warrant marketing towards and this research may shed some light on how to do this more effectively. Also, since there appears to be a large population of consumers that are currently non-ecologically concerned, marketers need to know if they can, and if so how, reach this group successfully. Product developers can benefit from this research as they strive to produce new, successful products in an environment that is not only economically, but environmentally uncertain.

This research is also important to consumers who, through taxation, fund government programs such as Cash for Clunkers and choose which political candidates and programs to support. It may also lead to the development of programs that will not only benefit consumers now, but future generations as well, by leading policymakers and business to develop better programs and products.

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THE EFFECTS OF PERSONAL INVOLVEMENT ON THE RELATIONSHIP BETWEEN MARKET ORIENTATION AND PRODUCT INNOVATION

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EXTENDED ABSTRACT

New products can provide added profit, increased revenue, and competitive advantage for firms (Cooper 1985). As such, product innovation and product innovativeness are essential to the concept of new product development. And, because nearly half of new products introduced each year fail (Griffin 1997), it is important to examine all possible variables which may decrease this ratio. In addition, marketing strategy research has shown a positive relationship between market orientation (MO) and innovation (Han, Kim, and Srivastava 1998). However, conflicting results have appeared throughout the past decade and no research has examined the possible effects of personal involvement in the new product process. This research investigates the relationship between and presents a new framework of MO and innovation with the addition of managerial involvement. The purpose of this paper is to examine the following research questions: How does MO affect product innovativeness? Also, how will enduring involvement and situational involvement of the new product manager affect the relationship between MO and product innovativeness and quantity of product innovation?

Narver and Slater (1990) found that MO is a one-dimensional construct with three components: customer orientation, competitor orientation, and interfunctional coordination. Following this research stream, Han et al. (1998) demonstrated that innovation acts as a mediating variable between MO and organizational performance and Lukas and Ferrell (2000) determined the amount of innovation in a product is affected differently by each of the three components of market orientation. Here we replicate the Han et al. (1998) research and extend it by proposing that the innovativeness of new products and the number of new products introduced will be greater for more market oriented firms.

Houston and Rothschild (1978) first introduced the two types of involvement that have emerged in the research stream: enduring involvement (EI) and situational involvement (SI). EI occurs when the focus lies within the consumer (Huang 2006) and SI exists when the focus is on the situation or the current state of the person (Huang 2006). EI is intrinsically motivated while SI is motivated extrinsically (Houston and Rothschild, 1978; Huang, 2006). Therefore, we define EI for this study as an intrinsically high level of ongoing interest in an object, person, or place that is central to that individual's ego and matches that individual's values. McGinnis and Vallopra (1999) provided evidence that purchasing involvement and supplier involvement affected new product success. Thus, EI should enhance the effect of MO on product innovativeness and the number of new products introduced. We define SI as an extrinsically motivated level of interest in an object, person, or place that is goal directed. In sales research, Judson, Schoenbachler, Gordon, Ridnour, and Weilbaker (2006) found that, to more

appropriately involve salespeople in the NPD process, incentives should be employed suggesting that even situationally involved managers should increase the strength of the relationship between MO and product innovativeness and number of new products introduced.

Product innovativeness refers to the degree of newness of the product to the market. At one extreme are radical innovations, which are completely new products that create new markets. At the other extreme are incremental innovations, which are only minor changes to current products produced by the firm. Innovation has been shown to be affected by MO (Lukas and Ferrell 2000) and serves as a mediator between MO and organizational performance (Han et al. 1998).

This paper contributes to the literature by proposing a possible explanation for the conflicting results of the relationship between market orientation and product innovation. If the hypothesized relationships hold, managers would do well to hire or promote managers into new product positions who are not only motivated by external rewards, but also by their own internal interest in the product category. The primary limitation of this paper is its conceptual nature. The next step in the process is to collect data and empirically test the hypothesized relationships. Additional moderators such as our control variable, organization culture, could also be examined. Researchers should also consider other possible variables such as various environmental factors and firm demographics.

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IMPLEMENTATION OF RFID IN AIRCRAFT AND HANGAR MAINTENANCE WITH INVENTORY TRACKING

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INTRODUCTION

Radio Frequency Identification (RFID) has for several years threatened to revolutionize supply chain operations. Major organizations like Wal-Mart and Federal Express have made serious efforts to integrate the technology into their workflow, hoping that the benefits of real-time product inventory and location data outweigh the costs and technological hurdles.

The aircraft maintenance industry players have similar strong incentives to make this technology work. Aircraft maintenance improvements in quality, information sharing, thoroughness, pre-emptive maintenance, and safety make RFID applications attractive.

Unfortunately for the aircraft maintenance industry, some of the conditions inherent to the job make RFID less viable. For starters, RFID tags have difficulty operating in close proximity to metal, and aircraft parts tend to be constructed from metal; usually aluminum, but sometimes titanium, steel, and others. Any attempt to integrate RFID into aircraft maintenance must overcome this problem.

Secondly, RFID tags must be attached to a part using some method, such as adhesive glue, a string or plastic loop through a hole, or possibly a band around the part held by friction. In the sensitive world of aircraft maintenance, however, it matters very much how a tag is applied. Many parts do not have convenient holes, are awkwardly shaped for a simple friction band, and may not respond well to residues from adhesives. Also, the location of a tag can be very important for signal clarity.

Finally, in aircraft maintenance, there are consequences for tag failure that do not match up with those in other industries. If two tags fail on a rack with hundreds of similar parts where maintenance logs and unique part identification is critical, the ramifications could be somewhere between expensive and tragic. For Wal-Mart and FedEx, however, the criticality is much less, making RFID (and new technologies in general) far less risky. This research seeks to identify the major components of RFID implementation risk, from the standpoints of technology and policy. The authors intend to test RFID signal clarity and reliability against samples of commonly-used aircraft materials, such as wood, aluminum, steel, titanium, various plastics, and various textiles to determine which, if any, RFID system tend to meet aircraft maintenance expectations. Then, the authors intend to test the most successful RFID methods against various tagging approaches, such as method, location, passive versus active, and obstructions, to better understand the operational implications of relying on RFID. Finally, based on these results, the authors will present best-case tagging scenarios on RFID use in a working hangar maintenance operation.

LITERATURE REVIEW

Radio Frequency Identification (RFID) is an up-and-coming technology intended to help track and manage inventories, warehouses, and supply chains in general (Lampe & Martin, 2003; Weinstein, 2005). Research suggests that RFID can provide competitive advantages and cost savings into aircraft maintenance as well (Ellickson, 2006). Due to its usability in these fields, the aircraft maintenance industry has become excited about the potential for applying RFID technology into their supply chains and operations.

While RFID can cut costs in a supply chain by enabling rapid tracking and sharing of materials throughout its product cycle (thus cutting human labor costs), there are a few obstacles to using RFID technology on aircraft and other materials. Primarily, some RFID systems do not work well on conductive surfaces (Prothro, Durgin, & Griffin, 2006; Ukkonen, Sydänheimo, & Kivikoski, 2005). Tests run in Purdue University's Supply Chain Management Technology Laboratory with aluminum parts and passive RFID tags confirm that signal is completely lost on many conductive surfaces. Ukkonen, et al. (2005) mention that for ultra high frequency signals, RFID tags do not perform well on conductive surfaces, but the performance is also dependent on the shape and size of the metallic items tagged. Passive tags also do not work well with water-based products (Weinstein, 2005).

It is possible to use passive tags on metallic surfaces if non-conductive barriers are used in between the tag and the metallic surface (Bacheldor, 2006). Low-frequency passive tags (125 kHz range) may also be used with conductive surfaces as well (Lampe, Strassner, & Fleisch, 2004). Similarly, tests performed in the Supply Chain Management Technology Laboratory at Purdue University preliminarily show that passive tag readability increases with distance from a conductive surface. The authors will run further tests with different non-conductive materials in between the conductive surfaces and the tag itself.

It is useful to note that active tags, which generate signal by using power from batteries rather than by receiving power from the reader itself, have a significantly longer read distance (many meters), have the ability to be read with small amounts of metal present, and can store much more data than a passive tag. Since they require batteries, however, active tags are much larger and much more expensive (Goodrum, McLaren, & Durfee, 2006).

METHODOLOGY

Unfortunately, due to funding and resource limitations, active tags were not used for this research. However, the testing done on various materials and aircraft parts is as follows:

- Carpeting material, rolled up, various thicknesses
- 0.125" plastic covering, tag underneath
- Landing gear door, various angles, various distances from surface, two different tags, Styrofoam barrier
- Bleed air tube from jet, various angles, various distances from surface, two different tags, Styrofoam barrier

- Decommissioned black box, various angles, various distances from surface, two different tags
- Extruded piece of aluminum, various angles, various distances from surface, two different tags

To begin, the black box, bleed air tube, landing gear door, and extruded piece of metal were taken to the Purdue University Supply Chain Lab to test signals with an Alien RFID reader and Alien passive tags. First, a long, flat, rectangular "Squiggle" tag was used on the landing gear door. The tag was placed on the top of the landing gear door and tested for readability between the four different Alien RFID antennae. Next, the landing gear door was flipped over, and placed on the landing gear door from that side. The tag was then subsequently placed on the four different sides of the landing gear door, facing multiple directions and on multiple different thicknesses of the metal, all to determine if the tag could be read. Next, an older model flat square tag was used in the same fashion.

Secondly, the bleed air tube was tried with the "Squiggle" tag. The tag was placed inside the tube, just outside the tube (held there by hand), placed against the tube on various different sides, all while holding it in place. It was later discovered that hand position impacts readability (more on this later in the Discussion section). Next, the older model square tag was tried in the same configurations, effectively covering every outside location and inside location of the bleed air tube.

Thirdly, the black box was tested for its readability. All six sides were tested, facing different angles. Angles where the tag would fall off without adhesive, hands were used to hold the tag on while covering as little of the antennae as possible. This was done with both the "Squiggle" and older model square tag.

Fourthly, the extruded piece of aluminum was used in various angles. Due to the small size of the aluminum piece, the tag hung off at various configurations, which may or may not have confounded the results (more on this in the Discussion section). The square tag fit even worse than the "Squiggle" tag, however, different configurations were still used by hand.

After these tests were run, the parts were brought back in, as well as the plastic, carpeting, and Styrofoam, to determine if distance or other materials could impact RFID signal. The first test was again the landing gear door. The "Squiggle" tag was held several inches above the landing gear, and slowly moved towards it from various different angles. Next, the square tag was used. For the bleed air tube, black box, and extruded aluminum piece, all of the original angles were used, while holding the tag away from the pieces and gradually moving them closer by hand.

Carpet was then brought over to test with the "Squiggle" tag, as results between the square and "Squiggle" tags by this point were presumed to be almost identical. Carpet was placed over the RFID tag, folded over the RFID tag, then finally rolled into a large roll of carpet (while in the center of the carpet) and rotated within the ranges of the four Alien antennae. Following this, the sheet of plastic was put over the "Squiggle" tag with only one Alien RFID antenna running, to determine if the signal could go through the plastic (due to the fact that if all

the antennae were on, there would always be locations where the signal did not have to go through plastic first).

In the final experiment, Scotch tape and 20mm thickness Styrofoam were used to attach the RFID "Squiggle" tag to the pieces originally tested, in the easiest-to-tape locations. For example, the largest, flattest part of the landing gear door (on both sides), the sides of the bleed air tube, just inside the bleed air tube, on the top part of the aluminum extrusion (the only place where most of the tag would fit), while the carpet and plastic were ignored. Usage of hands to hold the materials up were not a factor in this experiment, as tag reads were done while hands were outside of the range of the readers, and only the Styrofoam, tape (which RFID signals can pass through, even in high thicknesses), and the material the tag/Styrofoam/tape contraption were taped to.

RESULTS

As various different materials were tested in various different configurations at various different heights/angles to the readers, it is entirely plausible that results obtained from this experiment may or may not appear exactly the same to others. Furthermore, it was apparent by the end of the experiment that interference from the testers' hands played a part in readability (or primarily, lack thereof) in different configurations. This is why the usage of 20mm of Styrofoam was used at the end of the experiment, to separate out the RFID tags from the metallic parts while keeping hands out of the picture. Styrofoam was used because of its insulator-like properties and its very low density.

When the "Squiggle" and square RFID tags were held against the landing gear door at any angle, no signal was recorded. It did not matter if hands were in the way, which configuration the landing gear door was facing, or the thickness of the metal. In all cases, no signal was recorded. When the tags were held above the landing gear door by several inches, a signal was recorded most of the time, but curiously in different configurations it wasn't. Speculation and further testing determined for most of these experiments, hand position played a crucial role (more on this later). When the tag was hovering just barely off of the surface of the landing gear door, no signal was recorded, as it got further away, by two inches or more, the signal appeared to be on and off. Finally, with the Styrofoam and tape configuration (Styrofoam in all cases being 20mm thickness), a signal was read virtually every time.

For the bleed air tube, when the passive UHF tags ("Squiggle" and older model square tags, again) were held against the tube and inside the tube at every angle, no signal was recorded. If the tag was held inside the tube in the center of the hole, no signal was recorded. If the tag was held several inches above the side of the tube on the outside of it, signal was recorded more than nine out of ten times. As the tags got closer by hand, signal began to cut out, especially within an inch of the metal. When Styrofoam and tape were used to hold the tags on, a signal was read most of the time, except in the cases where the tag was inside the bleed air tube.

When the black box was tested with the tags held against it, occasionally a signal was read, however it was not a signal from the information programmed on the tag. The tags used in this experiment were not picked up when held against the metal or set against it in all

configurations. When the tags were held away from the black box, the rogue signal kept showing up, along with the signal from the tags used in this experiment "the "Squiggle" and the older square model). When held only a few millimeters away from the black box, the signal from the tags did not work, but because of confounding signals, a good estimate could not be given for tag read. Styrofoam was not used on the black box because of confusion with the random signals.

The extruded aluminum piece did not show favorable results for the tags when pressed against the aluminum. However, when held just a small distance off of the aluminum, the tags were picked up most of the time. Again, hand position seemed to play a big role. When Styrofoam and tape were used, the tag was read in every configuration used (although since the piece was so small, only two sides, the bottom and top, were used).

The carpet had no issues at all reading the RFID "Squiggle" tag. The older square tag was not used, because the tags had approximately equivalent reading abilities. No matter what configuration or how much carpet was layered between the RFID tag and the readers, the tag was always read. Carpet thickness at its max (when the tag was fully wrapped up) was approximately six inches on either side.

When the plastic sheet was used, only one RFID antenna was activated. When the RFID tag was held against the other side of the plastic, the tag was read. When taped against it, it was also read. At this point, Styrofoam was not used, because it was pretty clear that plastic had no impact on the performance of the RFID tag and its reader.

It is also noted that Styrofoam was not used with the carpet, because it read well due to not being against a metal surface.

DISCUSSION

Throughout testing, a couple problems showed up due to the established methodology that could have impacted the results of the experiment. The biggest issue was an issue that was not thought about and was not noticed until most of the way through testing. It was presumed since multiple antennae were used, there would be no issue with hand and arm location within the ranges of the readers (the readers were all well within their maximum ranges from each other, two on the left, two on the right, about three feet from each other top to bottom, and about four and a half feet away from each other horizontally, forming a "tunnel" of RFID antennae). However, when results came back for holding the RFID tags away from the individual units tested, it was clear a consensus of "how far away can this tag be from the material" could not be reached. Sometimes, it would work from an inch away, and sometimes it would not work from two inches away.

These results do not seem consistent with theory. Furthermore, when the Styrofoam was used and better results were given, it was even clearer that hand and arm position, or partial covering of vital components of the tags, may have played a part in seemingly random read distances and times. Due to time and resource constraints, re-testing could not be done. It should be noted that neither of the two testers had any metal screws or plates embedded in any

parts of their body that could interfere with signal.

Secondly, when the black box was tested, a rogue signal was recorded that did not correspond with the tags that were being used for the experiment. The tags in this experiment were programmed with all "4's" across them, but the data being picked up by the black box was of different characters. It was not determined what caused this, perhaps a rogue tag near the system, or perhaps some signal was given off from the black box (perhaps the black box was tagged at some point and the researchers did not know about it). The tags nearby were moved away from the readers, but the signal was still picked up. Regardless, this confounded the results to the point in which the measurements did not hold as much merit as the other tests. Further research may be done on the black box in the future, but is outside the scope of this paper.

Other issues encountered were the lack of active tag testing equipment. Due to the high cost of an active system, it was not feasible to purchase and run tests at this time. Further experiments may be done in the future, but an active system would need to be acquired. Theory states that active tags should work better near metal, therefore it is presumed active tags, while much more expensive, would work better than the UHF passive tags used in this particular experiment.

For an inventory and/or maintenance setting, it would be important to make sure passive tags are not attached directly against metallic objects. A scenario where a Styrofoam medium is used would help aid this issue. Furthermore, it is presumed tags could be hung from the parts, although this is a presumption based on the results of distance from metallic parts, and not tested in its entirety. It makes the most sense, barring cost, to implement an active tagging system, as this seems to perform the best with metal, but these conclusions are formed based on review of literature. If a passive system must be used, a handheld RFID reader may be used to identify tags with a Styrofoam medium (or a number of other solutions that may work), analyzed for date of birth/repair date/time left to repair/other information, and actions may be performed from there. If the items are moved, they may pass through a stationary RFID tunnel, and a database would read that the parts have entered that particular area. This scenario could be applied to inventory parts and tools, as well as parts coming off of the aircraft itself. Research is being done currently at Purdue University testing a similar scenario for feasibility.

CONCLUSION

This paper covered the testing of various different metallic aircraft components (comprised mainly of aluminum and steel), a textile (carpet), and plastic covering (which may be found on windows or walls) with ultra high frequency RFID tags by Alien. The long, rectangular "Squiggle" tag and an older model square tag were used for the testing. Both tags performed equally well in testing, so the "Squiggle" tag was utilized for certain tests that would have been awkward for the square tag. Results displayed similar results to literature, in that passive tags do not work well, if at all, when up against metallic surfaces. When the tags are held away from metallic surfaces, signal can be gained and the tag can be read once more. However, arm and hand positions impacted the results of this experiment, so correct distances from the individual parts would not be accurate, and retesting could not be run due to time constraints.

When a 20mm Styrofoam medium was used to hold the tags in place, readability dramatically increased. This further shows that hand and arm position, and partial covering of the tags, may have confounded results. This also agrees with theory in that water impacts the performance of UHF passive tags (and since human beings are comprised of a high percentage of water, the arm and hand position hypothesis proposed here makes sense).

Future work should be done on testing in rainy conditions, with active tags, and perhaps with wood, a properly set up experiment to gauge distances from the metallic surfaces, and perhaps even on extreme heat and cold conditions. After all, jet engines and aircraft in general are exposed to extreme temperatures while flying and on the ground.

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COMMUTER STUDENTS VS. NON-COMMUTER STUDENTS: A GAP ANALYSIS EXAMINATION OF DIFFERENCES IN SATISFACTION WITH HIGHER EDUCATION

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ABSTRACT

This paper examines differences between undergraduate commuter students and non-commuter students at a mid-sized university. The paper highlights differences in demographics, motivation for attending college, the balance of college and work demands, sources of stress, and key outcome measures such as GPA and overall satisfaction with the institution. Of particular interest is the examination of the gaps in satisfaction (i.e., expected vs. perceived actual performance) along a range of 14 items related to university offerings and services. Implications for university-wide programs, as well as specific curriculum and pedagogical approaches, are discussed.

ORGANIZATIONAL CULTURE AND EMPLOYEE PERFORMANCE: AN INVESTIGATION OF THE MEDIATING EFFECT OF CUSTOMER ORIENTATION

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ABSTRACT

The purpose of this study is to investigate the antecedent role of organizational culture on customer orientation and performance outcomes of customer orientation in the marketing context through a theoretical model. The proposed model was tested over a random sample of 2000 marketers from a broad spectrum of businesses. The final sample consisted of 189 usable responses. According to the study results, market culture has a positive and significant effect on customer orientation. The study results also revealed that higher levels of customer orientation lead to higher levels of relationship development and individual performance.

INTRODUCTION

Market orientation motivates employees to become more customer-oriented, more committed to their company and job, and more satisfied with their job (Kohli and Jaworski 1990; Siguaw, Brown, and Widing 1994). Having a workforce with a strong market/customer orientation is especially important for a firm in the selling context. If a firm is market-oriented, it is more likely to take a planned action to train its sales employees to make them more market/customer-oriented. Since the marketing concept requires a firm to direct all of its activities toward providing customer satisfaction and establishing long-term customer relationships (Kotler 1980; Tadepalli 1991), there is a mandate for market-oriented firms to adopt customer orientation at the individual level. The term customer-oriented selling was defined as "the practice of the marketing concept at the level of the individual salesperson and customer" (Saxe and Weitz 1982, p.343). Customer-oriented salespeople or sales force can create a high level of customer satisfaction and thus, develop a strong customer base for the company. This notion also applies to marketers within the organization. Customer-oriented marketers help the organization reach its customer satisfaction-related objectives and goals.

LITERATURE REVIEW

Past research on customer-oriented selling has focused on measuring and/or modifying the effectiveness of customer-oriented selling and examining the relationship between customer-oriented selling behavior and sales effectiveness (e.g., Brown, Widing, and Coulter 1991; Dunlap, Dotson, and Chambers 1988; Howe, Hoffman, Hardigree 1994; Michaels and Day 1985; Saxe and Weitz 1982; Tadapalli 1995; Thomas, Soutar and Ryan 2001). To date, few studies have examined possible determinants of individual-level customer orientation. These potential determinants include role ambiguity, role conflict (Hoffman and Ingram 1991; Siguaw, Brown,

and Widing, II 1994), job satisfaction (Hoffman and Ingram 1991; Pettijohn, Pettijohn, and Taylor 2002; Siguaw, Brown, and Widing, II 1994), job involvement (O'Hare, Boles, and Johnston 1991), internalization of service excellence, job competence, job autonomy (Peggei, Riccardo, and Rosental 2001), organizational commitment (O'Hare, Boles, and Johnston 1991; Pettijohn, Pettijohn, and Taylor 2002; Siguaw, Brown, and Widing, II 1994), sales training, sales skills (Pettijohn, Pettijohn, and Taylor 2002), and job tenure (O'Hare, Boles, and Johnston 1991).

In spite of its high importance, the number of studies on customer-oriented selling or individual-level customer orientation has been limited (e.g., Brown, Mowen, Donavan, and Licita 2002; O'Hare, Boles and Johnston 1991). Saxe and Weitz (1982) stated that "little empirical work has examined the effectiveness of customer oriented selling and the factors influencing the extent to which salespeople engage in it" (p.344). O'Hare, Boles, and Johnston (1991) urged that "Although customer oriented selling is an acknowledged practice, a complete understanding of is lacking" (p.61). O'Hare, Boles, and Johnston (1991) noted that "A review of work in the area of selling orientation/customer orientation indicates only limited research has examined the antecedents of this selling style" (p.64). Kelley (1992) urged that "very little research has investigated customer orientation and its antecedents" (p.30). According to Hoffman and Ingram (1991), "Little is known about the factors that affect customer-oriented behavior" (p.31). Recently, Brown et al. (2002) noted that "Despite the apparent importance of employees' customer orientation to the implementation of the marketing concept in the market-driven company, research on the construct has been limited" (p.111). All of these scholars have tried to draw attention to the lack of empirical research on customer orientation at the individual level and the importance of a better understanding of the customer-oriented selling concept in today's business world.

In this study, we try to respond to these research calls by investigating the antecedents and consequences of customer orientation at the individual level via a comprehensive theoretical model. There have not been many studies that examined the antecedents and consequences of customer orientation of an individual in different business contexts including marketing, advertising, retailing, and so on. The limited existing research has mainly explored individual-level customer orientation within the sales context. The current study investigates this issue in a larger context, the marketing context.

MODEL DEVELOPMENT AND RESEARCH HYPOTHESES

The objective of this study is to investigate potential antecedents and consequences of the individual-level customer orientation in the marketing context through a theoretical model (See Figure 1). The suggested model consists of three parts: (1) organizational culture, (2) customer orientation, and (3) performance outcomes. Six research hypotheses were proposed.

Figure 1: Antecedents and Consequences of Individual-Level Customer Orientation from Organization Related Factors
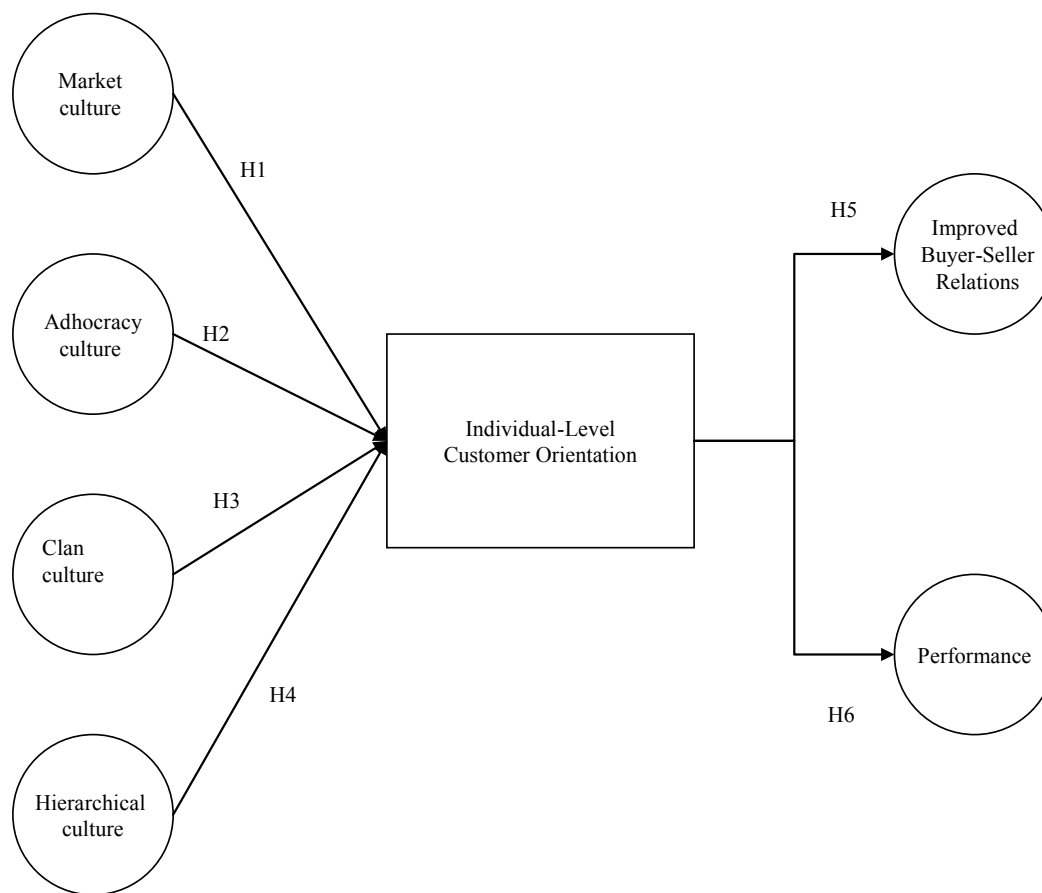
Organizational Culture and Customer Orientation

Organizational culture is deemed to be a very crucial subject in the context of marketing management. However, in spite of its criticality, there has been relatively little research effort directed at the relationships between organizational culture and marketing-related concepts/constructs (Deshpande and Webster 1989, Strong and Harris 2004). Based on the review of the relevant literature, there has been no clear consensus about the definition and measurement of organizational culture among researchers and practitioners (Deshpande and Webster 1989). Deshpande and Webster (1989) defined it as "the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them norms for behavior in the organization" (Deshpande and Webster 1989, p.4). Under the marketing concept, organizational culture is defined as "a fundamental shared set of beliefs and values that put the customer in the center of the firm's thinking about strategy and operations" (Deshpande and Webster 1989, p.3). Recently, the increasing efforts to develop a customer-oriented work environment within organizations have raised the scholarly interest in organizational culture as a critical organizational variable (Deshpande and Webster 1989). It is suggested that organizational models that fail to include culture as an organizational variable are not considered to be complete (Deshpande and Webster 1989; Also see Ouchi and Wilkins 1985).

Deshpande, Farley, and Webster (1993) used a more comprehensive typology of organizational cultures. They identified four classes of organizational cultures (refer to Deshpande, Farley, and Webster [1993, p.24-26] for detailed explanations for each class). These are market, adhocracy, clan, and hierarchical cultures. This study will adopt Deshpande, Farley, and Webster (1993)'s classification of organizational cultures.

On the basis of the arguments presented above about each culture type, the following hypotheses can be suggested to express the link between organizational culture and customer orientation:

The **market culture** strategically emphasizes "competitive advantage" and "market superiority" (Deshpande, Farley, and Webster 1993, p.25). It has mechanistic processes such as control, order, and stability. This is the best performing culture. It is characterized by a strong external positioning such as focusing on competition and differentiation (Deshpande, Farley, and Webster 1993). Especially, a strong external orientation of a market culture makes it compatible with the customer-oriented values. Employees in a market culture are likely to be customer-oriented in their interactions with customers. Better customer service, better customer satisfaction, and a high customer retention rate will be some of the keys to successfully beating the competition.

H1: A market culture will lead to a high level of individual customer orientation.

A **hierarchical culture** emphasizes stability, predictability, and smooth operations, and follows rules, policies, and procedures strictly (Deshpande, Farley, and Webster 1993). Due to its internal orientation, this type of culture is likely to produce the worst business performance (Deshpande, Farley, and Webster 1993). The levels of formalization and centralization might be high in this type of culture. Boles et al. (2001) reported a negative and significant relationship between centralized decision making and customer-oriented selling. Also, Jaworski and Kohli (1993) showed empirically that centralization of decision making within an organization serves as a barrier to market orientation. According to Jaworski and Kohli (1993), formalization does not affect market orientation. A strong internal orientation makes it more difficult for a hierarchical culture to develop customer orientation at both organizational and individual levels.

H2: A hierarchical culture will result in a low level of individual customer orientation.

The **clan culture** relies on loyalty, tradition, and interrelationships among organizational members (Deshpande, Farley, and Webster 1993). It has a strong internal orientation such as integration and smoothing activities. This type of culture can be expected to be more formalized and centralized to keep organizational traditions / practices / relationships unchanged. This type of culture is likely to perform better than the hierarchical culture (Deshpande, Farley, and Webster 1993). But, due to its strong internal focus, a clan culture is less likely to encourage customer-oriented thinking and behaving in its employees. Also, a high level of centralization in this culture serves as an impediment to customer orientation (Boles et al. 2001; Jaworski and Kohli 1993).

H3: A clan culture will result in a low level of individual customer orientation.

Finally, the **adhocracy culture** embraces innovation, growth, and new resources. Flexibility, adaptability, creativity, risk taking, spontaneity, and entrepreneurship are highly valued by this culture (Deshpande, Farley, and Webster 1993). It performs better than the clan culture. It has a strong external positioning (i.e., competition and differentiation). This culture has less centralization and formalization. Employees in an adhocracy culture are more likely to be customer-oriented. Moreover, Kelly (1992) reported that the higher degree of customer orientation is a result of a favorable perception of the organizational climate. Employees in an adhocracy culture are likely to perceive their organizational climate more favorably, and therefore, they are more prone to be customer-oriented.

H4: An adhocracy culture will lead to a high level of individual customer orientation.

Customer Orientation and Relationship Development

A possible link between customer orientation and relationship development has been explored by only a few studies (e.g., Williams and Attaway 1996). Williams and Attaway (1996) argued that "individual sales representatives can positively affect the organization's performance by utilizing a customer-oriented approach in establishing and maintaining relationships with customers" (p.39). Williams and Attaway (1996)'s argument suggests the existence of a positive connection between a customer–oriented approach and the establishment and maintenance of good relationships with customers. Moreover, Rush, Zahorik, and Keiningham (1996) indicated that "personal interaction component of services is often a primary determinant of the customer's overall satisfaction" (p.391). If the employee's interaction with customers is characterized as being customer-oriented or customer-focused, overall customer satisfaction may be increased. In turn, better customer satisfaction may lead to better long-term relations with customers. Empirically, Williams and Attaway (1996) found out that there is a positive and significant relationship between the salesperson's customer orientation and the development of buyer-seller relationship. Macintosh et al. (1992) claimed that "empirical evidence of the antecedents and process of relationship development is practically non-existent" (p.23). Therefore, it is believed that the investigation of customer orientation as a potential antecedent of relationship development would be a significant contribution to this line of research. On the basis of the empirical and conceptual evidence explained above, the following hypothesis was suggested:

H5: The higher the level of the marketer's customer orientation, the higher his/her level of relationship development.

Customer Orientation and Performance

MacKenzie (1993) thinks that performance is a representation of "a salesperson's overall contribution to the success of an organization" (p.70). Performance can be viewed as a product of the salesperson's abilities or aptitudes, skills (Churchill et al. 1985; Plank and Reid 1994), personality (Plank and Reid 1994), motivational state (Churchill et al. 1985), and other factors.

The number of studies that have investigated the link between customer orientation and

performance is relatively large. In general, the past research found a positive and significant relationship between customer orientation and sales performance (Boles et al. 2001; Brown et al. 2002; McIntyre et al. 2000; Grizzle et al.). According to Williams and Spiro (1985), "Successful selling depends on successful interpersonal communication" (p.434). Salespeople who are able to communicate and interact with their customers better are more likely to score high on sales performance. Customer-oriented salespeople better understand and satisfy needs and wants of their customers. High customer satisfaction may result in customer loyalty, a high customer retention rate, or repeated sales. In sum, the past research suggests the existence of a positive connection between customer orientation and performance. Therefore, the following hypothesis appears to be appropriate in defining the customer orientation-performance link:

H6: The higher the level of the marketer's customer orientation, the higher the level of /her performance.

RESEARCH METHODOLOGY AND DATA ANALYSIS

Characteristics of the Sample

The suggested research model was tested with data obtained from a random sample of 2000 marketers from a broad range of businesses within the manufacturing and non-manufacturing sectors. This study focused on marketers as target respondents. A self-administered questionnaire was sent to each respondent along with a cover letter and a postage-paid return envelope. The final sample consisted of 189 usable responses resulting in a response rate of 9.45%. Marketing managers were the largest group within the sample with 41.8 percent and followed by VP marketing (24.9%), sales manager (13.8%), marketing staff (13.8%), sales staff (3.7%), VP sales (1.1%), and others (1.1%).

Data Analysis

No nonresponse bias was found since there were no differences between the mean responses of the first and the last quartiles (Armstrong and Overton (1977). Principal component analysis with varimax rotation and Eigen value of 1 was conducted on each construct of the model to verify a single factor structure (unidimensionality of each construct). For each construct, only one factor structure was extracted. This indicates the evidence of unidimensionality of the model constructs. Reliability of each construct was evaluated using the coefficient or Cronbach Alpha (α). The reliability of each construct was higher than the cutoff value of 0.70 recommended by Nunnally (1978).

Evaluation of Model Fit

A structural equation modeling (SEM) analysis via LISREL 8.5 was used for model specification and hypothesis testing. A confirmatory factor analysis (Joreskog and Sorbom 1993) was used to estimate the model parameters, to assess the model fit, and to test the suggested hypotheses. A moment covariance matrix of the observed variables was used for the analysis. During the confirmatory factor analysis, a number of other competing models were obtained by freeing and fixing the model parameters (Sharma 1996) or applying different estimation methods

(i.e., unweighted least squares and generalized least squares) to the sample data. Maximum Likelihood (ML) estimation was utilized to estimate the model parameters. The fit between the suggested model and the sample data was found to be very good. Goodness-of-Fit Index (GFI) was 0.94 (greater than 0.90); CFI was 0.95 (greater than 0.90); and NFI was 0.95 (greater than 0.90).

EMPIRICAL RESULTS AND DISCUSSION

Hypothesis Testing

Table 1 presents information related the suggested hypotheses, parameter estimates and their associated t-values. In terms of the antecedents of customer orientation, the research results show that job involvement negatively affects customer orientation of marketing personnel. This result is somewhat surprising because originally it was hypothesized that this relationship was positive. There is a significant positive relationship between market culture and customer orientation. The research findings indicate that the type of organizational culture may not determine the manager's level of customer orientation. Previously, it was suggested that market and adhocracy cultures encourage their marketing personnel to be more customer-oriented. It was argued that these organizational cultures generate a work environment which instills and promotes customer-oriented values in all employees within the organization. The study results did not support these arguments. The results were meaningful only for the market culture. According to the empirical findings, clan and hierarchical cultures do not seem to promote high levels of customer orientation in their employees. The relationships of clan and hierarchical cultures with customer orientation are negative as hypothesized, but these results are not statistically significant. These unexpected results may partly be explained by the fact that some respondents might have had difficulty in understanding the organizational culture scale and answered it incorrectly. Thus, response error resulting from the difficulty of the scale might have contaminated the study results related to organizational culture.

Table 1. Parameter Estimates for the Hypothesized Links

Hypothesized Link	Hypothesis	Estimate	t-value
(+)market culture to customer orientation	H1*	0.2050*	3.105*
(+)adhocracy culture to customer orientation	H2	-0.0128	-0.364
(-)clan culture to customer orientation	H3	-0.0251	-0.731
(-)hierarchical to customer orientation	H4	-0.0242	-0.716
(+)customer orientation to relationship development	H5*	0.4920*	7.269*
(+)customer orientation to performance	H6*	0.3160*	4.311*
(*) Significant in hypothesized direction, two-tailed test.			

In terms of the consequences of customer orientation, the study results suggest that higher levels of customer orientation result in higher levels of relationship development. This result is in agreement with Williams and Attaway (1996)'s finding that there is a positive and significant relationship between the salesperson's customer orientation and the development of buyer-seller relationship. Based on this finding, it is possible to argue that a strong customer orientation (i.e., personal interaction with customers) leads to better overall customer satisfaction (Rush, Zahorik, and Keiningham 1996) which, in turn, results in improved buyer-seller relationship. It was also found that there is a significant positive relationship between customer orientation and performance. This finding is consistent with the past research (Boles et al. 2001; Brown et al. 2002; McIntyre et al. 2000). This finding indicates that marketers who are able to communicate and interact with their customers better will have higher performance scores (Williams and Spiro 1985).

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Since this study was conducted over a sample canvassing a wide spectrum of businesses, the study results may be generalizable to a wide range of companies. The study results provide valuable insights and practical implications for company managers. First, the top management should focus on developing a strong market orientation within the organization. This effort can benefit the organization by increasing its marketers' customer orientation. Customer-oriented marketing force plays a crucial role in the success of the organization. Marketing personnel has a profound role in connecting the organization to its customers (Ruekert and Walker 1987). Marketers need to continuously gather and evaluate current information on customer satisfaction, customer complaints, market trends, and so on. They try to make accurate assessments and predictions on customers' future needs, wants and preferences. The degree of marketers' sensitivity and responsiveness toward customer demands may significantly influence the company's business performance. Their attitude toward customers may affect customers' perceptions of the organization and its products and services. Marketing personnel with a strong customer orientation are likely to create favorable perceptions of the organization in the minds of customers. This may lead to higher levels of customer satisfaction, customer loyalty, and customer retention.

Second, the study results unveiled that employees with market culture tend to be more customer-oriented. In order to increase their employees' organizational commitment, organizations should help their employees bond and identify with the organization. Establishing and maintaining a friendly, supportive work environment for all employees may enhance the

chances that each employee will feel himself as an important part of the organization.

Finally, customer-oriented marketers perform better and contribute to the firm's efforts in developing excellent buyer-seller relationships. Therefore, firms should emphasize on promoting customer-oriented values and behaviors among their employees at all levels. They should periodically assess the level of their employees' customer orientation. They should design training programs and establish reward systems to promote the levels of customer orientation of their employees.

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USING B2B BUY-SIDE E-COMMERCE SYSTEMS IN THE SUPPLY CHAIN: DOES IT AFFECT FINANCIAL PERFORMANCE?

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ABSTRACT

Research suggests that new information technologies can improve the functionality of business processes, leading to improved firm profitability. However, new technologies are not equal in their contributions to a company's bottom line. Further, there is some debate as to whether early adopters of new technology benefit over later adopters. This study examines the financial performance of firms that modify their supply chain by adopting business-to-business (B2B) buy-side e-commerce systems. Analyses show that early adopters outperform their non-adopting industry peers in the post-adoption period. Superior performance in adopters' return on assets (ROA) is driven by increases in profit margins rather than by improved asset turnover. The results are consistent with the claim that B2B buy-side improves company performance through lower purchasing and administrative costs. Early adopters of B2B buy-side systems received a competitive advantage over industry counterparts, at least in this aspect of their supply chain.

WHEN DOES MOOD MATTER? THE EFFECT OF MOOD AND INVOLVEMENT ON PURCHASE INTENTION

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EXTENDED ABSTRACT

This research examines the influence of consumers' mood state and involvement on consumers' decisions about buying a warranty. In the present paper, I adopt the traditional valance approach of individuals' mood state to examine how mood influences individuals' subsequent judgment. This is cardinal at this point of time due to the conflicting and mixed evidence found in the literature regarding the role of individuals' mood.

Previous research suggests that positive mood tend to influence individuals' attitude positively and, therefore, reduce the level of risk perception from a purchase (Fedorikhin and Cole 2004). This influence, however, is qualified by the processing resources available, such that the influence is high when the resources are available. Therefore, it is important to examine how the level of personal involvement and level of resources available may qualify the effect mood on purchase intention.

Swinyard (1993) examined how individuals' mood and involvement influence consumers' shopping intention. The results indicated a significant two way interaction between mood and involvement, such that, the mood effect was greater during a more involved shopping experience. Hence, shopping intention increased only when people were in a good mood and in more involving situations. These results are consistent with the involvement theories, as involved consumers are more active processors of information cues.

I believe the conclusion that positive mood effect is greater when individuals are more involved in the shopping experience is incomplete. It is possible that individuals' mood has changed due to the involvement task subjects had to perform, thus, the significant finding may have been confound due to the carry over effect the change in subjects mood caused. The change in mood reduces the amount of cognitive resources consumers have to process the information, which in turn, may influence their subsequent decisions. In this research, I account for such possibility by measuring mood after the mood treatment as well as at the end of the study. If mood changed at the end of the study compared to the subjects' mood before the treatment, the amount of cognitive recourses for information processing will be less, which may have an effect on individuals' decision to buy the warranty. Previous research found that happy mood influences purchase likelihood when subjects are highly involved in the purchase situation (Swinyard 1993). My argument is that individuals' purchase likelihood will go beyond simply the interaction of mood and involvement and that the change in individuals' mood will have a reverse effect such that individuals in a sad mood who are less involved in the purchase situation will have greater effect on the likelihood to purchase the warranty.

An experimental design was employed to examine the effect of mood and involvement in consumers' decision to purchase a car warranty. It was proposed that after accounting for mood

change, sad mood individuals who are less involved in the purchase situation will show higher likelihood to purchase the warranty compared to individuals in a happy mood who are highly involved. This prediction was tested on a sample of students (N = 229). The results supported that hypothesized prediction and showed a significant two-way interaction between mood and involvement. That is, subjects were more likely to purchase the car warranty in one of two situations: (1) when they were highly involved in the purchase situation, and (2) when subjects were in a sad mood less involved in the purchase situation.

This research has a number of theoretical implications. The findings extend the involvement and affect literature by providing evidence indicating sad mood as a driving factor for consumers' purchase. This result is counter intuitive to the extant literature on mood and that asserts the importance of happy mood to increase consumers' purchase intention.

In addition to focusing the attention on the role of indirect affect and involvement in affecting consumers' decision, the finding from this research provides mangers and sales people with framework to increase their sales of protective products (i.e. warranties). Because individuals' mood is likely to decline during the shopping experience and the interaction with the sale people, it is recommended to: (1) keep the consumers in a happy mood state and increase the importance and relevance of the purchase situation to them, or (2) enforce the sad mood state on the consumers. In both ways, their likelihood to purchase the warranty will increase.

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THE IMPACT OF PRESCRIPTION DRUG INSERTS ON CONSUMER AWARENESS OF THE SIDE EFFECTS

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ABSTRACT

This paper examines direct-to-marketing of pharmaceutical products and the impact that this has on consumer awareness of side effects. The impact is in terms of how many people read and understand the package inserts that come with the medicines. A survey was conducted and the results show how many individuals read and comprehend the inserts. Various demographic variables are included with age and gender being the most important. Finally, changes need to be made in advertisements to try to reach the younger individuals and males.

INTRODUCTION

It is not business as usual – the age of consumerism has redefined the outlook of marketing in the healthcare industry. Consumers are increasingly demanding greater involvement in the decisions made about their healthcare. Traditionally, the physician made majority of the decisions for the patient concerning medical products and services. Choice of drug typically relied on the physician's prescription and supply channel focused on the middleman rather than the end user (Marketing Health Services, 2001).

Pharmaceutical companies were among the first to recognize the potential of appealing directly to consumers. Historically, the pharmaceutical industry was prohibited from direct consumer advertising. In 1997, the U.S. Food and Drug Administration (FDA) eased the restrictions on direct-to-consumer advertising of prescription medications. A new era of a consumer-driven marketing approach is born, more commonly known as "DTC" in the healthcare world. Exponential growth in direct consumer marketing of medications, products and services quickly followed this deregulation move by the FDA.

Prescription drugs are a major topic in today's society. From the new prescription benefit under Medicare to rising costs, everyone is concerned with these issues. The rate of inflation of prescription drugs is roughly triples that of overall health care. Healthcare reform is the major topic of the day. The marketing that has taken place has been directed at influencing the consumer (patient) to request certain medications for their disease. Advertisements have bombarded the airways. At the end of each advertisement, there are disclaimers concerning possible side effects of the particular drug. In fact, recently one product, "Yaz", made an advertisement completely based on the side effects. This advertisement was in response to a variety of concerns brought forward to a variety of parties.

Package inserts are those pamphlets that come with the prescription with all of the relevant information concerning the product, including how to use, what to avoid while take the

medication, and the side effects possible. In January, 2006, the Food and Drug Administration revised the format of the package insert that will provide up-to-date information in an easy-to-read format (FDA Consumer, 2006). The reason for these revisions is to save time and reduce adverse drug events (Fass et al., 2007). The content of the insert will start with the highlights of the prescribing information and makes the order of the sections user-friendly (American Journal of Health-System Pharmacy, 2007). Also, the new insert will section listing the risks and benefits of the drug along with a toll-free number and internet reporting information for suspected adverse effects (The Brown University Geriatric Psychopharmacology Update, 2006).

ANALYSIS OF DATA

The main problem with package inserts is getting individuals to read this information and to understand the contents. This paper examines these two issues, reading and understanding. A survey was administered to 692 individuals in the Southern United States. There was some missing data, making the sample size smaller in most cases. A convenience sampling technique was adopted for the purpose of this study. The samples utilized for this study were unrestricted non-probability samples. The rationale for adopting this type of sample was that despite its minor drawbacks all the respondents were legitimate consumers. The respondents were asked questions relating to inserts. Questions were about whether they had seen, read, and understood the insert. Additional questions were asked about what languages were used to write the inserts.

There were 322 men and 366 women in the sample. The age classification was as follows: in the age group 18- 25 were 260 respondents, in the age class 26-45 there were 249 people, and over 45 there were 167. There were 397 single individuals and 287 married individuals. Education level was as follows, 274 with less than college degree and 402 with college degree and above.

The majority of the people (87.7%) of the people saw the inserts. A smaller majority of the people (62.0%) felt that there was <u>not</u> too much information on the inserts. Table 1 provides these results.

Table 1
Basic Frequencies

Question	Yes	No	Total
Was the insert seen?	594	83	677
	87.7%	12.3%	100%
Was there too much information?	192	313	505
	38.0%	62.0%	100%

Table 2 provides the basic responses to the questions. Over ½ of the people (57.7%) responded that they either read the insert always or most of the time. The percentage of people who stated that they read the insert either sometimes or rarely was 36.7%. The percentage of people who never read the insert was 5.7%

Table 2
Basic Statistics

Question	Always	Most Times	Some Times	Rarely	Never	Total
How often have you read the patient package insert that comes with your medicine?	191 31.0%	165 26.7%	154 25.0%	72 11.7%	35 5.7%	617 100%
How often does the information of the package insert confuse you?	32 5.2%	79 12.8%	251 40.8%	183 29.8%	70 10.1%	615 100%
Are the package inserts written in English?	467 75.7%	119 19.3%	20 3.2%	7 1.1%	4 0.6%	617 100%
Are the package inserts written in Spanish?	75 12.6%	105 17.6%	199 33.3%	76 12.7%	142 23.8%	597 100%

When it comes to the insert being confusing, only 18% of the respondents said that it was confusing always or most times. The percentage of individuals who felt that the insert was sometimes or rarely confusing was 70.6%. The percentage of individuals who felt that the insert was never confusing was 11.4%.

The above analysis tends to lend credence to the fact that a lot or individuals are reading and comprehending the inserts. This may be due to the fact that the inserts have been re-designed to be easier to read. Whatever the reason, the inserts are performing the function that they were intended to perform.

The remaining questions were related to languages used for the inserts. Most individuals (95.2%) stated that the inserts were written in English always or most times. When asked whether the inserts were written in Spanish, 30.2% of the respondents stated always or most times with 46.0% saying sometime or rarely. The percentage who state never was 23.8%. Almost all of the individuals stated that the inserts were written in English with the percentages for Spanish about equally divided among most of the time, some of the time, and never. The percentages of individuals stating never suggest that companies need to address this issue. There is a significant number of individuals in this country that speak only Spanish.

Analysis of Demographic Variables

Demographic variables were analyzed to see if there was any relationship. Table 3 provides the results of the cross-tabulations. The p-values are given. The eleven significant results are examined here. Gender was related to all of the variables except one, age with three, marital status with one, and education with two.

Table 3
Cross-Tabulations Using Demographic Variables

Question	Gender	Age Class	Marital Status	Education
Was the insert seen?	.000***	.001***	.013**	.197
Was there too much information?	.870	.052*	.806	.003***
How often have you read the patient package insert that comes with your medicine?	.000***	.000***	.230	.192
How often does the information of the package insert confuse you?	.088*	.650	.800	.170
Are the package inserts written in English?	.020**	.117	.037**	.399
Are the package inserts .written in Spanish?	.046**	.124	.057*	.007***

    *   - Significant at .10 level
    ** - Significant at .05 level
    *** - Significant at .01 level

The first question is whether the insert was seen. Females were more likely to see the insert than males. This is consistent with other research, which suggests that females are more likely to be more observant of this type of information; perhaps, due to motherly instincts. Older individuals, 46 and over, are more likely to see the insert. Again, this is consistent with other research, suggesting that older individuals may be more concerned, particularly with drug interactions. Finally, married individuals were more likely to see the insert than single individuals.

The second question was whether too much information on the insert. Two demographic variables were related, age and education. Older individuals, 46 and over, thought that there was too much information. This is related to the fact that older individuals are more likely to read them. Individuals with college degree and above are more likely to suggest that there is too much information on the insert.

The next question is how often the inserts are read. Two demographic variables, gender and age, were related. Females are more likely to read the insert always or most of the time. Older individuals are more like to read the inserts than their younger counterparts. In this case, two age groups, 26 – 45 and 46 and over, were more like to read the inserts most or all of the time than those between 18-25.

When asked whether individuals found the inserts confusing, only one demographic factor, gender, was significant. Males were more likely to find the inserts confusing than the female counterparts. This may lead to them not reading them as often.

When asked if the inserts were written in English, only gender was significantly related. Females were more likely to state that the inserts were always written in English than males. Again, females were more likely to read them.

When asked if the inserts were written in Spanish, two variables, gender and education, were significant. Females were more likely to state that the inserts were always written in Spanish than males. They would know because they were more likely to see the insert and read it. They would notice if they were written in Spanish. Education was related, also. Individuals with less than college degree were more likely to see that the insert was written in Spanish always than those with college degree and above.

IMPLICATIONS FOR MARKETING

One of the basic tenets of direct-to-consumer advertising was that people want to be more involved in their health care. The package insert would be one way to be better informed about the medicines and how they impact health. Based upon this study, the majority of the people saw the inserts, but only one-half of the individuals read the insert most or all the time. The revisions required by the FDA may have helped to make the inserts more user-friendly, but still people are not reading them. Confusion is the not the problem. A vast majority of the individuals said that the inserts were not confusing. The inserts are being read and understood by one-half of the people. The dilemma is to reach more people. Demographic variables may help here.

Advertisements must be developed and delivered to insure that they reach males, younger individuals, and single individuals. These groups were less likely to read the inserts, and males and younger individuals were less likely to understand the inserts. The re-designing of the inserts by the FDA has probably helped in this matter, but more needs to be done.

Direct-to-consumer advertising is increasing. The question is how one can gain the attention of the younger individuals and males so that they will take a more active role in their health care decisions. Maybe the ads must be clearer on possible side effects and interactions with other drugs. If males and younger individuals are not going to read the insert, then they must be reached in other ways. This is true especially with drugs that might be used by them. This is the challenge that faces the pharmaceutical industry, especially in light of all of the lawsuits being filed. They must make every effort to inform the public of the dangers.

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THE EFFECTIVENESS OF VISUAL METAPHORS IN BUSINESS-TO-BUSINESS ADVERTISING: A RESEARCH PROPOSAL

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ABSTRACT

Though rhetorical figures such as visual metaphors are common in consumer advertising, their appearance in business-to-business advertising raises questions regarding their effectiveness. This proposal investigates whether the use of visual rhetorical figures in advertising can effectively persuade industrial buyers. In contrast with the received view that industrial buyers are more rational than consumers and use a cognitive approach to purchasing, it is hypothesized that ads with rhetorical figures such as visual an textual metaphors cause industrial buyers to have favorable attitude toward the ad, favorable brand attitudes, and favorable ad recall. A methodology for testing these hypotheses is presented.

INTRODUCTION

To reach consumers inundated and numb with advertising messages, advertisers using print media have changed communication strategies over the last 50 years. In the past, direct claims regarding product attributes and benefits were the norm. But today, advertisers are relying more frequently on the use of indirect claims. To advance their products and brands, advertisers more frequently use indirect claims through the use of rhetorical figures. Evidence of this change is abundant in the business to consumer literature. Phillips and McQuarrie have documented the increased use of rhetorical figures and the increased variety of rhetorical figures since the 1950s (2002). The number of rhetorical figures in magazine advertising has grown such that by the mid-1990s, 74% of consumer magazine ads used rhetorical figures (Leigh 1994). Today it seems a normal occurrence to find the abnormal in an ad. Readers can see lemonade turn into butterflies (Crystal Light), skin moisturizer dispensed from a water cooler (Cetaphil), or a sponge that writes notes to a dishwasher (Dawn).

Though no documented empirical evidence is yet available, this trend toward the use of rhetorical figures is evident in business-to-business (B2B) advertising in trade magazines. In a recent issue of a trade publication for information technology executives and managers, a reader could find a data center taped off with construction site hazard tape (Microsoft), hosting service built like a old-time safe (Rockspace Hosting), outsourcing services depicted as a boxer (CompuCom), and cars moving across a spanless bridge (Sungard Hot Sites).

All this use of indirect claims seems counterintuitive. If the marketplace is packed with overwhelmed and distracted consumers, using a simple, direct claim with an equally direct image would seem the obvious choice. After all, copywriting texts urge writers to be straightforward e.g., (Bly 1985). It also appears counterintuitive because technical personnel and purchasing

agents are "no nonsense" people who communicate in a rational and thoughtful manner. Yet, advertisers are using more indirect strategies such as rhetorical figures in their headlines, text, and visual content.

In consumer behavior advertising, an empirical rationale for the increased use of rhetorical figures does exist. Indirect claims force the reader to make spontaneous inferences that have strong attitudinal implications yet require little cognitive effort (Kardes 1988). Phillips found that rhetorical figures divert the subject from convention and forces the subject to attempt to make sense of the ad. Traditionally, ad directors take this into account and create ads for a heterogeneous audience that has only one level of meaning for the reader to discover (Phillips 1997). The decoding of this single meaning stems the concept of its "implicature." Implicature is a concept borrowed from pragmatics, a subfield of linguistics concerned with how meaning is transmitted. According to pragmatics, meaning is derived through not just through grammar and vocabulary but also through the context of the communication. In other words, people rely on context clues such as place, manner, time, or mode of communication to overcome ambiguities in the message and determine the message's meaning. Implicature are central to context clues. Implicatures, suggest the meaning of the message rather than expressing it directly. The can be thought of as the implied meaning that people must infer from the communication. Implicatures can be either strong, in that most readers will get the central meaning immediately, or weak, in that few readers will get implied meaning.

McQuarrie and Phillips take the issue of implicature in indirect claims further. They argue that indirect claims are more advantageous because they leave the reader open to multiple positive inferences about the product or brand. Also, these indirect claims of rhetorical figures let the viewer self-generated the multiple positive inferences at the time of exposure. Because of this viewers find the ads more believable. They also show that visual indirect claims are particularly useful to the advertiser (McQuarrie and Phillips 2005).

While it has been found that indirect metaphorical claims can influence subjects better than direct claims in consumer advertising, the effectiveness of indirect metaphorical claims has never been tested in business-to-business advertising.

Thus the intended contribution of this study to the body of knowledge is to
- Demonstrate that visual rhetorical figures are effective in business-to-business advertising
- Show that ads with visual rhetorical figures create a favorable attitude toward the ad
- Show that ads with visual rhetorical figures create more favorable brand attitudes
- Show that ads with visual rhetorical figures have greater ad recall

The effect of the result of this investigation will be to provide academics and practitioners with a better understanding of how B2B readers are influenced by rhetorical figures in print advertising in a business-to-business context.

INDIRECT CLAIMS AND RHETORICAL FIGURES IN TEXT AND VISUALS

Communication in print advertising has its genesis the combination of text and visuals. Advertisers employ both forms of communication to influence readers; however a river of meaning runs through an ad in a magazine. It is that meaning that persuades the reader. The meaning can easily be examined through semiotics the study of how signs can denote things, relate to each other, and impact those who create them and receive them. Both textual and visual communication require that viewer and sender share a pragmatic competency based on a system of conventions and a vocabulary of meanings that are embedded in the culture. It is this competency that allows readers to grasp implicit and inferred messages within the communication and grasp the Gestalt of the message—the meaning.

Indirect Claims in Advertising

Indirect claims in advertising have been studied for some time, but only in the business to consumer context. It has long been know that messages tend to be more persuasive if the intent to persuade is not obvious to the reader (Walster and Festinger 1962). Kardes has built on these findings by exploring how ads read by a motivated reader can induce effortful information processing on the part of the reader if the ad highlights the personal relevance of the message and shows that the brands vary on a dimension important to the recipient (1988). Motivated consumers will spontaneously draw inferences about the brand and form strong attitudes toward the brand which they can access cognitively. When advertisers use indirect persuasion, they attempt to use the consumer's ability to draw inferences to go beyond what is directly stated in the ad (Johar 1995). This method has proven effective enough to raise regulatory policy concerns regarding what inferences a reasonable person would draw from cigarette, alcohol, and cosmetic ads. In these ads, readers receive two messages, the surface statement and the "real" meaning beneath it (Stern 1992).

Rhetorical Figures in Texts as Indirect Claims

A common type of indirect claim is the rhetorical figure because rather than using a direct and literal method of communication, the rhetorical figure does so figuratively. It is the incongruity between the expression's form and its content that renders an implied meaning for the recipient of the ad to decode (Mothersbaugh et al. 2002).

Since antiquity, rhetoricians have studied how to persuade audiences using figurative language, which they termed rhetorical figures. With only an oral tradition to work with, they became masters of the persuasive "figure of speech." Since then, the concept of rhetorical figures has transferred to text and to visuals. Textual rhetorical figures have been well studied in the marketing literature. In a study of headlines of full-page consumer advertisements, McQuarrie and Mick found that 86% of the ads studied contained rhetorical figures in the headline or the subhead (1993). The rhetorical figures they found fell into two broad categories: schemes and tropes. Schemes include such figures of repetition as alliteration (repeating of consonants) and anaphora (repeating a word at the beginning of successive clauses). Tropes include figures of wordplay (e.g., pun), figures of indirection (e.g., irony), and figures of substitution (e.g., metaphor). Tropes appeared more than 3.5 times as often as schemes. They postulated that the

figures appeared in the advertising because practitioners found them effective in a primary way and because practitioners recognized that persuasion goes beyond rational argument and included both nonrational and symbolic components.

In specific research on tropes, researchers have found that for low involvement readers, those readers who are not actively searching for information to meet an explicit need, ads featuring tropes were more effective than ads featuring explicit claims (Toncar and Munch 2001). When compared to ads with direct claims, advertising with tropes in the headlines and subheads were processed more deeply by low involvement readers. The readers also had a more favorable attitude toward the brand and a more favorable attitude toward the ad. Tropes are effective because much of the low-involvement media seeks to provide background information and to develop top of mind recall in the readers when that information is needed, so that when the consumer is finally prepared to buy, the product advertised with a trope in the headline will be the first to be considered (Toncar and Munch 2001). In a classification of rhetorical figures, tropes were found to be more irregular and as such are more complex than schemes. McQuarrie and Mick (1996) further subdivided tropes into two categories based on rhetorical operation: substitution and destabilization (McQuarrie and Mick 1996). Substitution tropes include hyperbole (i.e. exaggeration) and metonym (i.e. substitution of one object for another). Destabilization tropes include paradox (i.e. a self-contradictory statement that expresses a truth) and metaphor (i.e. a term applied to something that is not literally applicable but which is suggested as a similarity). Destabilization tropes are shown to be more complex than substitution tropes because they deviate more from the literal interpretation of the text.

Using the lens of literary criticism, Stern explores the use of metaphor in consumer advertising stating that metaphor works by implying an indirect similarity of a literal object, which has the attribute, to the metaphoric object, which does not (1990). The reader then supplies the omitted term which has been substituted by the metaphor. For example, one can take the metaphor "business is war." The reader ascribes the analogy between business and war works because the reader transfers onto business all of the qualities of war: chaos, danger, death, triumph, and loss onto business. Business figuratively becomes extended combat. Metaphor is similar to simile which uses "like" or "as" (business is like war). The mere dropping of the comparative word "like" in a metaphor causes the reader to connote other meanings including a figurative "truth" about the subject. Stern further classifies metaphor as being single, extended, or open. Single metaphors have one main quality that is shared between the literal object and the metaphorical object. Extended metaphors have more than one point of similarity in common. An open-ended metaphor has an infinite number of shared points of resemblance which allow the reader to transfer many meanings on the metaphorical object.

Visual Rhetorical Figures as Indirect Claims

The rhetorical approach to figurative language can also be applied to visual images. Interpretive theory postulates that rhetoric is the sender's attempt to influence the receiver in terms of the sender's argument, articulation, and presentation. These elements form the thought of the message. These same elements can be applied to visual images as well. Scott construes visual rhetoric as representing concepts to invent a complex argument. This argument is carried out by the arrangement of visual elements, and how those elements are delivered forms a method

of evaluation of the intended message (1994).

Just as the meanings embedded in cultural conventions and understanding can be conveyed through textual communication, meaning can be conveyed through visual communication as well. Like textual communications, visual communication requires that the viewer and the sender must share a system of conventions and a vocabulary of meanings stemming from the culture they share if the viewer is to be able to respond to the visual meaning of the ad (McCracken 1987). This application that combines Scott's views of visual rhetoric with McCracken's shared system of conventions is supported by Holbrook. Holbrook uses the lens of semiotics to study the issue. Semiotics is the study of the processes of signs and communication. Relying on a subfield of semiotics known as pragmatics which studies how context contributes to meaning in communication, Holbrook found that people derive meaning from communication based on their behavioral responses to the signs within it. This pragmatic competence can only be achieved through experience, experience that is shared by the communicator and receiver. While noting that researchers must capture the Gestalt of the message and its configuration, Holbrook study illustrates how consumption symbolism and imagery form the meaning that viewers perceive in advertising (1987).

McQuarrie and Mick studied visual rhetoric in consumer advertising, examining the two manners in which visual rhetorical figures affect consumer responses: increased elaboration and a greater pleasure in viewing the ad. This elaboration takes place because the reader must take apart the "artful deviation" of the rhetorical image. Secondly the reader derives a certain amount of pleasure from decoding the meaning which the sender has artfully deviated (McQuarrie and Mick 1999). This pleasurable text concept is well linked to attitude toward the ad (Mick 1992). Echoing Scott, McQuarrie and Mick found that viewing an ad relies on the viewer's culturally-determined knowledge structure which determines and patterns the types of meanings the view will ascribe to the visual images in the ad. In their study of consumer advertisements, they found that foreign informants often failed to interpret visual tropes correctly because they lacked the necessary background in North American culture. While the foreign viewers could easily interpret what had deviated in the image, they were often unable to make the connection as to *why* it had deviated (McQuarrie and Mick 1999).

Visual and Textual Rhetorical Figures in Combination as Indirect Claims

Combining of visual and textual metaphors can create powerful effect. One such effect is advertising resonance. Resonance is defined as a "wordplay in the presence of a relevant pictorial" play on words (McQuarrie and Mick 1992). The authors base their definition on the concept from semiotics called incongruous polysemy. In incongruous polysemy, the reader finds text that deviates from his or her expectation and as such the elements in the text now contains added meanings that would not be present if the text element were standing on its own instead of with the picture. The resonance created between the text of the headline and the visual element of the advertisement forces the reader to contend with a double meaning. This ambiguity forces the reader into an aesthetic experience that forces him or her to resolve the ambiguity and thus derive pleasure from the ad. Advertising resonance has been found to create greater liking for ads, more favorable brand attitudes, and greater recall for headlines.

While previous research has dealt with the combination of visual and textual figures under directed processing, recent research has examined the effect of the combination of rhetorical figures under incidental exposure. Testing under incidental exposure is more generalizable because it more closely resembles how readers would view an advertisement in a magazine they are reading: the advertisements are incidental to the articles in the publication. In a single-exposure design in a magazine with articles and filler ads, those ads with rhetorical figures had higher ad recall and higher attitude toward the ad than those ads without rhetorical figures. Of the textual rhetorical figures, tropes had higher scores than schemes; however, the visual rhetorical figures had a greater impact than the textual rhetorical figures (McQuarrie and Mick 2003).

As the metaphor is the most complex of the textual rhetorical figures, the combination of textual metaphors and visual metaphors is the strongest generator of indirect claims. Working with the concept of strong and weak implicatures used by Phillips in 1992, McQuarrie and Phillips have studied how metaphors presented in pictures and words affect readers of consumer advertisements (2005). McQuarrie and Phillips studied how weak implicatures generate inferences for readers to grasp the advertiser's intent. Positing that the more weak implicatures viewers must hold at one time, the more likely the readers are to create their own general claims; the researchers found that readers were more receptive to the advertised brand after exposure to indirect claims in pictures or words than to direct claims. Secondly, those ads with visual indirect claims generated more multiple positive inferences about the product than the ads with verbal indirect claims (McQuarrie and Phillips 2005).

ADVERTISING IN THE BUSINESS TO BUSINESS WORLD

Though the effect of metaphor in consumer advertising has been examined, its effect in the B2B context has not. As a whole, B2B advertising is the least understood and least studied of all the types of advertising. In 1988, in a study of advertising research trends, Yale and Gilly found that industrial advertising was one of the most under-examined topics in advertising academia. Yale and Gilly grouped industrial advertising in a catch all group with five other less well-researched advertising topics. Together they represented a mere seven percent of all the articles published in the six leading advertising and marketing journals (1988). Ten years later not much had improved for B2B advertising. In a study of the past 25 years of the Journal of Advertising, the acme of advertising academic outlets, Muncy and Eastman (1998) found that no B2B articles were published in the journal. The largest percentage of articles (22%) dealt with consumer behavior aspects of advertising. They posited that the dearth of articles on B2B advertising stemmed from academicians finding it easier to research students and academics having fears of studying interoganizational relationships (1998). B2B advertising may be the sleeping giant of advertising academia. In the business-to-business market it is estimated that over US$3 billion are spent annually on advertising (Johnston 1994). While B2B advertising may be significantly under researched, it does offer some interesting differences and similarities when compared to consumer advertising.

Business Context: Advertising Effectiveness

Consumer buyers buy differently from business buyers. Consumer buyers usually

buy with little or no consultation. They often display buy nonrationally, e.g. impulse or hedonic purchases. Business buyers are committee buyers who consult with other in the corporation before negotiating. Business buyers adhere to a rational actor model for purchasing products or services. Their purchases are profit motivated and must make sense within the firm and provide an advantage. However, it is the context of business that creates the biggest difference in measuring advertising: the producing firm, its sales force, the industrial buyer, and the company that will use the product or service. In the consumer context, advertising effectiveness can be directly measured by measuring how much product is coming across the scanner. However, in the B2B context, a purchasing team faces off against a sales force, yet these two players stand between the user and the producer of the good or service. This faceoff within a faceoff confounds the measuring of advertising effectiveness (and sales effectiveness). While all advertising is designed to create awareness and to create a favorable attitude toward the product, service or brand, in the B2B context companies use two vastly different ways to measure advertising effectiveness: communications effects and sales effects. Communications effect research examines if the ad communicates the desired message to the target audience. Its aim is to reveal the behavior characteristics of the customer. On the other hand, sales effect research attempts to link advertising to sales. This is particularly hard to measure because many factor influence sales including the salesperson, the presentations, promotional offers, and time constraints. For the B2B advertising manager choosing one method over the other leaves the results of the other metric unexamined. Some researchers have gone so far as to suggest that businesses create a third measure to take advertising, customer variables and sales results simultaneously (Johnston 1994).

Another issue facing B2B advertisers is the type of research necessary to assess the impact of advertising on the market response. Most industrial marketers are generally too small to support the type of research necessary and often raise the old adage that half of the advertising is wasted, the difficulty is learning which half. Because they do not know if their advertising has been effective or how effective it has been, industrial marketers are forced to set their budgets using a nonempirical rule of thumb approach. The two most popular are allocating a percentage of sales as the advertising budget or using a task method where the budget is allocated based on the task the advertising is supposed to accomplish. However, some have found as many as 39.6 percent of companies use other methods or just arbitrarily pick number on which to base their advertising budget (Lilien et al. 1976). Thus for B2B advertisers, a missing key to success remains finding a metric to link the advertising quality to customer behavior.

Business Context: Buying Process

While both consumers and industrial purchasers rely on similar decision process such as AIDA (attention, interest, desire, and action) or hierarchy effects (awareness, knowledge, liking, preference, conviction, and purchase), industrial buyers are different from consumers. Industrial buyers more often have a group decision-making process rather than individual one. Their purchases often entail long term relationships with sellers. The products they buy have a greater complexity than a consumer would see. These products are more often much more expensive and are often customized to the buyer's specifications. Industrial buyers are influenced by many stimuli; and their behavior has both rational and emotional motives just like consumers (Patti 1979). But unlike consumers, B2B readers of advertisements are highly involved in their

reading and are busy looking for information (Chamblee and Sandler 1992). Buyers in the business-to-business process tend to be more rational as well. Companies know this and have followed suit. In a study comparing B2B service advertising to B2C service advertising, B2B advertising used a rational appeal in the headline 95.6% of the time, while B2C relied on rational appeals in the headline only 51.6% of the time (Turley and Scott 1997).

B2B advertisers may take some solace in the areas of similarity between consumer advertising and B2B advertising. In an early study of advertising in the copper and brass business, Mason found that Anaconda began using the industry slogan "Think Copper" in its industrial advertising. While other companies did advertise during the period, Anaconda was the only one to use the slogan. After the campaign had run its course, research showed that readers of the ads had a higher opinion of Anaconda than did nonreaders. More interesting was that more readers had higher opinions of the company than of the competition based on every comparison point (1969). This finding would indicate that a consistent message identifying the company is effective. Kohlman sees industrial advertising of company identity as important but takes a different approach. Presaging branding, Kohlman sees industrial advertising as the creator and communicator of company identity in the eyes of the purchaser. This identity creation helps salespeople get in the door to present to buyers. But B2B is more complex than B2C, salespeople present their own identities as part of the selling process to the buyers and this identity may often supersede the company's identity in the buyer's mind. Therefore, continuous industrial advertising is necessary because the company must keep the company's identity before the buyer (Kohlman 1960).

Business Context: Life Cycle of the Buying Process

For this reason, Patti contends that advertising is more effective in the early stages of the industrial adoption process because it mirrors the first steps of AIDA (awareness/interest) and the first stages of the Hierarchy of Effects (awareness/knowledge). Patti also noticed that the reader's response to the advertisement was more rational the more differentiated the product was from competitors (Patti 1979). In subsequent research, Hartley and Patti discovered that each step of the hierarchy of effects requires a different type of message (1988). B2B advertisers focused their messages as follows: awareness step (35.0%), knowledge step (35%), liking step (9.4%), preference step (0.9%), conviction step (2.6%), and purchase step (10.3%). Kohlman presages these findings reasoning that B2B's advertising exists to open the door for the salesperson to close the deal (1960). Levitt also supports this phenomenon and credits the source. Levitt defines the source effect as an independent judgment by the audience of the advertisement that affects the reception of the message. Thus the greater the prestige of the company, the advertisement, or the publication, the more likely the ad will influence the audience to move in the desired direction. The source effect has been found to decline over time unless more advertising messages are available to support it, thus calling for a continued advertising effort (Levitt 1967).

However, the source effect is not a panacea. If the purchasing department is manned by highly competent professional buyers, the source effect will most likely only get the salesperson a first hearing among the competitors. The company's reputation based on its advertising is not likely to sway the industrial purchaser. However, the source effect can sway the

technical personnel, who are better judges of a complex product's merits. Particularly when first examining complex new materials in sales presentations, technical personnel are influenced by the seller's advertised reputation provided the presentation is a high quality presentation. However, in high risk situations, technical personnel are influenced by their technical expertise (Levitt 1967). Findings by Ronchetto, Hutt and Reingen support the understanding of the importance of technical personnel in highly complex product purchases because technical personnel could be seen as central to the workflow and having close direct ties to management (1989). Technical personnel, such as engineers and plant managers also have a greater role and responsibility in the purchases of highly complex new product purchases (Choffray and Lilien 1978).

Similarities Between B2B and B2C Advertising

But for all these differences between consumer behavior and industrial buying behavior, industrial advertising does have similarities with consumer advertising. Advertising layout has been found to affect reader response in industrial advertising. A relatively new layout, rebus style, was found more effective in creating awareness, interest, and preference than the more traditional Ayer #1 layout (Chamblee and Sandler 1992). The Ayer #1 layout consists of a headline at the top of the page, a picture under it and body copy beneath the picture. The rebus layout contains multiple elements and illustrations laid out in a convenient reading pattern. Sometimes the elements and pictures lie within the body copy; other times the copy wraps around the picture. This layout allows the advertiser to present multiple aspects of the product simultaneously to which conveys a gestalt about the product that would not be possible with one picture. The rebus layout is popular in current consumer advertising. Chamblee and Sandler also point out theat the Ayer #1 layout has lost favor in consumer advertising and suggest that esthetic and lifestyle issues have evolved and are reflected in layouts. This would indicate that changes in consumer sensibilities in advertising over time have also affected industrial advertising.

Others remind B2B advertisers to return to earlier times to keep their identity before the reader by using corporate symbols to connote the attributes of the brand in the minds of industrial readers (Lamons 2004). These symbols, such as Michelin's tire man "Bibendum," help readers understand the brand better. The symbol builds corporate image by focusing the reader's attention on brand expectation,

RESEARCH QUESTIONS

Researcher on the effectiveness of the use of visual and textual metaphor has mainly focused on the consumer market and has yet to be tested in trade advertising. While some parallels exist between consumer and trade advertising in terms of layout and message processing such as AIDA, industrial buyers are presumed to use a more rational and cognitive approach to purchasing products for business use. Unlike consumers industrial buyers also depend on sales people to inform them, so the effectiveness of advertising in B2B most often lies in creating awareness of the company and building the identity of the company.

This begs the question: Do visual and textual metaphors in trade journals affect how industrial buyers make decisions? If visual and textual metaphors affect how industrial buyers

make decisions, how do they do so?

Thus it is hypothesized
H1:   Treatment ads with metaphors cause favorable attitude toward the ad.
H2:   Treatment ads with metaphors cause favorable brand attitudes.
H3:   Treatment ads with metaphors have favorable ad recall.

These research questions and hypotheses suggest an experimental design adapted from McQuarrie and Mick (1992; McQuarrie and Mick 1999). In this laboratory experiment, subjects will be exposed to treatment ads containing textual and visual metaphors and control ads without the visual metaphor. All other elements in the ad will be held constant.

METHODOLOGY

Stimuli Construction

Six test ads will be based on actual magazine ads for information technology security applications, system analysis software, power management equipment, servers, email management systems, and web site management software that contained visual metaphors. The ads will be scanned by a professional artist and duplicated by the artist using graphics software. A fictitious brand name will be given to each ad and a direct (nonfigurative) headline will be given to each ad. The ads will be produced to appear online as magazine ads that had been digitally scanned for presentation. Each ad will appear in two versions, the blocking ad with the visual metaphor removed and the treatment ad with the visual metaphor present. The rest of the picture, the headline, the text, and other semantic cues will be held constant. Nonfigurative and figurative treatments will be alternated within each subject so each subject will see half the ads with a visual metaphor and half the ads without a visual metaphor.

The ads will then be inserted in a mock IT magazine composed of 32 pages. The magazine will contain stories of interest to IT professionals which have appeared in recent issues of IT magazines.

Subjects and Procedure

The data will be collect from readers of three information technology magazines geared toward technology decision makers. Readers of the magazines will contacted via the Internet. Subjects will be offered an incentive of $10 for completing a usable survey online. Three thousand dollars will be budgeted for incentives for 300 surveys. The subjects will be directed to the website to take the survey. The website will show a "countdown clock" showing how much incentive money is left for disbursement. Readers who have not responded after two weeks will be re-contacted by email and asked to participate. As a motivator, the email will also show how much money is left for disbursement.

When the subjects enter the experiment, they will be told that it is a study on magazine reading habits targeted to IT professionals who will make managerial and technical decisions for the purchase of information technology to support their company's needs. They will be told that

this type of testing is common in magazine publishing and that the magazine pages are a rough layout. They will then be asked to answer a series of questions about how they read trade journals, how they are influenced by trade journals, what articles and topics they would like to see, etc.

Then they will look through a "virtual" copy of the magazine. They will be able to look at the magazine for as long as they wish before closing the section of the survey and answering another series of questions focusing on how the magazine is written and its value. Mixed with these will be questions about ad liking and ad influence on industrial purchasing decisions. The subjects will need about five to ten minutes to answer these questions. Then they will answer a series of questions on ad recall.

Once they have submitted the questionnaire, the subjects will be debriefed and the nature of the experiment will be explained to them.

Measures of Treatment Effect

Attitude-toward-the-brand, or brand liking, will be measured using a ten point semantic differential scale developed by Gill, Grossbart, and Laczniak (1988). In this study, instrument reliability is high with a Cronbach's alpha of .95. The ten point scale is anchored by good/bad, dislike very much/like very much, favorable/unfavorable, and worthless/valuable.

Attitude-toward-the-ad, or Aad, will be measured using a semantic differential scale developed by Coulter (1998). In this study, instrument reliability is high with a Cronbach's alpha of .90. The ten point scale is anchored by favorable/unfavorable, positive/negative, bad/good, and liked a lot/ not liked.

Ad recall will be patterned after McQuarrie and Mick (1992). After the subjects have answered the brand liking and ad liking questions, they will be asked to recall as many headlines and as many graphics (which included the visual metaphor and the control) as they can. Two judges, working independently, will be used to code the responses by judging the accuracy of the subjects' recall of the ad. The judges will be blind to the purposes of the experiment. Accurate recall will be defined as an approximate reproduction of the headline including the differentiating graphic (McQuarrie and Mick 1992).

Analytical Procedure

The research hypothesis and data collection suggest analytical procedures involving two one way analysis of variance tests.

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THE SELECTION PROCESS: HOW STUDENTS DECIDE AND CHOOSE THEIR COURSES

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EXTENDED ABSTRACT

As the US student population evolves, universities need to adapt course selection options and design programs that will attract, retain and meet student's needs. Institutions of higher education are wrestling with the notion of adjusting their offerings to give students greater choice in course selection (Ackerman and Gross, 2006). Having a one-size-fits-all model may be too restrictive to be adequate in addressing the different needs of the students. Students usually prefer to have alternative from which to choose so that they can individualize their university experience and include courses within the context of their own lifestyle (Schwartz, 2004).

Universities seem to consider their students and their potential employers as customers with higher education as the product (Ackerman and Gross, 2006). While having a choice is generally viewed as empowering, the challenges associated with offering a wide selection is shared by universities across the country (Wathieu et. al, 2002). Satisfaction can also be impacted by the loss of attractive alternative options (Carmon, et. al., 2003). When deciding what program to study, the amount of choice offered by the university may be a differentiating factor. Insufficient student choices may lead to dissatisfaction. On the other hand, too many choices could lead to stress and cause postponed or later graduation (Ackerman and Gross, 2006). Students have expressed that their main purpose is to graduate, and they are concerned about making course selection mistakes. While students appreciate the opportunity to follow individual interests (e.g., internships, independent studies, field projects, and service learning projects), they also derive some reassurance from having basics prescribed. They place a value on supervision and guidance (Ackerman and Gross, 2006).

Research on the course selection process includes the use of published student evaluations of teachers and instructor attributes. These student evaluations gauge instructor popularity or reputation and appear to have a major impact on course choices (Wilhem, 2004). With teacher evaluations, students place more value on carefully organized lectures, experienced presentation skills and speaking abilities, and lessons that allow students to build useful class notes (Marks, 2000). Fairness of grading and workload difficulty wielded relatively little influence on course selection (Wilhem, 2004). In learning activities, students show academic preferences for courses that provide a level of stimulation, effort, and real-world applications (Davis et. al., 2000). Since students have preferred learning styles, matching those preferences with instructor teaching styles is considered as being directly related to student performance (Davis, et. al., 2000).

Students have more interest in taking the courses in their major than in general core requirements. They prefer upper-level electives rather than in survey courses. In general, their

preference is for courses that are associated with their person goals and aspirations (Ackerman and Gross, 2006). Offering information about different instructional approaches may help students make selections from multiple sections of the same course. To better understand how students make these decision, this research was undertaken to better understand the selection process that students go through when determining their course schedule for a semester.

*The instrument designed for this research was a self-administered, structured, undisguised questionnaire. Seven-point Likert scales were used extensively to assess the following: the **Instructor** (teaching style, homework given, number and types of exams, power points used, extra credit opportunity provided, etc.); the **course** (time of the day, day of the week, location, type of course, etc.); **other factors** (building, facilities, syllabus, elective versus mandatory, etc.); **satisfaction** with the institution along with **demographic** questions were also included on the instrument. The study was conducted among a projectable sample of the student population at a mid-sized southwestern state university. The overall ending sample was 242 students.*

While most of the details will be presented at the conference, we found support with existing research where the value of a course is a function of instructor-controlled factors such as the kind of assignments, availability of guest lectures by professionals, and the quantity of lecture material directed toward real-world applications (Wilhem, 2004). It is apparent from this research that students want choices. A lack of choice leads individuals to perceive a threat to freedom and decreases their sense of control. Conversely, presenting a great deal of course choice may also be counter-productive (Ackerman and Gross, 2006). Students select the courses that provide useful knowledge, even if the workload is heavy and the instructor is believed to be a demanding grader (Wilhem, 2004). Students assign value on knowledge that is pertinent to their major and future career.

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USING A SALES PROMOTION PLANNING SPREADSHEET TO TEACH STUDENTS TO INTEGRATE CHANNEL STRATEGY, FINANCIAL GOALS, CONSUMER DEMAND AND BRAND LOYALTY

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EXTENDED ABSTRACT

With increasing retailer demands on suppliers for Temporary Price Reduction promotions (TPRs), it is important for students to understand TPR profit and distribution strategy effects. Limited time for teacher preparation often prevents examination of the topic. This assignment exposes students to channel considerations involved in supplier TPR decisions. It requires little preparation and uses class discussions. This exercise combines a "what if" spreadsheet requiring only basic computer skills, with product- or brand-manager role-playing and a business memo format written assignment to achieve Bloom's higher educational objectives of understanding, integration, and application. Although the exercise has been reported before for one school, this paper extends learning assurance validation to a second university and teacher and to a new type of course. Using teacher supplied baseline parameters, students project sales and profits and develop recommendations regarding TPR participation. The assignment and spreadsheet may be obtained from the authors (kmarshall@alcorn.edu) in Word and Excel formats.

Concept integration across courses and disciplines is desired. The assignment requires students to use concepts from marketing, accounting and management, such as channel demands and strategy, break even analysis, demand elasticity, sales goals and margins, financial goals, buying patterns, and brand loyalty, to anticipate TPR effects on sales and profits. TPRs, as sales promotions, are discussed in marketing textbooks, and students are encouraged to investigate recent literature on the effects of sales promotions on consumers, retailers and suppliers.

The assignment is given to the students after a lecture on sales promotions as presented in marketing textbooks. Following spreadsheet presentations, discussion of discounts to use and the profit and sales impacts expected, students develop and justify recommendations regarding a TPR participation demand from a retail chain. The instructor provides spreadsheet input parameters for annual sales, manufacturing costs, broker commissions, and set-up charges required by the retailer. Students must define the TPR amount, and estimate the expected change in sales and the number of months that regular sales might be affected. Computed cells report the total program costs and effects on unit and dollar sales and profits. Students must justify student-defined entries and interpret the managerial implications of the computed cells. Special topics that can be discussed to help the student understand the business impacts of TPRs include whether breakeven units are feasible, and how regular sales volume may affect the profitability of the program. Brand loyalty is an important topic for discussion. Students can consider why different products generate brand loyalty, how this may affect the TPR attraction to new buyers,

whether new trial buyers will become regular buyers, and whether new-buyer sales will offset losses from sales to brand loyal customers who stock up during sales promotions. Once the challenge is recognized, the model leads to lively class discussions.

Student Reception of the TPR Assignment.* The spreadsheet spurs student interest in how TPRs work. Students debate the advisability of sales promotions, which leads to discussions of the need to balance channel demands and profit goals. Students are often surprised at the unit sales increase needed to offset a TPR. Student interest in how changing inputs impact profit and unit sales outcomes is particularly encouraging. The real learning comes when the student uses the spreadsheet to develop a recommendation and then provides a written justification of the recommendation. Questions in the assignment provide focus and structure to guide the student's analysis. The assignment questions also serve as a basis for class discussion after the assignment is given but before it is due so that confused students can ask questions and gain understanding.*

Student Assessments of the Assignment.* The Assignment was presented to four different classes (undergraduate and MBA) at two universities using two professors during the academic years 2007-2009. Each professor taught two classes. The first class at the first university included twelve undergraduates and four MBA's in a combined principles of marketing course. All of these students were used in the analysis of all classes combined, but only undergraduate results are reported for class specific analysis. The second class was a required marketing metrics MBA course with ten students. The second professor, located at a different university, taught two sections of a required MBA marketing strategy course. One section, with 27 students, met in a conventional classroom setting. The other, with 27 students, met in a distance learning format in which the class met physically together on three occasions, but not during the TPR assignment. For learning assurance purposes, students were asked to complete a questionnaire and return it anonymously to the professor. Students were assured that responses would not affect grades and questionnaires would not be (and were not) reviewed until grades had been turned in. The questionnaire had two items for each of seven learning objectives (profit impacts, channel demands, breakeven assessment, financial goals, unit sales required, need for test marketing, and demand elasticity). Students were asked to rate his or her level of understanding by responding to statements about clearly understanding the topic of the learning objective before and then after the assignment. Responses were level of agreement scores on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree) with 3 as "Neutral." Data was analyzed using paired-comparisons t-tests. One-tail tests were used because expected changes for all objectives were in the direction of improvement. Taking all classes together, average student self-evaluations significantly increased for all learning objectives following the TPR assignment (P<.005). The greatest improvement was in understanding profit impacts and channel demands, followed by the need for test marketing and breakeven assessments. In class-specific assessments, all learning objectives also showed statistically significant improvements regardless of teacher.*

Limitations and Further Work.* As presented, the assignment is limited to a retailer channel and does not consider long-term TPR effects. While this simplifies the assignment, the current success justifies elaboration. Future market share gains, greater awareness of the brand, and acquisition of new brand loyal customers are possible effects for more elaborate simulations. There is also a need for further testing with more professors and the authors*

request volunteers.

MODERATING EFFECT OF ORGANIZATIONAL CLIMATE ON THE RELATIONSHIP BETWEEN NEW PRDUCT DEVELOPMENT CAPABILITIES AND NEW PRODUCT PERFORAMCE

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EXTENDED ABSTRACT

Corporate culture plays a key role in determining the working climate, leadership style, strategy formulation, organization behavior, and processes of the firm (Saffold 1988). Culture must permeate an organization to make a difference (O'Reilly 1997). In RBV, culture is a valuable organizational resource because it is created over time, is intangible, is difficult to imitate, and has the potential for moving the firm to a position of competitive advantage (Helfat and Peteraf 2003). Studies show that a strong corporate culture contributes to improved performance, directly in terms of specific achievements (Deshpande', Farley, and Webster 1993) or indirectly by enhancing commitment and motivation associated with challenges linked to success (Lim 1995).

The goal of this research is to investigate organizational climate factors' (innovativeness and open-mindness) moderating role in the various relationships between NPD capabilities and NPD performance. To understand the specific role of organizational climate factors in the various NPD processes, we suggest NPD capabilities as a composition of various steps (idea generation, idea screening, technical development, market test, and commercialization) and various NPD performance measures (sales change, sales growth, profit performance, market share performance, ROI, ROA, and cash flow).

We surveyed 84 U.S. firms (originally from the list of the High-Technology Marketplace Directory). All companies met the criteria of developing and commercializing new products. The key informant was the project manager of a most recently developed product.

The results of the main-effects between new product capabilities and NPD performance show that most of new product capabilities, except technical development, are positively associated with various measures of NPD performance. For example, idea generation is positively associated with sales growth, market share, operation profit, ROI and ROA. Idea screening is significantly associated with sales growth, market share, operation profit, ROI and ROA. Commercialization also showed positive relationships with sales growth, market share, operation profit, ROI and ROA. However, all of the relationships between technical development and new product performance are not significant. Market test also has no significant relationship with operation profit and ROA.

Based on the moderated regression analysis results, we found a significant moderating

role of an open-minded culture on the link between NPD capabilities and NPD performance. For instance, open-mindness moderates the effects of idea generation on sales growth, market share, operation profit, ROI, and ROA. Open-mindness also moderates the effects of idea screening on sales growth, market share, operation profit, ROI, and ROA. But, only the effect of technical development on the market share is moderated by open-mindness. For market test and commercialization, open-mindness has significant moderating effect only on sales growth and market share.

For innovative culture, the findings indicate that innovativeness influences the relationship between idea generation and sales growth, market share, operation profit, ROI, and ROA. Innovativeness also moderates the effects of idea screening on sales growth, market share, operation profit, ROI, and ROA. When we examined commercialization, we found significant interaction effects to sales growth, market share, operation profit, ROI and ROA performance.

Although, not all of performance dimensions are supported in our hypotheses, the results suggest that researchers must understand the research context and choose meaningful measures of NPD performance for suggesting appropriate explanations. Additional research is needed to test other types of organizational cultures. Organizational culture is a complex construct that encompasses many dimensions. Future research could be directed toward inclusion of other important dimensions.

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HEALTHCARE ALLIANCES: IMPACT ON EACH PARTNER'S BRAND

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ABSTRACT

Most companies including healthcare organizations interface significantly with other organizations. In particular, the development of affiliations and health systems over the past 20 years has created situations where many provider organizations are working more closely together. Surprisingly, there is very little information in the literature describing the impact of alliances, affiliation, etc. on the different brands involved. This may be due to concerns about sharing proprietary information and partly due to it not being a metric that is usually anticipated or measured. A review of the literature and a study conducted by the authors provide new insights for healthcare marketing and strategy executives and academicians.

INTRODUCTION

Organizations generally partner to allow both organizations to better meet customer or market needs that might be difficult to meet on their own. It allows each organization to take advantage of its partners' complementary strengths and capabilities to increase revenues, expand markets and improve market position. One of the first steps generally introduced in any alliance, affiliation or partnership is marketing initiatives that are co-branded. Co-branding involves two or more organizations placing their brands on a product or service in an attempt to project a desired image to the consumer. The objective is to create an end-user message that is greater than what either of the individual brands alone could generate.

REVIEW OF LITERATURE

Simonin and Ruth (1998) tested a model (see Figure 1) in which attitudes toward a brand alliance were affected by four factors: pre-attitude towards Brand A, pre- attitude towards Brand B, product fit and brand fit. They concluded that 1) brand alliances significantly affect each of the individual brands; 2) prior attitudes towards each individual brand affects attitudes towards the alliance; 3) both product fit and brand fit significantly affect attitudes towards the alliance and, 4) when two highly familiar brands ally, they experience equal effects.

Figure 1
What Contributes to Perceptions of Brand Alliance
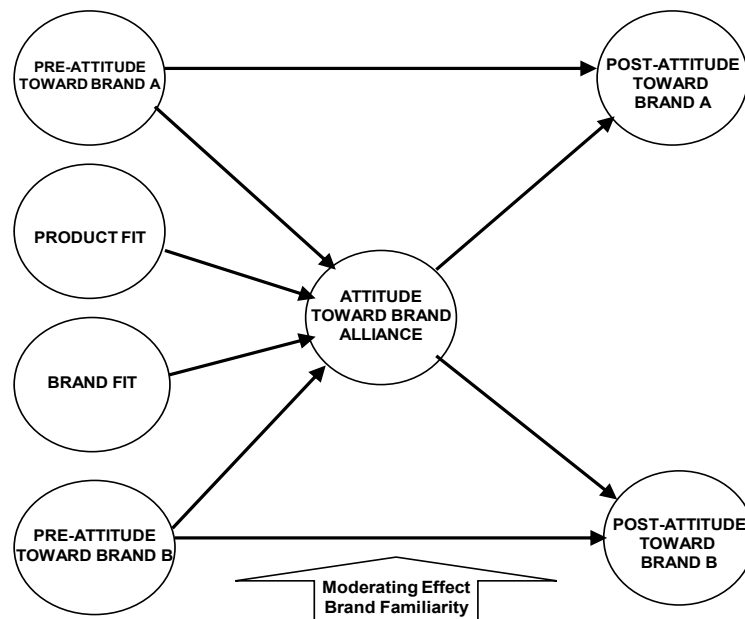
Keller (2003) also created a model to explain how brand alliances were impacted. Figure 2 shows the four broad categories – places, things, people and other brands. He concluded that in an increasingly networked economy, linking an organization's brand to other entities is a crucial skill for marketers to understand to optimally position their organizations. In addition, he noted that co-branding may be more effective than what can be achieved through traditional product marketing programs. Baumgarth (2004) tested Keller's model on 342 students and staff at a German university. His study confirmed Keller's model but he noted that brand fit was more important than brand attitudes towards the individual brands were less important.

Figure 2
What Contributes to Perceptions of a Brand
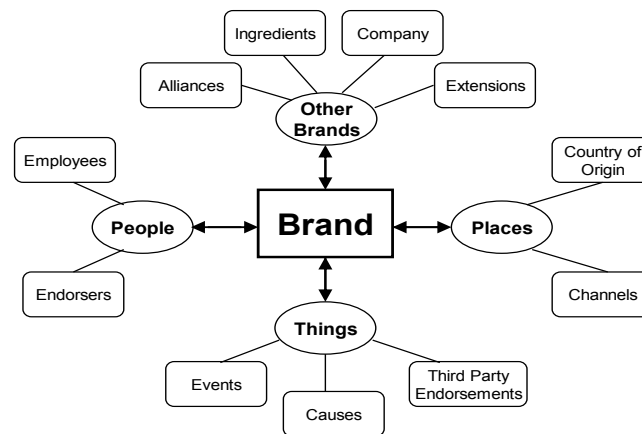
Dickinson and Barker (2007) noted that attitudes toward one brand can be transferred to another through marketing efforts (See Figure 3). They also indicated that brand fit, attitude and familiarity help or hurt. Consumers more familiar with the companies were more likely to rate the co-branded entity as better than those less familiar.

Figure 3 Evaluating Brand Alliances
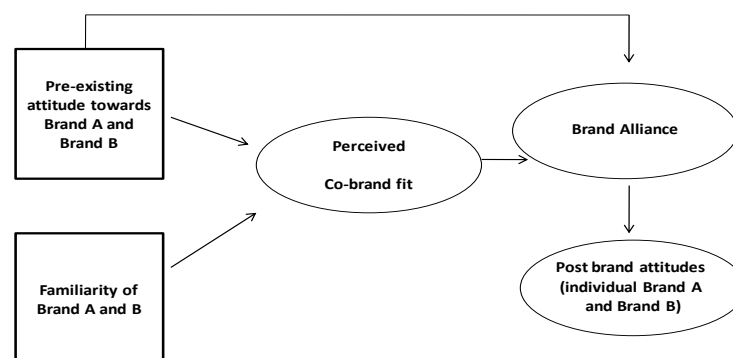
Figure 4, Helmig et al (2008) introduce a theoretical model of co-branded products where the two end objectives of a co-branding effort are affected by five clusters of factors and three clusters of spill-over affects. The end objective of economic success is affected by the characteristics of constituent brand/products, characteristics of the co-branded product, fit

between the constituent brands/products, fit between the constituent brands with co-branded product and personal specific behaviors. The end objective of positive effects on constituent brands is affected by characteristic of constituent brands, characteristics of co-branded products and fit constituent brands/product.

The authors note that communication regarding a co-branded launch should emphasize the functional benefits of the co-branded product and highlight the emotional and personal fit of the two partners.

In Figure 5, Payne et al, (2009) present a brand relationship model based on consumer information processing and consumer experiential perspectives. The authors argue that their model more clearly represents the complexity of co-branding a service. In particular, they emphasize the importance of understanding the consumer's experience as a factor in evaluating the success of the co-branded initiative.

Figure 4
Theoretical model of co-branded products
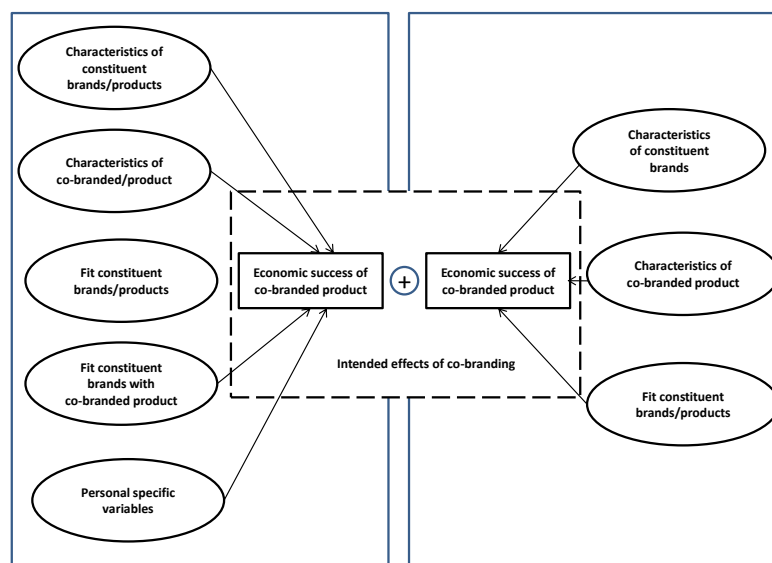
Figure 5
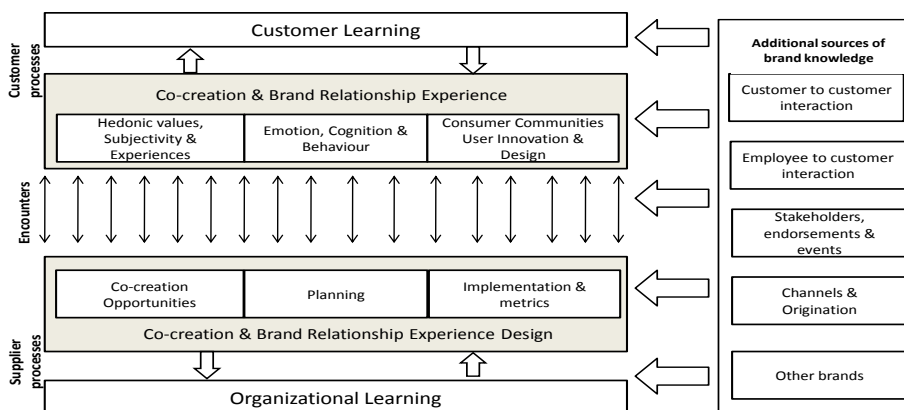
Park, Jun and Shocker (1996) conducted a study of 235 graduate students of brands Slim-Fast and Godiva Chocolates on a hypothesized cake mix. A Slim-Fast, Godiva Cake Mix was rated as significantly more preferred over just a Slim-Fast Cake Mix or a Godiva Cake Mix. The higher rating was attributed to the good brand fit between the two brands. (See Figure 6)

Figure 6
Likelihood to Purchase Cake Mix
on 1 to 7 Scale

Slim-Fast Cake Mix	Godiva Cake Mix	Slim-Fast Cake Mix by Godiva	Godiva Cake-Mix by Slim-Fast
4.08	5.11*	5.32**	5.13

* Significant difference between Godvia and Slim-Fast p<05

** Significant difference between Slim-Fast by Godiva and Godiva Cake Mix
   p<05

So what can we take away from this review of the literature. First, prior attitudes towards each brand affect the perceptions of the alliance. Second, brand fits seems to be the most important factor in generating a successful co-branded effort. Third, when two highly familiar brands form an alliance, both should positively benefit. And fourth, the more experience consumers have with each brand, the greater likelihood that previous experience will impact the success of the co-branded effort.

Research Study

Referral Center (RC) located in a large rural state had decided to reach out to as many community hospitals as were interested to find ways to help each become financially stronger. RC's competitors had been employing a "strip-mining" approach to rural areas, sending their doctors to small towns to bring the patients with good insurance back to the big city practices and hospitals, leaving rural doctors and hospitals to serve the uninsured and low paying insured. In most rural towns/counties, the local hospital is the largest employer and as these smaller hospitals began to lose profitable volume they were reducing staff to stay financially afloat. RC's strategy to keep financially appropriate patients in the local community by sending RC specialists to see patients at community hospitals and to train local physicians and hospitals on how to treat and manage less-acute patients was received positively. In return, RC expected that these closer working relations would result in the referral of appropriate higher acuity patients. By keeping lab tests, radiology scans, simple surgeries and admissions local, community hospitals, were able to grow their volume, as was Referral Center (RC). (See Figure7)

Figure 7
Change in Hospital Admissions

Affiliated Hospitals	2004	2008	% Δ	
D	2,231	2,701	+21%	
C	1,287	1,511	+17%	
B	1,830	1,960	+ 7%	10%
E	2,577	2,688	+ 4%	
A	5,361	5,336	0	
Referral Center	25,884	32,090	+24%	
13 Other Area Hospitals	67,431	63,981	- 5%	

As part of this strategy, formal affiliations were developed for Cancer, Heart, Children's Care and Stroke; as well as, less formal arrangements in ENT, digestive diseases, neurosciences and pulmonary. In the formal affiliations, the RC's protocols and medical oversight was provided.

After several years of forming and implementing the strategy, it was decided to measure the impact of these partnership relationships on consumer knowledge and perceptions.

Research Methods

The CEOs of seven partner community hospitals of Referral Center (RC) were contacted

in August 2008 and asked if they were okay with RC conducting a consumer study regarding if consumers in their markets were aware of the partnership and likelihood to use both organizations in the future. Five CEO's responded and asked to have their hospital included. A survey of 401 interviews stratified by county were completed by phone from September 17 to September 25, 2008. Consumers were called at home by a market research firm and told the purpose of the study and invited to participate. No incentives were used. Each hospital was the only one in its county. Total sample error was 90% confidence range at +/- 4.1% and 90% at +/- 9.2% at the county level. A sample of 80 consumers per county was chosen. Respondents were screened and only interviewed if primary or shared head of household, 21 years or older, the healthcare decision-maker for the household, and resident of the defined county.

Results

Figure 8 shows that 42% of the respondents were aware that their community hospital partnered with the Referral Center. The counties with the highest awareness had been more actively partnering and promoting their relationship. In the lowest scoring county, E, the local hospital had just announced an exploratory relationship with the Referral Center.

Figure 8
Awareness of Partnership with Referral Center

Q: You may have noticed that some Kentucky hospitals have formed partnerships, where physicians from one
     hospital will see patients at the other hospital. Are you aware of any partnership between (County hospital)
     and any other Kentucky hospital or health system?
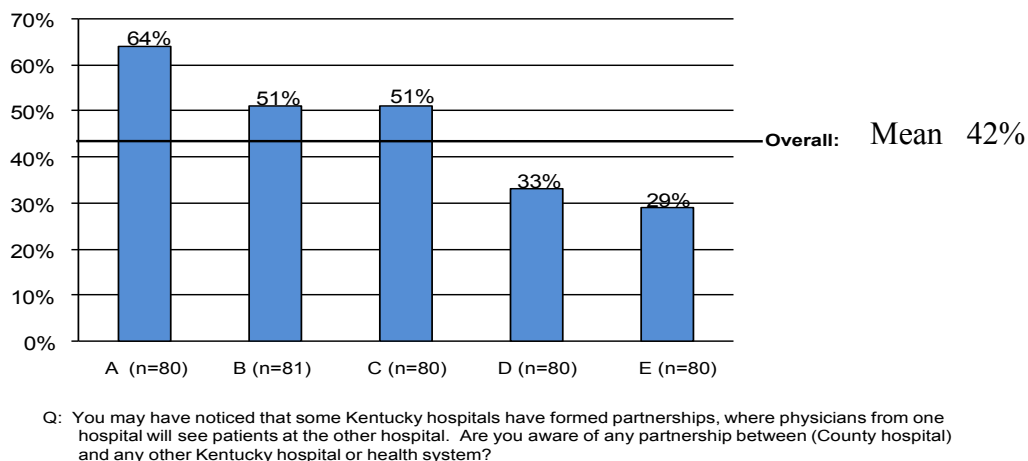
Figure 9 shows that 61% of the respondents felt their local hospital only provided some, a little or none of what they are looking for. The assessment of local community hospitals not meeting all of consumers' needs ranged from 69% to 44%.
v

One of the interesting results of the co-branding was that consumers had higher expectations that the patient experience would be improved and they expected increased availability of healthcare services. (Figure 10 and 11)

Figure 9
Expected Change in Patient Experience

Improve a Great Deal/Improve a Little

Mean 66%

Aware of RC Partnership Informed of RC Partnership
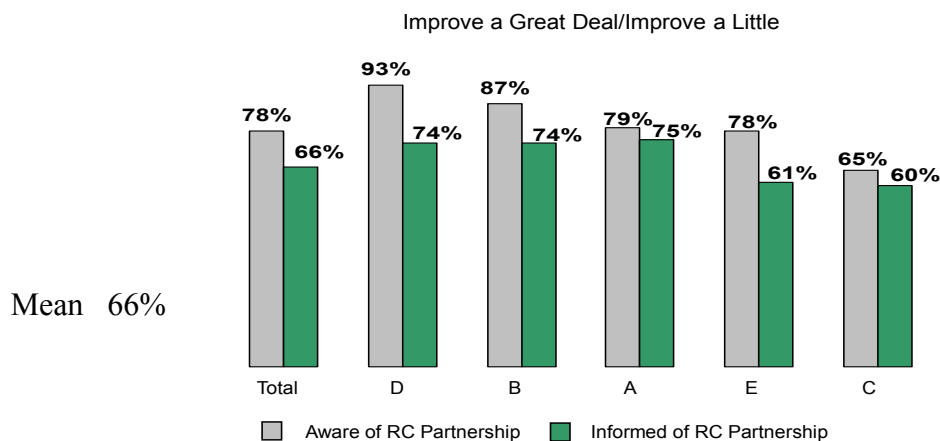
Q: Based on everything you know and feel about (County Hospitals) and Referral Center, do you think the
patient experience at (County Hospitals) will (improve a great deal/improve a little/not really change/ worsen
a little/worsen a great deal) because of its partnership with Referral Center?

Aware of partnership   Mean = 4.24 SD = .95
Informed of partnership   Mean = 4.07 SD = .95

Figure 11
Expected Change
Available Health Care Services

Improve a Great Deal/Improve a Little

Aware of RC Partnership Informed of RC Partnership
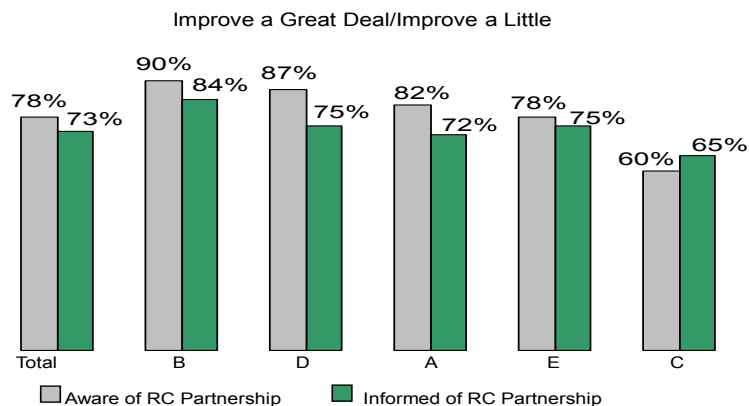
Q: Based on everything you know and feel about (County Hospitals) and RD, do you think the
patient experience at (County Hospitals) will (improve a great deal/improve a little/not really change/ worsen
a little/worsen a great deal) because of its partnership with Referral Center?

Aware of partnership   Mean = 4.31 SD = .92
Informed of partnership   Mean = 4.13 SD = .89

The two major co-branding findings most important to the referral center and the community hospitals related to future use of the community hospitals and of the Referral Center. In Figure 12, 59% of the population said they were much more or somewhat more likely to use their community hospital now that Referral Center physicians were seeing patients in the local hospital. The percentage ranged from 70% to 46%.

Figure 12

Likelihood to Use Community Hospital

- Overall, 59% of respondents say they are much more or somewhat more likely to use their community hospital now that RC doctors are seeing patients there.
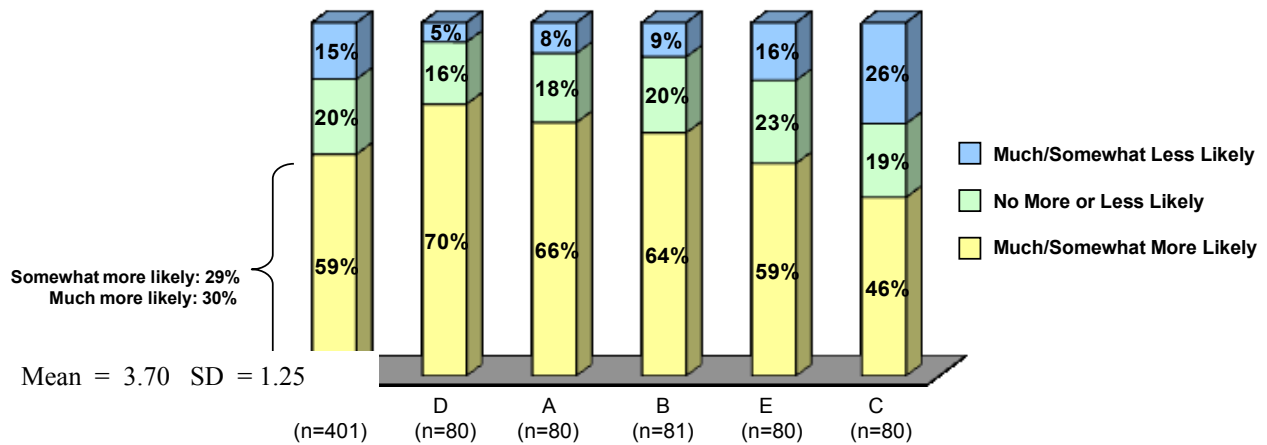
Q: If you were in need of medical care, would you be much less, somewhat less, no more or less, somewhat more likely or much more likely to use (Hospital) in the future now that RC doctors are seeing patients there?

Figure 13 shows that 53% of the respondents said they were much more or somewhat more likely to use the Referral Center now that the two organizations had formed a partnership. The percentages ranged from 65% to 48%.

Figure 13

Likelihood to Use Referral Center

• Overall, 53% of respondents say they are much more or somewhat more likely to use a RC facility now that RC doctors are seeing patients there.
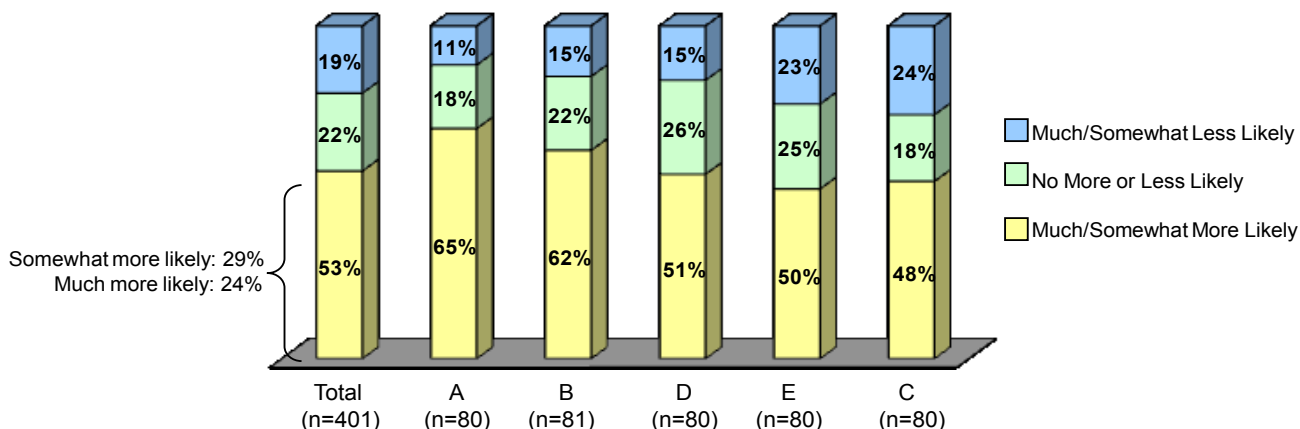
Q: If you were in need of medical care, would you be much less, somewhat less, no more or less, somewhat more likely or much more likely to use a RC facility in the future now that (Hospital) and Referral Center have formed a partnership?

Mean = 3.51   SD = 1.28

In addition, further analysis (see Figure 14) of which consumers were more likely to use and less likely to use both the referral center and community hospitals was conducted. Previous utilization, female gender and income were predictors of likelihood to use or not use.

Figure 14

Impact of Co-Branding on RC and Community Hospitals
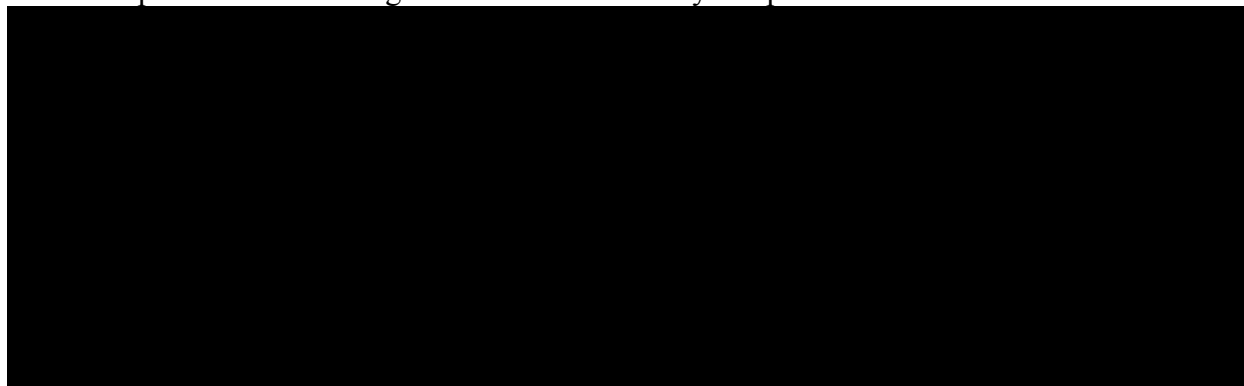
DISCUSSION

The data indicates that both partner brands and the referral center brands were positively influenced. Perceptions, attitudes and future behavior were all positively impacted. We believe this is due to the good fit between the brands and supported by the clinical and operational programs created. It appears in this case that the co-branding approach is a win-win for all involved. As would be expected, those who were familiar with the partnerships were more likely to rate both the local hospital and referral center more positively than those less familiar.

One unexpected side effect of the co-branding is the increased expectations from consumers regarding medical care. Making sure both the community hospitals and the Referral Center can deliver the expected benefits around patient care and availability of services has become an important and increasing focus of the partnership.

Increasingly in healthcare, competition is between large systems or alliances of hospitals and other entities as opposed to competition between individual firms. While there are many configurations of alliances/networks, simple co-branding of joint efforts appears to be an effective strategy for competing and creating marketing advantages.

The findings of this study seems to support the findings of Keller, Baumgarth, Park that increased familiarity with the individual brands and good product fit between the brands results in an increased likelihood to use a co-branded service. However, previous experience with each brand had a noticeable effect on likelihood to use that organization in the future but experience with the partner's brand did not affect future use of the originating brand.

MANAGERIAL IMPLICATIONS

Identifying which co-branded products or services to offer starts with identifying where there are gaps in product, service, quality and access. In our case, consumers were leaving their communities to receive medical care. By Referral Center providing that care at their local community hospital, patients' needs were better met.

It appears when there is a good fit (like in this study), both co-branding organizations can improve their market position. Co-branding is a corporate strategy worth pursing.

Recognize that expectations of the co-branded service will likely exceed the expectations of each individual brand and be prepared to increase investments in clinical programs to improve operational components of the experience. RC continues to add additional days of service, more types of sub-specialty care, and to invest in personalized access/appointment personnel to meet increasing expectations.

Co-branding can lead to more formal organizational structures. RC is involved in more discussions regarding increased organizational integration and acquisition.

Conducting studies like the one presented and sharing it with partners and potential partners can be a useful strategy for building alliances.

FURTHER RESEARCH

Our research indicates some potential customers were not favorably impressed by a co-branded effort. Better understanding what factors contribute to this negative attitude would be useful. In addition, the advantages and disadvantages of a long-term co-branded relationship would provide useful managerial information.

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POST-PURCHASE RETURN INTENT: THE INFLUENCE OF UTILITARIAN AND HEDONIC UTILITIES

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ABSTRACT

Post-purchase return intent plays an important role in shaping up firms' return policies. Interestingly enough, the literature lacks theoretical support to facilitate a better understanding of the consumer returns decision process itself. The present research addresses the gap by using hedonic and utilitarian utilities theory to position the post-purchase return intent within the broader context of consumer behavior and supply chain management. An experiment tests the relationship between these two types of utilities and the return intent. Managerial implications and future research directions are presented following the research findings.

INTRODUCTION

Supply chain management is often defined as the art and science of "proactively planning and coordinating the flow of products, services, and information among connected firms focusing on creating and delivering value to end users." (Cavinato 1992, p. 285). However, not all buyer-seller exchanges end with delivery of the product to a satisfied end user. This approach considers only the downstream flow of the products, services, or information to the end user. When the end user is not satisfied with the value received the seller often allows the buyer to return the product. Practitioners and academics alike are starting to recognize the importance of the return movement of products and services as an additional flow in the supply chain. Rogers and Leuschner (2004) point out that the management of returns is one of the distinct dimensions of the supply chain concept as compared to the traditional logistics-oriented perspective. Rather than be considered as two independent flows supply chain management treats each flow as a part of a continuous supply chain loop. Understandably, the question of how to "close the supply chain loop" in terms of extracting social, business, and environmental value-added for all the participants in the supply chain takes center stage in returns management research agenda (Wells and Seitz 2005). The following definition is illustrative: "Returns management is the supply chain management process by which activities associated with returns, reverse logistics, gate-keeping, and avoidance are managed within the firm and across key members of the supply chain."(Rogers et al. 2002, p. 1)

The increased interest in the return movement of products and service from the point of consumption back into the supply chain is supported by the following statistics, from 1990 to 1999, only 0.88% of supply chain and/or logistics related articles were discussing returns management. From 2000 to 2004, this number jumped to 4% (Rogers and Leuschner 2004). Such increased interest in the field is understandable as the annual costs associated with returns within the United States are estimated to be close to $1 billion, which cut organizational profit

margins by an average of 3.8% (Blanchard 2005). In their review of returns management-related literature, Rubio et al. (2008) state that the main streams characterizing research in the area are focused on organizational (firm-centered) efforts related to asset recovery, production planning and related returns inventory management, and reverse logistics within the supply chain umbrella. Since firms realize that returns are costly, they struggle to find ways to reduce them in the supply chain (Rogers and Tibben-Lembke 1998). This predominant firm-centered focus is justified because, as in every relatively young business discipline, showing the effect of returns on the bottom line is a necessity (Stock 1998). However, focusing only on the firm by excluding the customer from the returns-related value equation may prove myopic (King et al. 2008). They introduced the term "gate keeping" to describe efforts by firms to monitor activity at the point of return to illustrate the importance of the interaction between companies and final consumers in reducing returns.

Developing and institutionalizing policies and procedures that both facilitate and control returns is the focal point of investigation when returns-related consumer behavior is discussed (O'Brien et al. 2009). Whether these policies are characterized as "extremely liberalized"/ "no questions asked" type like Wal-Mart (Sciarotta 2003) or tend to impose certain limitations on returns-related refunds to prevent fraudulent intent (Hess et al. 1996), they remain substantially different across firms, products, and industries, illustrating the challenging nature of the business to customer relationships in returns settings (Wood 2001).

Consider the following, returns policies and returns processing are heavily influenced by reasons stated by customers for returns (Obrien et al. 2009). However, these companies do not trust these same customers to be honest (King et al. 2008). On one hand, firms operate on the basic assumption that consumers tend to exhibit fraudulent behaviors, with terms like "dishonesty", "deshoping", and "retail crime" used to illustrate firms' prevailing attitudes toward customers who return products (King et al. 2008). On the other hand, customers are equally suspicious of firms and voice their frustration with inferior product quality, price gimmicks, and firms constantly trying to "rip them off" in any exchange as the main reasons for consumers to take advantage of returns processes (Hunt and Nevin 1981). This apparent paradox deserves further attention. While the organizational perspective has been largely addressed through the development and implementation of returns policies and regulations (Petersen and Kumar 2009), focused studies using the customers as units of investigation related to their returns intentions are scarce.

This research addresses the gap by incorporating the theory of hedonic and utilitarian satisfaction in more closely investigating the thought process behind shaping up consumers' intent to return a product. In general, this theory suggests that consumer attitudes and intentions, including the intent to return a product, have two distinct components: 1) hedonic and 2) utilitarian (Batra and Athola 1991). While the current research acknowledges the notion that how useful or beneficial the product is outlines a strong motivational factor in terms of return intent, it suggests that only in combination with the experiential effect of owning the product, a more complete theoretical model is needed regarding return intent. Such a model has the potential to provide additional guidance in terms of return policies development and implementation.

Purpose and organization of the paper

The purpose of the paper is to identify both the hedonic and utilitarian dimensions of consumer intent to return and their potential effect on policy formation. The paper is organized as follows: A literature review to establish the theoretical background is presented focused on the applicability of hedonic and utilitarian theory drawn from the field of economics toward returns behavior. Following the literature review the main hypotheses of the study are presented. A methods section is discussed next, describing in more detail the experimental design of the study. The results of the experiments are described regarding support for the hypotheses. The results are followed by outlining some managerial implications. Finally, research limitations are acknowledged, concluding with future research directions.

LITERATURE REVIEW

Studies of Returns Policies from Firms' Perspectives

Previous studies of returns policies include two streams of relevant research: manufacturers' returns and consumer returns. The literature on manufacturer's returns policies is quite extensive and examines the impact of a variety of factors. Marvel and Peck (1995), for instance, show that the decision to accept returns by manufacturers depends on the nature of demand uncertainty. Uncertainty over customer arrivals favors accepting returns since these induce retailers to hold risky inventory and result in optimal stock levels. When the uncertainty is over consumer's valuation however, a no-returns policy is recommended to avoid unprofitable price distortion. Padmanabhan and Png (1995) provide a summary of the various explanations for the use of manufacturer's returns policies, including the need to: share the risk with the retailers when demand is uncertain, safeguard the brand name, and facilitate the distribution of new product information. More recently, Tsay (2002) shows how risk sensitivity affects manufacturers' optimal returns policies.

Next, based on the insurance role of manufacturer's returns policies, Pellegrini (1986) considers returns policies as an effective competitive tool for channel coordination when products are close substitutes and retailers are risk-neutral. The channel-coordination role of manufacturer's returns policies is also explored by Pasternack (1985), who investigates how a partial credit for unsold stock can achieve channel coordination. Next, the manufacturer's returns policy can serve as a tool either to signal the quality of the new product when it is not observable by retailers (Chu 1993) or to learn the demand for a new product (Sarvary and Padmanabhan 2001). Finally, Kandel (1996) provides arguments for accepting returns based on the optimal allocation of responsibility for unsold inventory between the manufacturer and the retailers. His research discusses six factors that affect the choice of returns, including: optimal inventory, capability to dispose of unsold stocks, risk-sharing, incentives to provide marketing efforts in terms of quality, service, and promotions, beliefs about sales distribution when there is asymmetric information between the manufacturer and the retailer, and costs of returns.

Studies of Returns Policies from Consumers' Perspectives

The second stream of literature focusing on consumer behavior based-returns policies is

more limited. Che (1996) investigates the role of consumer-returns policy in screening for high-valuation customers. He finds that when the retail cost is high and consumers are risk-averse, the retailer can protect its margin by selling only to high-valuation customers under a returns policy. Next, from a signaling perspective, Moorthy and Srinivasan (1995) argue that money-back guarantees, with liberal returns policies for consumers, can credibly signal product quality. MS identify conditions under which money-back guarantees are necessary to signal quality; they also identify conditions under which these guarantees serve as a useful supplement to price in signaling quality.

Hess et al. (1996) investigate the role of a non-refundable charge in attenuating the moral hazard problem associated with accepting returns from consumers. That is the case when some consumers purchase the product with the intention of returning it after extracting some free value out of it. They find that the retailer is better off imposing a non-refundable charge when the trial value, the overall valuation, or the probability of consumer finding a matched product is high. Such a charge is also recommended when consumers' transaction cost or the salvage value of the returned product is low.

HYPOTHESES

Utilitarian Dissatisfaction

Past research in marketing and economics has provided insights into consumers' decision making processes based on the theory of utility, recognizing the existence and importance of both utilitarian and hedonic considerations in making choices (Stigler 1950, Zajonc and Markus 1982, Dhar and Wertenbroch 2000, Shiv and Fedorikhin 1999). Utilitarian dissatisfaction is the negative feeling experienced by consumers when products exhibit a relatively low level (below the consumers' expectation) of performance regarding its functional features.

H1: A higher level of utilitarian dissatisfaction leads to a higher rate of consumer returns.

Hedonic Satisfaction

In contrast, hedonic satisfaction is defined as the positive feeling that consumers experience when the product provides a relatively high (above the consumers' expectation) level of non-functional features (e.g., affection). Specifically, consumers may evaluate a product based on its functionality (utilitarian evaluation) of the product's usefulness or benefit and/or the experiential affect associated with it (hedonic evaluation; e.g., how pleasant those associated feelings are) (Batra and Ahtola 1990).

H2: A high level of Hedonic Satisfaction will lead to a lower rate of return than those with a low level of Hedonic Satisfaction.

Utilitarian Dissatisfaction and Hedonic Satisfaction

Most importantly, these two dimensions need not be mutually exclusive (Shiv and Fedorikhin 1999). However, the characteristics of the choice task can influence the relative

weight that consumers place on these two types of utilities. For instance, Dhar and Wertenbroch (2000) investigate the relative importance of hedonic and utilitarian considerations in an acquisition condition (when consumers choose which of the many alternatives to acquire) and a forfeiture condition (when consumers choose which of the alternatives to give up). They find that relative preferences for hedonic as compared to utilitarian goods are stronger in forfeiture conditions than in acquisition choice conditions.

This finding suggests that when making the decision to return the product, a forfeiture condition, consumers are more likely to be influenced by hedonic considerations than in the acquisition condition. Therefore, given the existence of both utilitarian and hedonic considerations, one may expect that the motivation to return a product due to the consumers' dissatisfaction with the product functionality (i.e., utilitarian dissatisfaction) would be moderated by the consumers' hedonic satisfaction.

H3: Hedonic satisfaction moderates the impact of utilitarian dissatisfaction on the rate of returns: a higher level of hedonic satisfaction leads to a weaker effect of utilitarian dissatisfaction on the rate of returns (i.e., a flatter slope).

METHOD

Experimental Design

This study is conducted using a 2 (high vs. low utilitarian dissatisfaction) X 2 (high vs. low hedonic satisfaction) between-subjects factorial design. The subjects, two hundred twenty-five students from a middle-sized urban university, were randomly assigned to one of four conditions. A high percentage of this student population works either full-time or part-time and commutes to the campus daily. Because they spend many hours each week driving and have their own source of income, a product that they either already have or are interested in purchasing is a portable navigational device (based on the Global Positioning System) or as it is commonly known as "a GPS".

The subjects are presented one of four possible scenarios (Appendix), in which the GPS that he (she) has purchased has disappointing performance characteristics (utilitarian dissatisfaction), but also appears to provide emotional satisfaction (hedonic satisfaction) as perceived by the buyer and by peers. The performance characteristics are classified as utilitarian (i.e., either high or low utilitarian dissatisfaction) and hedonic (i.e., either high or low hedonic satisfaction) performance of the product. Given one of four possible randomly assigned scenarios, participants are asked to report the likelihood that they will return the GPS to the store. To reflect the real-world practice of imposing a non-refundable charge when the trial value or the overall valuation of the product is high (Hess et al. 1996), we inform respondents in all four scenarios that a 15% restocking fee is imposed on each returned item.

Accordingly, we manipulate the independent variables, including utilitarian dissatisfaction and hedonic satisfaction and measure the dependent variable, which is the consumers' intention (i.e., likelihood) to return the GPS to the store. Most importantly, to ensure that we have successfully manipulated the respective independent variables (i.e., utilitarian

dissatisfaction and hedonic satisfaction), we measure the level of utilitarian dissatisfaction and hedonic satisfaction perceived by the respondents in each of the four conditions. We employ four-item Likert scales to measure each of these two variables adapted from Babin, Darden, and Griffin 1994.

As an additional manipulation check a second set of scenarios was used substituting utilitarian satisfaction for utilitarian dissatisfaction in each of the four scenarios. In the utilitarian dissatisfaction scenario subjects were told that, "The GPS does not work as well as you would like", whereas in the utilitarian satisfaction scenario subjects were told that, "The GPS does work as well as you would like". As expected, intention to return the GPS dropped accordingly in each of the respective parallel scenarios, which confirmed the dissatisfaction/satisfaction manipulation was working.

Construct Validity

When instrument items are adapted for a different purpose and modified from their original form construct validity can be an issue. To ensure that each set of items retained their construct validity, a test of convergent and discriminant validity was conducted. An initial exploratory factor analysis was conducted to ensure that the items designed to measure each concept, (utilitarian dissatisfaction and hedonic satisfaction) did behave as expected with 61% variance explained. The initial instrument contained four items designed to measure utilitarian dissatisfaction and four items to measure hedonic satisfaction. Based on the initial factor loadings one item on the hedonic scale was removed due to low correlations with the other three items. The final seven items, using a Varimax rotation, resulted in a two factor solution with 60% variance explained, divided into one four item scale measuring utilitarian dissatisfaction and a three item scale measuring hedonic satisfaction. As expected, high levels of utilitarian dissatisfaction loaded positively with intention to return the GPS and high levels of hedonic satisfaction loaded negatively with intention to return the GPS.

Table 1 Factor Analysis

Rotated Component Matrix	Component	
	1	2
Will Return the GPS to Store	-.832	
All Features Looking For	.761	
Accomplish What Want	.710	
Having GPS a Joy	.650	
Valuable Investment	.599	
Friends Enjoy GPS Feel Good		.762
Friends Travel with Me		.748
Sense of Adventure		.700
Travel Because Want To		(a)

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
(a) Item deleted due to load loading

Reliability

Each set of measures was then tested for reliability. The four item set for Utilitarian Dissatisfaction yielded a Cronbach's alpha of 0.80 and the three item set measuring Hedonic Satisfaction yielded alpha = 0.69. These levels are sufficient for basic research (Nunnally and Bernstein 1994).

Results

The results are reported in Table 2 and graphically depicted in Figure 1. Accordingly, we find that the simple effect of utilitarian dissatisfaction on the rate of returns as hypothesized in H1 is supported (p=0.002) as is the simple effect of hedonic satisfaction on the rate of returns as hypothesized in H2 is supported (p=0.030). However, the moderating effect of hedonic satisfaction on the relationship of utilitarian dissatisfaction and rate of returns as hypothesized in H3 is not significant.

Table 2 [ANOVA]
Tests of Between-Subjects Effects
Dependent Variable: Return GPS

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	17.517(a)	3	5.839	5.039	.002
Intercept	3576.552	1	3576.552	3086.786	.000
HS	5.498	1	5.498	4.745	.030
UD	11.827	1	11.827	10.207	.002
HS * UD	.102	1	.102	.088	.767
Error	249.113	215	1.159		
Total	3843.000	219			
Corrected Total	266.630	218			

Nevertheless, hedonic satisfaction does reduce the rate of returns (p=0.03) and the shape of these relationships (i.e., the simple effect of UD and the moderating effect of HS) as shown in Figure 1 are in accordance with our expectation. This suggests that (1) utilitarian (dis)satisfaction is quite an important determinant of the consumer returns, (2) other factors influencing hedonic utility of the product (such as aesthetics), though helpful in creating the value of the product, do not eliminate the negative effect(s) of the product's poor performance regarding its functional features on the intention to return the product. The influence of peers is also shown to influence hedonic satisfaction which influences likelihood of return.

Figure 1
Estimated Marginal Means of Return GPS
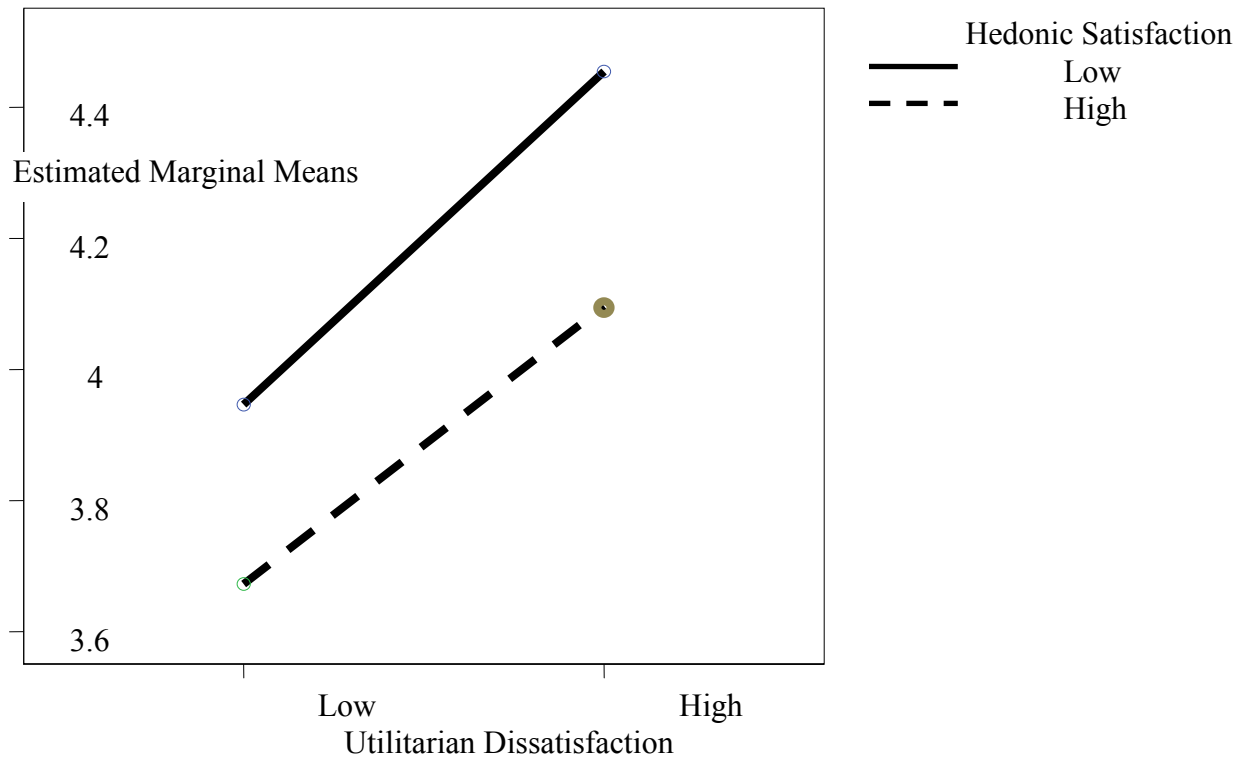
MANAGERIAL IMPLICATIONS

By identifying and measuring the impact that hedonic satisfaction has on customer returns behavior managers now have the ability to measure heretofore information previous disregarded in studying and setting returns policies. Current returns processing gathers information about performance characteristics, but equally important is the gathering of hedonic characteristics at the point of returns. This information has the potential to reduce the amount of returns by identifying and then addressing those product related problems. While this study identifies an important variable to include in returns policies it does not address the challenges of implementing procedures to increase the collection of hedonic satisfaction information at the point of return. Gathering personal information regarding emotional associations (hedonic satisfaction) with a product might be more challenging than asking the consumer about product performance perceptions (utilitarian satisfaction/dissatisfaction). If friends' perceptions are more important, then firms should incorporate friends' evaluation in the consumer decision process. Firms' employees will need additional training and supervision to reinforce the importance of asking potentially more sensitive questions when processing returns. Consumers returning products may also be reluctant to provide this additional information if they feel that it may influence the likelihood of the firm accepting the return.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

While the subjects included in the sampling frame for this experiment in many cases are actual and potential consumers for this product, the sample was collected in an academic setting so the generalizability of this study is limited. Future studies should include a random sample of consumers from the actual marketplace.

Reverse logistics should not be viewed as a costly side-show to normal operations, rather as an opportunity to build competitive advantage (Stock, Speh, and Shear 2006). Competitive advantage for any organization is centered on its ability to provide superior levels of customer satisfaction.

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APPENDIX

Hedonic Satisfaction – Utilitarian Dissatisfaction Scenarios

Low HS Low UD

You have been looking at GPS's for some time and you finally bought one a few days ago. You are not pleased with how it looks. Some of your friends ask to see it and also tell you they don't care for its looks. In addition, the GPS does not work as well as you would like. The screen is sometimes hard to read in bright light and you've noticed the maps sometimes are missing streets. You can return the product for 30 days with no questions asked, but there is a 15% restocking fee.

High HS Low UD

You have been looking at GPS's for some time and you finally bought one a few days ago. You are quite pleased with how it looks. Some of your friends ask to see it and also tell you how good it looks. However, the GPS does not work as well as you would like. The screen is sometimes hard to read in bright light and you've noticed the maps sometimes are missing streets. You can return the product for 30 days with no questions asked, but there is a 15% restocking fee.

Low HS High UD

You have been looking at GPS's for some time and you finally bought one a few days ago. You are not pleased with how it looks. Some of your friends ask to see it and also tell you they don't care for its looks. In addition, the GPS does not work as well as you would like. The screen is usually hard to read in bright light and you've noticed the maps are missing many streets. You can return the product for 30 days with no questions asked, but there is a 15% restocking fee.

High HS High UD

You have been looking at GPS's for some time and you finally bought one a few days ago. You are quite pleased with how it looks. Some of your friends ask to see it and also tell you how good it looks. However, the GPS does not work as well as you would like. The screen is usually hard to read in bright light and you've noticed the maps are missing many streets. You can return the product for 30 days with no questions asked, but there is a 15% restocking fee.

Items included with each scenario:

With this GPS I have all the features I was looking for.

Strongly Agree	Agree		Disagree	Strongly Disagree
1	2	3	4	5

With this GPS I travel not because I have to, but because I want to.
My friends will travel with me because I have this GPS.
I can accomplish what I want to with this GPS.
Having this GPS gives me a sense of adventure.
My friends enjoy this GPS, which makes me feel good
This GPS is a valuable investment.
Having this GPS is truly a joy.
I would return this GPS.

THE ROLE OF COMMUNICATION IN NURSING JOB SATISFACTION AND PERFORMANCE FOLLOWING A SIGNIFICANT CHANGE IN LEADERSHIP: IMPLICATIONS FOR HEALTH CARE MANAGEMENT

Eric G. Harris
Kristen Maceli

ABSTRACT

It has been well-documented that the United States faces a serious nursing shortage. As Harris and colleagues (2007) recently discussed, as many as thirty states are currently experiencing nursing shortfalls. An aging nurse population, fewer new applicants, increased demand from aging baby boomers, and increased job dissatisfaction all contribute to the problem. Critical to the issue is that the health care industry is growing, and concerns about the service quality of available health care continue. While health care may be the fastest growing service in both developed and developing countries, the resultant strains have exacerbated problems associated with maintaining strong nursing morale, and ultimately, with retaining high quality nursing professionals.

INTRODUCTION

One important aspect of health care success, in general, is obtaining the right combination of talent, leadership, and support (Scott, 2009). Strong leaders understand the importance of getting to know their team in order to build trust, to establish connections, and to lead through turbulent times. Few changes that occur in the hospital setting are as turbulent as when CEO turnover occurs. Establishing strong communication ties is especially important in these situations. Good communication is essential for understanding the different learning styles and needs of employees, the result of which is to build trust and foster connectivity. Leaders must also be able to communicate expectations and direct employees to achieve organizational goals (Scott, 2009), and this is especially critical in the time of leadership change. Communication, in general, plays a major role in effective organizational change (Johansson and Heide, 2008).

Empirical studies highlight the importance of communication in nursing job satisfaction. Communication satisfaction, quite simply, brings about a more enjoyable work experience (Hecht, 1978). Although researchers have addressed the importance of strong communication flow in the hospital environment, the issue has not received significant attention during the time of leadership turnover.

Examining the importance of communication in healthcare, Pincus (1986) argued that hospital executives must be sensitive to the overall communication atmosphere. The researcher examined three specific types of communication flows that are particularly relevant:

communication with *supervisors*, with *co-workers*, and with the *CEO*. His results indicated that both communication with top management (e.g., CEO) and communication with supervisor influenced nurse job satisfaction. The results of the Pincus (1986) study revealed that while both communication with supervisor and CEO are important in determining nurse job satisfaction, it is the communication with the *supervisor* that plays a stronger role in influencing satisfaction, and ultimately, job performance. Other work has revealed that both communication with upper administration and immediate supervisors influence nursing job satisfaction (e.g., Frone and Major, 1988). These effects, which can be explained in part by Leader-Member Exchange Theory (LMX), are an important part of the overall organizational climate (Yrle et al. 2003; Mueller 2002).

Given that it has been over 20 years since the studies cited herein, and that changes in hospital leadership are common in today's hyper-competitive health care industry, the effects of communication following a significant change in hospital leadership warrants attention. Indeed, it has been estimated that CEO turnover in hospitals has ranged from 14 – 18% per year over the last decade (Khaliq et al., 2006).   The results of the Khaliq and colleagues (2006) study on CEO turnover indicate both positive and negative effects of CEO turnover in areas of employee morale and medical staff relations. Numerous other sources predict the trend to continue, or even intensify in the face of continued economic stress.

Our work focuses on the relative impact of communication with superiors *after* a significant change in leadership occurs. As such we address three specific research questions:

Following a significant change in hospital leadership, what is the relative impact of communication with supervisor, CEO, and co-workers on nurse satisfaction?

Do the communication effects impact job satisfaction of nurses when controlling for satisfaction with the leadership change?

Do the communication effects impact the job performance of nurses directly, or do the effects occur indirectly through job satisfaction?

METHOD

Participants in our study were front-line nursing personnel at a medium sized hospital (< 300 employees) located in the southeastern United States. The study was a part of a larger data collection effort. The hospital had undergone a change in the CEO a little over one year prior to data collection. A sample of 143 front-line nurses was given a survey instrument that contained constructs related to the study as well as several unrelated measures. A total of 111 nurses returned the survey in usable form for a response rate of exactly 77%. Although relatively small, this sample size well exceeds common guidelines of at least 15 responses per construct (Hair, Anderson, Tatham, and Black, 1998). The average age of the nurses was 43 years, the average tenure at the hospital was approximately 6 years, and the average tenure in health care was nearly 15 years. Eighty-four percent (84%) of the respondents were female and sixteen percent (16%) of the respondents were male. A non-response analysis revealed that respondents did not differ from non-respondents on various demographic factors, including age and tenure with the

firm. The measures that were utilized in the study are discussed below.

Measures

Most of the scales in this research were single-item measures. While single-item measures are commonly criticized in the literature, they do offer practical advantages and the researchers were encouraged to keep the survey instrument as short as practically possible. The scales are discussed below.

Openness of Communication: The openness of communication measures for CEO, coworkers, and supervisors were on 9-pt. single item scales assessed as "How do you rate your satisfaction with each of the following communication issues: openness of communication with CEO (CEO), openness of communication with your coworkers (CO), openness of communication with your immediate supervisor (SUPER)." This construct captured the perceived two-way communication between nurses, their coworkers, and their superiors. The response ranges were from "1= extremely dissatisfied to 9 = extremely satisfied."

Job Satisfaction: The job satisfaction measure was a multiple-item, composite measure that assessed job satisfaction with: overall job, supervisor, hospital policies, support provided by the hospital, and opportunities for advancement with the hospital, where "1 = extremely dissatisfied and 9 = extremely satisfied." The composite measure was formed by utilizing the average score across the individual items.

Job Performance: Job performance was measured by utilizing three independent (single-item) measures, including "overall job performance", "quality of work performed", and "quantity of work performed." These items were assessed on 9-pt. scales ranging from "1 = among the worst in the hospital" to "9 = among the best in the hospital."

ANALYSIS

Research Question #1:

Our first research question asked if following a significant change in hospital leadership, what is the relative impact of communication with supervisor, CEO, and co-workers on nurse satisfaction? We utilized stepwise regression to explore the relative impact of the three independent variables (CEO, CO, and SUPER) on JOBSAT . This procedure is useful for assessing the relative impact of independent variables (Hair, Anderson, Tatham, and Black 1998). The results are presented in Table 2 (1). The procedure revealed that two variables were significant, CEO and SUPER, and that the relative impact of CEO was stronger than that of SUPER (β = .44, p < .05 and β = .33, p < .05). The adjusted r-square was 41%. Importantly, however, the confidence intervals for the betas *did* overlap (CEO = [.20, .43], SUPER = [.13, .37]). The table reveals the stepwise results, with the higher betas revealing a stronger impact on the dependent variables. We can state that the relative contribution of CEO was greater than that of SUPER, although the overlap is noted. Ultimately, we conclude that the openness of communication with the CEO following a leadership change is *at least* as important as the previously noted effect of openness of communication with the supervisor on nursing job

satisfaction. This finding addressed our first research question.

Research Question #2:

Our second research question asked if the communication effects impact job satisfaction when controlling for the simple satisfaction that came from the change in leadership itself. Here, the issue was if the change in job satisfaction of nurses over the past year was due to the actual change in leadership or if the level of communication with the new CEO also played a role. Here, we regressed "change in job satisfaction compared to one year ago (SATCOMP)" on "satisfaction with the change in new leadership (SATCHNG)" and "openness of communication with the CEO (CEO)". The SATCOMP variable was measured on a 9-pt. scale bounded by 1= "much less satisfied than one year ago" to 9 = "much more satisfied than one year ago". The average satisfaction change was 5.96, which was significantly higher than the midpoint of "about the same" (t = 4.17, $p < .05$). As such, we can say that the nurses were more satisfied than they were one year previous to the survey administration (and CEO change). The results of the analysis revealed that the change in job satisfaction (SATCOMP) was significantly influenced both by the openness of communication with the new CEO (CEO $\beta = .37$, $p < .05$) and the actual change in leadership itself (SATCHNG $\beta = .34$, $p < .05$). These results are shown Table 2 (2).

Research Question #3:

Research question #3 asked if the communication effects impact job performance of nurses directly, or if the effects occur indirectly through job satisfaction. Previous work by Pincus (1988) revealed that communication with the supervisor directly impacted nursing job performance. In our first model, we regressed SELFOVER on the three independent variables (CEO, SUPER, CO). These results are shown in Table 2 (3). The model was non-significant (F = 1.20, $p = .31$), as were all of the beta coefficients. The same results were found when the both self-rated quantity of work performed (QUANT), [F = 1.25, p = .29], and self-rated quality of work performed (QUAL), [F = 1.76, p = .16)] were regressed on the independent variables. JOBSAT did, however, influence all three aspects of the self-rated performance (SELFOVER, β = .19, $p < .05$; QUAL, $\beta = .27$, $p < .05$; QUANT, $\beta = .24$, $p < .05$). While the strict test of mediation (influence of communication variables on job performance is not satisfied), the influence of the communication variables essentially works indirectly through JOBSAT.

DISCUSSION

The results of our work reveal that communication with CEO plays an important role in nursing job satisfaction, and ultimately, job performance. Whereas previous work has highlighted the importance of communication with immediate supervisors, our work reveals that following a change in hospital leadership, open communication with the CEO is critical. As CEO turnover continues to occur, it is vital that upper management is cognizant of the role that they play after coming in to a new leadership position. Our work also highlights the fact that changes in nurse satisfaction following CEO turnover are influenced not simply by the fact that a new leader was hired, but rather, that the openness of communication with the new leader occurs. As such, it is not enough to simply change leaders. Strong communication with the new leader must occur. Managers must therefore pay close attention to communication flow following

significant changes in administration.   Finally, our work revealed that the effects of communication on job performance are mediated by job satisfaction.   Of course, the link between job performance and job satisfaction has been studied many times before, and it may be a reciprocal relationship.   Here, we see that communication effects influence job satisfaction most directly.

LIMITATIONS AND FUTURE WORK

As we have noted, one important limitation of our work is the reliance on single-item measures. These measures are often criticized in the social sciences. Also, we relied on a single site in what is essentially a case-study format. Furthermore, established scales need to be used, when possible. Future studies should address these issues. The time period for our study was defined as one year following a significant change. This may have been too long a time period to consider the relevant effects. Future research should consider shorter time frames. Furthermore, our study specifically examines the influence of communication effects on job satisfaction and performance while neglecting to consider other variables that influence the constructs. Clearly, numerous variables impact our outcome measures. Nevertheless, our study does reveal that communication with the CEO is particularly important following a change in leadership.

Table 1
Correlation Matrix

	CEO	CO	SUPER	JOBSAT	SELFOVER	QUANT	QUAL
CEO	1.00						
CO	.45	1.00					
Sign.	.00						
SUPER	.43	.57	1.00				
Sign.	.00	.00					
JOBSAT	.60	.47	.54	1.00			
Sign.	.00	.00	.00				
SELFOVER	.14	.19	.09	.19	1.00		
Sign.	.17	.07	.37	.04			
QUAL	.13	.22	.21	.27	.83	1.00	
Sign.	.22	.04	.04	.00	.00		
QUANT	.09	.20	.14	.24	.82	.89	1.00
Sign.	.38	.05	.20	.01	.00	.00	

Note: CEO = communication with CEO; CO = communication with co-workers; SUPER = communication with supervisor; JOBSAT = overall job satisfaction; OVERALL = overall job performance; QUANT = quantity of work performed; QUAL: = quality of work performed; n = 111

Table 2 Regression Results

IV	DV	
(1)	β	p
	JOBSAT	
CEO	.44	.00
SUPER	.33	.00
Excluded variable: CO		
Adjusted r^2	.41	
F-Statistic (Model)	39.24	.00
Stepwise (p-in .05; p-out .10)		
(2)	SATCOMP	
SATCHNG	.34	.00
CEO	.37	.00
Adjusted r^2	.34	
F-Statistic (Model)	20.41	.00
(3)	SELFOVER*	
CEO	.07	.50
SUPER	-.03	.78
CO	.15	.20
Adjusted r^2	.005	
F-Statistic (Model)	1.20	.32
	SELFOVER	
JOBSAT	.19	.04
Adjusted r^2	.03	
F-Statistic (Model)	4.21	.04

Variables:

Job satisfaction: "Please rate your satisfaction with each of these areas" (1 = extremely dissatisfied, 9 = extremely satisfied)

Job performance: "Please rate your job performance over the following areas" (1 = among the worst in the hospital", 9 = "among the best in the hospital")

Communication: "How do you rate your satisfaction with each of the following communication issues: (openness with CEO, coworkers, supervisor)", 1 = extremely dissatisfied, 9 = extremely satisfied).

(Note: n=111; *in section 3, the regressions on QUANT and QUAL omitted to simplify presentation. These regressions were non-significant)

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WHEN DIFFERENCES MATTER: THE IMPORTANCE OF STUDENT COMPATIBILITY IN HIGHER EDUCATION AND ITS IMPACT ON STUDENT (DIS)SATISFACTION

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ABSTRACT

Within numerous service environments, customers impact the satisfaction or dissatisfaction of other customers. The extent to which customers "are capable of existing or performing in harmonious, agreeable, or congenial combination with other customers" is referred to as compatibility (freedictionary.com). This paper examines the role of compatibility within the context of higher education and evaluates the importance of compatibility in higher education in accordance with the seven compatibility-relevant characteristics identified by Martin and Pranter (1989). The potential impact on student satisfaction (or dissatisfaction) is examined and recommendations for compatibility management are presented.

ASSURANCE OF LEARNING: INSIGHT FROM THE TRENCHES

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ABSTRACT

Measuring assurance of learning is a reality for most business programs. As business programs implement assessment procedures, a natural process of refinement occurs. What has been learned over the past five years that has shaped the AoL process? How have systems and processes been changed or improved over time? How can online classes being assessed? What differences, is any, are need for online classes compared to face-to-face classes from the assessment? How can a program close the loop and improve learning outcomes over time? How can you achieve faculty buy-in? Do all classes need to be assessed? Can a subset of classes be assessed? How do you select the right classes for assessment? The presenters offer insight from their experiences.

ACCOMMODATING AND SATISFYING THE LEARNING PREFERENCES OF TRADITIONAL AND ONLINE MBA STUDENTS

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ABSTRACT

This study explored graduate student preferences for fourteen commonly used teaching methods. Convenience samples were drawn from a university exclusively delivering its MBA program via the Internet and a university providing traditional face-to-face classroom instruction. Overall, the similarities between these student groups were greater than the differences. No significant preference differences were found for nine of the fourteen pedagogical methods. The effectiveness of the use of the alternative teaching tools in assisting online higher learning is discussed.

INTRODUCTION

Distance education is undergoing rapid growth as colleges and universities rush to offer online courses and degrees in a variety of subject areas. Enrollment in for-credit distance education courses more than doubled between 1997 and 2000. Nearly 3.2 million students took at least one course delivered online in the fall of 2005 while enrollment in online courses increased almost 10 percent during the 2006-2007 academic year compared with only a 1.5 percent growth of the overall higher-education student population (Cincotta 2008). Today almost 20 percent of all college students take one or more online courses annually (Online Nation).

Although Piotrowski and Vodanovich (2000) report that computer-related course instruction has made a tremendous impact on student learning the effectiveness of online distance learning continues to be debated, especially in terms of student learning. Research on effective pedagogy utilizing this medium remains in its infancy (Brower 2003). A growing body of literature has examined learner needs, motivation, and skills (Henderson, Spiller, Kunz, and Ratliff 2002; Keller 2008; Lim and Kim 2002-2003; Lin, Lin, and Laffey 2008; Mclean 2001; Roper 2007; Sargeant, Curran, and Allen 2006; Song, Singleton, and Hill 2004) but little research has been conducted with regard to student preferences among the multitude of teaching methods. Instructors are challenged to concentrate on the learning preferences of their students and to use teaching tools that fit the requirements of online delivery rather than personal teaching procedures and \strategies with which they are comfortable.

In response to a call from McCallister and Matthews (2001) to compare knowledge acquisition between on-campus and on-line courses, this research addresses the fundamental question *Do traditional and online students similarly perceive the effectiveness of commonly used pedagogical methods?* This study pursues this topic by measuring how MBA students rank

the comparative value of alternative learning tools. Armed with this knowledge, academicians can incorporate students' learning style preferences into lesson planning.

LITERATURE REVIEW

E-learning

Although e-learning is dramatically reshaping the public perception of education (Skill and Young 2000) minimal information exists about the characteristics and learning preferences of the students who enroll in these programs (*Minton and Willett 2003) and no known research has* examined student learning outcomes derived from totally virtual courses (McCallister and Matthews 2001). Extant research has focused on the impact of technology on education. For example, studies have investigated theoretical approaches to information technology (Tynjala and Hakkinen 2005), value-added education through technology (Fraser, Harich, and Norby 2005; Sherman and Kurshan 2005; Tennent, Windeknecht, and Kehoe 2004), and the impact of distance education on group interactions and decisions (Gabriel 2004; Hrastinski 2006). Much of the research on Web-based courses indicates that students do as well or better and are satisfied with their learning experiences as students in traditional face-to-face classes (Chang and Smith 2008; Lim, Kim, and Chen 2008; Palmer and Holt 2009).

Preliminary research on technological pedagogy finds that e-learning requires more motivation and effort on the part of students (Hicks 2000; Keller 2008; Rovai, Ponton, and Wighting 2007). Mature, working professionals expressed greater interest in online education than typical college students (*Minton and Willett 2003).* Generally, mature students tend to be more intrinsic and rely more on a deep-level approach in learning than younger students, who mainly depend on rote learning (Liu and Ginther 1999).

THE STUDY

This study compares online MBA student and traditional face-to-face classroom instruction student perceptions of their preferences for fourteen learning tools.

Subjects

Subjects were drawn from MBA students enrolled in Marketing Management subjects taught at two large Midwestern universities. One university delivers its graduate program exclusively online while the other university provides traditional face-to-face classroom delivery. The sample drawn from the online program consisted of 84 students and the face-to-face classroom sample consisted of 42 students. Both groups were evenly divided by gender. No significant age or GPA differences were found between the comparison groups. The majority of students in both samples were less than 30 years old. The samples significantly differed in years of work experience ($t = 3.05$, $p = .003$) with more online students possessing at least 5 years of employment experience than face-to-face classroom students. Significant differences were also found for the undergraduate majors earned by MBA students ($t = 4.435$, $p < .001$). More face-to-face classroom students entered graduate business school with non-business academic backgrounds than the online comparison sample. Course instructors administered the

questionnaires. Participation in the study was voluntary.

INSTRUMENT

The Learning Tool Preferences Questionnaire measures students' perceptions of the effectiveness of fourteen alternative learning tools to promote higher learning using a 3-point scale (very effective, neither effective nor ineffective, very ineffective). The fourteen learning tools are lectures, research papers, textbooks, supplemental reading materials, small group sessions with fellow students, one-on-one meetings with teacher, case studies (three or more pages read prior to class), case scenarios (less than three pages read during class meeting), tutorials, videos and other electronic materials, guest speakers, Internet activities, team presentations, and role playing. Students also ranked these learning tools based on their personal preferences. Basic demographic information also is collected.

RESULTS

An aggregate learning tool effectiveness score was calculated (very effective minus very ineffective = % effective rating) for each of the fourteen pedagogical methods. Overall, online students demonstrate a higher overall satisfaction with existing teaching methods than inclass students.   Interestingly, face-to-face classroom students hold negative perceptions of the effectiveness of textbooks and online activities (i.e. very ineffective exceeded very effective ratings). Table 1 summarizes the overall effective scores of the learning alternative tools.

Table 1: Students' Evaluations of Alternative Learning Tools

Learning Tool	Traditional MBA Students	Online MBA Students	Overall Effectiveness
One-on-one	35.60 (2)	49.76 (4)	44.52 (2)
Cases	22.80 (4)	50.96 (3)	40.53 (3)
Group sessions	38.40 (1)	51.08 (2)	46.38 (1)
Guest speaker	20.40 (5)	10.84 (14)	14.38 (14)
Lecture	8.00 (10)	31.33 (12)	22.69 (11)
Supplemental Reading	20.40 (5)	49.28 (5)	38.58 (4)
Role playing	13.60 (9)	20.05 (13)	17.66 (13)
Scenarios	23.20 (3)	46.51 (6)	37.88 (5)
Internet Activities	-6.80 (14)	42.89 (7)	24.49 (9)
Textbooks	-2.4 (13)	53.14 (1)	32.57 (6)
Tutorials	.80 (11)	36.32 (9)	23.16 (10)
Electronic materials	.40 (12)	32.20 (11)	20.42 (12)
Research papers	17.20 (7)	37.59 (8)	30.04 (7)
Team Presentations	14.40 (8)	32.78 (10)	25.97 (8)

Table 2 lists the rank order of learning tools in terms of student preference (1 = most favorite, 14 = least favorite) and mean score.

Table 2: Students' Rank Order Preferences for Learning Tools

Learning Tool	Overall Preference Ranking Mean / Rank	Online MBA Students Mean / Rank	Traditional MBA Students Mean / Rank
One-on-one	7.13 / 7	7.36 / 8	6.68 / 4
Cases	6.15 / 4	6.00 / 3	6.46 / 3
Group sessions	5.66 / 3	6.00 / 3	4.98 / 1
Guest speaker	8.52 / 10*	9.25 / 12	7.02 / 6
Lecture	5.22 / 1	4.96 / 2	5.76 / 2
Supplemental Reading	6.82 / 5	6.62 / 5	7.24 / 7
Role playing	9.90 / 13	10.27 / 14	9.15 / 11
Scenarios	6.93 / 6	6.92 / 6	6.95 / 5
Internet Activities	8.05 / 8*	7.16 / 7	9.85 / 14
Textbooks	5.32 / 2*	4.07 / 1	7.85 / 8
Tutorials	8.94 / 11*	8.60 / 10	9.61 / 13
Electronic materials	8.87 / 10	8.73 / 11	9.17 / 12
Research papers	8.30 / 9	8.47 / 9	7.95 / 9
Team Presentations	9.19 / 12*	9.71 / 13	8.15 / 10

*preferred significantly greater

T-tests between the comparison groups found significant differences in the perceived effectiveness of five pedagogical methods. Students enrolled in online classes perceive textbooks ($t = 4.831$, $p < .001$), tutorials ($t = 1.65$, $p = .10$), and Internet activities ($t = 3.966$, $p < .001$) as significantly more effective in helping them achieve their educational goals than students enrolled in face-to-face classes. Conversely, students enrolled in face-to-face classes rated guest speakers ($t = 3.149$, $p = .002$) and team presentations ($t = 2.146$, $p = .034$) as more effective.

DISCUSSION

As cited in the findings the preference differences are not surprising. Face-to-face and online courses create dissimilar learning environments and generally appeal to students with different characteristics. Students are drawn to online courses because they offer flexibility and the ability to do coursework from off campus (Braun 2008, Payne and Johnson 2005). However, these advantages negatively affect several commonly used face-to-face pedagogical tools. For example, finding convenient times for online students with conflicting work schedules and family commitments to meet to prepare team presentations is far more challenging for online students than for students who sit together in a classroom. Similarly listening to a guest speaking synchronously in real time to the class may not be possible for the student who purposely chose the asynchronous delivery of the online course to accommodate scheduling conflicts.

Neuhauser (2002) states that successful online students are self-disciplined, self-starters who possess a strong understanding of technology. These online students tend to be much more independent than students in traditional classroom settings, highly motivated, committed to learning, and seek less social interaction with peers or an instructor (Huynh, Umesh, and Valachich). As a result instructors who are "sages on the stage" in classroom often are "guides

on the side" in online environments. Romiszowski, (2004) refers to this transition as a shift from being the primary source of students' knowledge to being the manager of the students' knowledge resources.

Within the online learning environment the supportive nurturing that instructors provide to traditional students is often replaced by other sources. Textbooks are more apt to serve as a guideline through course material for distance learners while tutorials can strengthen understanding of topics for students who, unlike their face-to-face counterparts, are unable to ask questions while lectures are presented. Fortunately the constant improvement of Internet-based technology continues to close the gap between traditional and online student preferences for alternative teaching tools. Developing delivery platforms such as Adobe, Wimba, and Illuminate enable instructors to archive synchronous online class session for students to review at a later time. For example, students participating in real-time, online tutorials can ask questions and instructors can answer emailed questions posed by students who are unable to attend the live tutorials. These tutorials are recorded and posted on the course website for subsequent review. Technology is also addressing some of the issues associated with online team presentations. Instructors can set up group support systems that enable team members to work on assignments synchronously or asynchronously and enable other classmates to watch the finished presentations at times that are convenient for them.

It is critical to recognize the importance of student-centered learning as many business schools and marketing programs increase their emphasis on distance learning. Student preferences must not be overlooked. Pedagogical tools that work well in the traditional classroom may not function as effectively when simply uploaded to the online environment. This research attempts to fill a small gap in the literature addressing online instruction. This study found traditional and online students exhibit several preference differences but argues that these discrepancies can be overcome by utilizing new innovative technologies. Online instructors are encouraged to experiment in their courses, to try new tools, to poll student opinions, to retain the pedagogical methods that work well and students prefer.

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EXPANDING MARKET ORIENTATION TO INCLUDE SUPPLIERS

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EXTENDED ABSTRACT

Since the second half of the last century the marketing concept has been the foundation of current marketing thought and practice (Drucker 1954; Keith 1960). The marketing concept recommends that firms should focus their efforts in the identification and satisfaction of customers' needs (Kotler 1984). Kotler and Zaltman (1971, p.5) emphasize this recommendation by stating that, the marketing concept "... calls for most of the effort to be spent on discovering the wants of a target audience and then creating the goods and services to satisfy them." By its introduction and adoption, the marketing concept marked a milestone achievement in both academics and practice that transformed the way firms used to look at their customers.

Later, in the early nineties, two different teams of researchers Kohli & Jaworski (1990) and Narver & Slater (1990) developed and introduced market orientation (MO) as a mechanism that companies might follow to implement the marketing concept. Although both papers converged on linking adoption and implementation of MO to improved firm performance, they, however, diverged on how to define and implement MO. Consequently, two different frameworks or approaches of MO were born.

Kohli and Jaworski (1990, p.6) adopt an information processing approach and define market orientation as "organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments and organization wide responsiveness to it." on the other hand, Narver and Slater (1990, p.21) adopt an organizational culture approach in which they define market orientation as "the organization culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continuous superior performance for the business." In this conceptual paper we follow Narver and Slater's (1990) approach.

In their paper, Narver and Slater (1990) demonstrate through empirical investigation that MO has three different dimensions that form the desired organizational culture. These three dimensions are: customer orientation, competitor orientation, and inter-functional coordination. Basically, they emphasize the idea that, for a firm to be successful, it should pay attention to- and understand the importance of its customers and its competitors, and coordinate the resources (including information about customers and competitors) it has to create the behaviors that would lead to the creation of higher value to customers.

MO literature has focused on intra-organizational processes (i.e. inter-functional coordination), lateral relations (i.e. competitor orientation) and downstream supply chain (i.e. customer orientation) (Kohli and Jaworski 1990; Narver and Slater 1990; Jaworski and Kohli 1993; Slater and Narver 1994; Mogan, Vorhies, and Mason 2009). However, we contend that

including an inter-organizational perspective with a focus on the upper part of the supply chain (i.e. suppliers) will represent a more comprehensive view of MO.

Suppliers of firms have always played a role in the creation of value to end customers. However, as the business and economic environments became more dynamic, firms tend to outsource larger percentages of the total value, a trend that makes suppliers' role in value creation for customers more important and sometimes critical in today's business environment. Such a shift toward outsourcing enables firms to focus on core competencies and to become more flexible. Thus, we propose that adding an orientation toward suppliers (i.e. supplier orientation) to MO is a legitimate and important step.

We define supplier orientation as the organizational shared believes and values that help managers understand the importance of a firm's suppliers in the creation of superior value to customers, which will be reflected in supplier oriented behaviors. Such behaviors might include, but are not limited to, the assessment of suppliers, coordination with suppliers, sharing critical information with suppliers, and involving suppliers in product development (HandField, Ragatz, Petersen, and Monczka 1999).

The addition of supplier orientation will affect the notion of inter-functional coordination in two different ways. First, information about suppliers should be included in the inter-functional coordination processes similar to the information about customers and competitors. Second, the coordination between the firm and its suppliers requires the addition of a new dimension, inter-firm coordination. On the managerial implications side, these additions will highlight the importance of suppliers and their role in value creation to end customers.

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A PRESCRIPTION FOR MEDICAL OUTSOURCING SUCCESS: A MARKETING STRATEGY APPROACH

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EXTENDED ABSTRACT

Medical outsourcing (a.k.a medical tourism) capitalizes on the skyrocketing cost of health care and the growing number of underinsured and uninsured in America. Medical outsourcing refers to the practice of seeking efficient and cost-effective health care abroad. How pervasive is the medical outsourcing trend? Deloitte Center for Health Solutions estimates that as many as 750, 000 Americans traveled abroad in 2006 for medical care, and predicts that number to increase to 6 million by 2010 (Greenberg 2007). In the early stages of medical outsourcing, individual uninsured and underinsured patients pursued risky but affordable health care abroad. However, employers in the U.S. who bear the brunt of health care costs are engendering a fundamental change in medical outsourcing. Several U.S. corporations, hospitals, third-party healthcare administrators, state governments, and insurance companies are accelerating this trend by building alliances with international hospitals, medical tourism facilitators, and the hospitality industry (Konrad 2007).

While many medical outsourcing pundits have painted a rosy scenario for medical outsourcing, all is not well with firms that have jumped on the medical outsourcing bandwagon. As seen in traditional outsourcing relationships, many medical outsourcing relationships are expected to fail (Corbett 2001). Therefore, on one hand firms are aspiring to be successful in medical outsourcing but on the other hand, many of these medical outsourcing relationships are expected to fail. This leads to two important questions for researchers and managers- why are some firms more successful than others in medical outsourcing? What are the reasons for success in medical outsourcing? Therefore, it is imperative to understand the antecedents of medical outsourcing competences and the mediating effects of the relationship factors on medical outsourcing success. To date, no studies exist on the explanatory foundations of medical outsourcing competence and success.

The purpose of this study is to develop a theoretically grounded framework that examines the antecedents and consequences of medical outsourcing competence and the mediating role of relational factors in medical outsourcing success. This research draws from the explanatory power of Resource Advantage (R-A) theory (Hunt 2002), Alliance theory (Lambe, Spekman, and Hunt 2002), and Relationship Marketing theory (Morgan and Hunt 1994) to explain medical outsourcing competence and success. In general, R-A Theory explains and predicts two germane issues related to medical outsourcing. First, R-A Theory explains why outsourcing models based solely on cost savings are inadequate to explain the current complexities of outsourcing. Second, R-A Theory explains why there is diversity in outsourcing, why some outsourcing relationships fail, why some succeed and why some outsourcing relationships are better than others?

The central thesis of this research is that for a medical outsourcing firm to be successful,

the firm must develop outsourcing competences which requires a commitment from senior management, an understanding of the industry dynamism, and an ability to learn from the marketplace. However, such competences alone are not a prescription for success. Even in a contractual setting, firms must build relationships through mutual trust, timely information exchange, and enhanced communication quality. According to relationship marketing theory (Morgan and Hunt 1994), these relational factors act as the "glue" that holds relationships together. Finally, successful relationships lead to medical outsourcing success.

To the extent that this research is supported using Structural Equation Modeling, the implications to medical outsourcing practitioners are meaningful. Furthermore, this research offers a framework that contributes to the literature on medical outsourcing, relationship marketing, and strategic global marketing.

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COMPREHENSIVE ANALYSIS OF DISTRIBUTION SITE LOCATION DECISIONS: AN EXAMPLE FROM MEXICO

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ABSTRACT

Establishing a new location for production or distribution is generally an expensive and resource consuming proposition for most organizations. When resources are scarce, it is important that these decisions are carefully analyzed to provide the greatest opportunity for success. This research extends analysis originally conducted to determine the cost of locating a manufacturing process in a specific location to the general case of attempting to locate a distribution facility for existing customers in a new location. The analysis for manufacturing location decision developed with industrial partners and was designed to be inclusive of as many of the costs associated with location decisions. The methodology can be extended to any location decision and here the methodology is illustrated with an example of a distributor making the decision of whether or not to locate a distribution facility for supply customers in Mexico in Monterrey, Mexico, or San Antonio, Texas.

INTRODUCTION

The importance of reliable cost information in manufacturing and distribution environments cannot be overstated. In some cases, the decisions related to these activities can lead to significant investments and have far reaching effects. Given these stakes, decisions made with unreliable cost information can cause irreparable harm to a firm. One key decision made by both manufacturers and distributors is where to locate facilities. It is worth noting that there have been other researchers who have utilized an approach to analyzing the location decision with extensive cost model, the approach of Kumar et al. [1] is quite similar, though their focus was different and they did not explicitly model many factors.

In today's globalized economy, manufacturing and distribution sites are often located to take advantage of lower labor costs or serve customers that are. When assessing alternative locations, lower labor costs are typically paramount. However, lower labor costs may not always translate into lower overall costs for manufacturing and distribution operations. For some products, lower labor costs might not even result in lower direct costs. Other costs might also increase and exceed any putative labor cost savings. The cost of shipping and handling the finished or semi-finished goods to their destination must be included. Other costs could include the need for increased inventory due to longer supply chains. When operating outside of a currency union, there is also the risk of currency fluctuation, which could also overwhelm any potential cost savings. There is also the risk of delay of shipments from suppliers which can lead to expedited shipping, the shutdown of other facilities, or the loss of a sale. There may also be the need to oversee or supervise operations; this can be especially important when outsourcing or initializing operations. There is also the cost incurred to cross borders or import goods. To

make a well informed and explicit manufacturing site location decision each of these costs should be included in any decision maker's model.

The goal of this work is to create a methodology to project comprehensive distribution and manufacturing costs (encompassing the aforementioned costs). This methodology will allow decision makers to make well informed and explicitly reasoned decisions regarding site location.

THE LOCATION COST EQUATION

The goal of the cost equation is to capture and quantify all of the major costs associated with manufacturing or distributing a product in a given location. This requires that all of these costs be monetized in a consistent manner. For this purpose, the cost equation presents costs in two ways: annual cost and piece cost. Annual costs are the yearly costs associated with a given cost category or subcategory. The piece costs are annual costs divided by the saleable production volume (it should be noted that piece costs are not calculated for distribution cases). This representation allows for a concise and explicit comparison to be made among alternative locations. The variables associated with the location cost equation are shown in Table 1.

The Location Cost Equation used in this project takes the form of a tabbed Excel spreadsheet. Each of the tabs is associated with a particular cost category. These tabs allow users to input case specific factors for each of the cost categories. These case specific factors are then used to project the costs associated with that activity or category. The total cost of a specified location decision is then tabulated. The spreadsheet is organized in such a manner that two alternative locations or options can be examined and easily compared. Table 1 summarizes the cost categories examined in the location and each of the costs are discussed subsequently.

Table 1: Location Cost Equation Breakdown

Direct Manufacturing and Distribution Costs	Expedited Shipping Costs
– Labor	– Lead time/distance
– Other variable costs	– Volume
– Tooling and equipment	– Shortage consequences
– Building and overhead	Financing Costs
– Quality	– Currency risk
Inventory Carrying Costs	– Cost of capital
– Lead time	– Financing options/ Restrictions
– Lead time variability	Security Costs
– Volume	– Escorts, security fences, insurance
– Service level	– Usage
– Building and overhead	– Costs
Shipping Costs	– Regional differences
– Truck, rail, ship	Tax/Bureaucracy/Paperwork
– Fixed investments	– Associated costs
– Labor and fuel	– Lead times
– Overhead	– Regional differences
– Broking and other fees	

DIRECT MANUFACTURING AND DISTRIBUTION COST MODELING

A valuable cost estimation tool allows for the evaluation of explicit trade-offs between project characteristics and their impact on cost. Specifically, Noble and Tanchoco suggest that a cost estimation tool should analyze and present quantifiable information and allow the decision maker to process or integrate uncertain or incomplete information throughout the assessment process [2]. Cost modeling attempts to be such a tool by projecting the cost of a process or product without it having to be executed or produced.

While no standard method of cost modeling is widely used and accepted, one generative cost modeling approach that satisfies all of the preferred characteristics proposed by Noble and Tanchoco [2] is process-based cost modeling. Process-based cost modeling (PBCM) is a cost estimation tool that requires limited product and process data inputs and has been used to project manufacturing or assembly costs based on part and process characteristics. While PBCM approaches have previously been used to answer numerous research questions related to manufacturing costs [3-7], in two particular instances it has been used to look at the effects of different labor rates and input costs on overall manufactured costs [8-9].

PBCM's are constructed by working backward from cost (the model's objective) to physical parameters that can be controlled – the model's inputs. The modeling of cost involves:

1 - Correlating the effects of these physical parameters on the cost-determinant attributes of a process (e.g., cycle time, equipment performance requirements),
2 - Relating these processing attributes to manufacturing resource requirements (e.g., kg of material, number of laborers, number of machines and/or tools)
3 - Translating these requirements to a specific cost [10]

The relationship between physical parameters and process characteristics is determined by using fundamental physical relationships and/or through statistical analysis.

In the case of the tabbed spreadsheet, the main inputs for manufacturing and distribution models are production volume and facility size, respectively. These two quantities along with inputs regarding equipment, tooling, shelving space coverage, energy use, materials, and labor are used to project the costs for facilities (fixed costs) and operation (variable costs) of the site required to complete the proposed manufacturing or distribution task. Other factors that can be varied depending on region include: overhead burden, productive time, and reject rate (associated with manufacturing quality).

SHIPPING AND HANDLING

Other researchers have attempted to include the effects of shipping and handling in their manufacturing or distribution site selection analyses. Schniederjans and Zuckweiler present a direct comparison of labor costs and transportation costs for the manufacture of rubber hose in Mexico [11]. They estimate the cost of Mexican labor (in Chihuahua) at $3 per hour (as compared to $18 per hour in Lincoln, Nebraska) and find that this makes Mexico the preferred manufacturing location (even when including transportation costs). Themido et al., use activity-based costing to estimate the cost of delivering goods to various geographic regions [12]. Baykasoglu and Kaplanoglu use activity-based costing to project costs for a land transportation company [13]. They note almost twenty distinct cost drivers. In addition to the problems noted previously with ABC, most logistics cost research does not put these costs in the context of manufacturing costs in alternative locations. In 2008, the cost of shipping a standard 40-foot container from Shanghai to the US was over $8000, a marked increase from $3000 in the year 2000 [14]. Janic examines the cost of a modal distribution network in Europe [15]. While the effects of reduced labor cost on manufacturing costs have been examined, the analysis of transportation costs in the context of a distribution or manufacturing facility have been limited. This work has created a set of generative cost models for land transportation costs (trucking).

Shipping and handling is a process requiring resources that are based on the characteristics of the process. As such, a process-based cost model for shipping are analogous to those of a production process. Other processes, such as the product development process, have been modeled using the methods of process-based cost modeling [5, 16]. Logistics processes can be broken down into individual steps and functions; Baykasoglu and Kaplanoglu provide a detailed example for the import process [13]. Shipping to the United States from Mexico requires a customs broker and possibly drayage (a tractor to bring the trailer across the border) [17]. These types of location specific costs must be accounted for in a reliable shipping model. The shipping lead time can have significant effects on the required safety stock and the associated inventory costs.

To project shipping costs, the model projects four key cost elements – labor, equipment (shipping transportation means – e.g., trucks or cargo ships), fuel, and overhead /supervision. The resource requirement and costs for each cost element is calculated based on user inputs in the shipping spreadsheet tab. These costs can be used to determine a total shipping and handling

cost on a per piece basis. This allows for the shipping and handling costs to be assessed in the context of manufacturing costs, which are also typically presented on a per piece basis. The cost calculations the proposed shipping and handling cost model are presented in Equations 1 and 2.

$$TC^S_{Total} = TC^S_{Labor} + TC^S_{Equipment} + TC^S_{Fuel} + TC^S_{Overhead} \tag{1}$$

$$C^S_{Total} = TC^S_{Total} \Big/ PV^S \tag{2}$$

where TC^S_{Total} is the total cost associated with a shipment; PV^S is the number of items in the shipment.

INVENTORY COSTS

It is often assumed that shortage costs are significantly higher than storage costs [18]. This is a reasonable assumption given that in some cases the shortage of an inexpensive component can lead to production shortages that cost $150,000 per day [19]. In addition to uncertain demand, uncertain lead time can increase the level of safety stock needed [18]. Alternative manufacturing or distribution site locations can have a dramatic effect on lead time and lead time variability. This could lead to increased inventory requirements needed to meet a given desired service level. For example, the transit time from Shanghai to Los Angeles is 11 days and it takes another 8 days for goods to arrive in Atlanta [20]. This does not include possible significant delays; recently, a ship had to wait almost 14 days offshore during the peak months of July to December [21]. A company sourcing components from Shanghai could have to hold significant inventory to allow for such lead times and variability (assuming a high required service level). In fact, Canbolat et al. cite an example of sourcing a component from China and recommend a 25-day safety stock [19]. This would contravene a "just in time" sourcing strategy. Inventory management can be a very important strategic consideration. In one study, a significant portion of respondents noted it was the most important function of a logistics executive [22].

As mentioned previously, lead time, demand, and the variability of lead time and demand are the key determinants of required safety stock. While the demand variability of a product is independent of the manufacturing location (and thus lead time for that product); the manufacturing location can affect both lead time and lead time variability. These quantities along with a required service level determine the required stock [18]. It is possible that different products (and industries) have different acceptable and established service levels, as such these are inputs for users to specify in the tabbed spreadsheet.

The variability in the lead time associated with shipping can have significant impacts on both shipping cost and associated costs. Even for relatively short motor vehicle trips, variability and incident-related delays can significantly extend (in some cases double) trip time [23]. International shipping adds the increased variability of border crossings and possible security-related delays [17, 24]. Even at secure and relatively open border crossings (the United States and Canada), the variability in the wait time to cross the border can equal the actual wait time [25]. Again, the tabbed spreadsheet allows for these factors to be input (or in the case of wait

times and variability – calculated based on user inputs).

To monetize the effects of alternative production locations on required safety stock, some holding cost must be assigned to that inventory. Holding cost estimates cited in the literature range from 12% to 25% [18, 26-27]. But ongoing work with industrial partners indictate that this number could be significantly higher, perhaps as much as 40-60%. The user will input their case specific carrying cost into the spreadsheet; this will then be used along with turnover and the specified service level to calculate a carrying cost. Other case variables such as production volume or shipping time are pulled from other tabs in the spreadsheet.

FOREIGN EXCHANGE

While shipping time variability is one significant risk in international manufacturing, currency risk is another. In Schniederjans and Zuckweiler's study, they found that a tenth of a percent adjustment in the relative exchange rate between the Mexican Peso and the US Dollar could have dramatic effects on the preferred manufacturing location [11]. This currency movement shifted the production volume where Mexico was the preferred manufacturing location from 5 million units to 7.2 million units. It should be noted that between August 2008 and February 2009 the Mexican Peso decreased in value (in relation to the US Dollar) by almost 40%.

Currency fluctuations are a major risk to companies with operations outside of their home country (or currency union); exchange rate volatility can be several times greater than interest rate volatility (even in periods of high interest rate volatility) [28]. To mitigate against the risk of currency fluctuations, firms can insure themselves (or hedge) against such movements. This can be done by entering into contracts (to exchange certain currency at predetermined rates); firms can also buy or sell derivative products to protect against fluctuations (e.g., a call or put, respectively for an importer) [29]. This is referred to as financial hedging. Firms can also engage in operational hedging. This involves organizing operations such that there is flexibility to mitigate fluctuations (e.g., having domestic as well as international manufacturing facilities or passing along fluctuations to the customer). Operational hedging has been shown to be insufficient in eliminating foreign exchange rate exposure [30]. Firms tend to use financial derivatives to hedge their exposure to currency fluctuations [30-31]. The amount of currency hedging is typically dependent on the exposure a firm faces [32]. To account for this the cost of financially hedging a certain amount of currency risk is built into the location cost equation.
The tabbed spreadsheet allows a used to define which cost categories (usually percentages of certain variable costs) they desire to be hedged. The model then uses the Garman and S. W. Kohlhagen foreign exchange currency option valuation technique [33] to calculate the cost of that option. The use of options pricing to capture foreign currency risk allows for a transparent and consistent method to be applied across location and activity category.

Component Delay

Canbolat et al., examine various risk factors associated with international manufacturing; they note component delay as the biggest risk factor and attempt to monetize it [34]. As mentioned previously, one of way of mitigating the effects of component delay is to increase

safety stock. Another way is to expedite shipping. In some extreme cases, even chartering a flight to expedite a shipment can be worthwhile [35]. Since near 100% service levels would require a safety stock that is not economically reasonable, there is a chance that component delay will either lead to production delay or lost sales. In these cases a firm can either realize these adverse effects of delay or pay a premium for expedited shipping. In one case the probability of requiring expedited shipping has been estimated at 10% [34].

To capture the cost of component delay, case and location specific expedited shipping costs data are used. The tabbed spreadsheet allows for the expedited shipping cost (both direct and indirect) to be specified by the user. These costs are then combined with a user defined probability of requiring expedited shipping and the shipment structure (number of annual shipments) to calculate the associated costs.

OVERSIGHT

Globalization has increased the need of companies to send personnel to international locations to oversee operations or transfer knowledge and corporate culture to international subsidiaries [36]. These assignments can cost up to several times an employee's base salary [37]. The use of expatriates is a significant and growing trend [38]. However, most of the literature focuses on the semi-permanent relocation of employees, where even the shortest assignments are measured in years [39]. This does not address the case of a firm using an employee to oversee the offshoring of production to a third party (or local production subsidiary) or setting up a distribution facility. In this case there may not be a need for a dedicated employee to oversee production full time. While the cost of such supervision may not be as great as that of a full time expatriate; it should be captured to properly reflect the cost of operations and take into account alternative cases. In the case of large multinational corporations, the employees of a local subsidiary can be used to oversee production operations and serve as a firm's emissary. However, this also has a cost; this cost is not usually included in the literature. This work incorporates the cost of the required supervision and oversight.

To capture the cost of this oversight, the cost of travel, room and board, and wages for personnel involved in initial oversight are calculated. To capture the cost of ongoing oversight, the number of ongoing oversight visits and their associated costs are also included. The tabbed spreadsheet includes inputs that allow for the number of personnel and the oversight visit duration to be specified.

TAXES AND DUTIES

The costs of the duties and valued added taxes can have a significant effect on location decisions. Duties can significantly increase the costs associated with imported components and raw materials. Locating in regions that allow firms to maximize profit through the minimization of tax is of growing importance in the emerging global economy. The feature of tax areas and international logistics zones can assist firms in increasing their after-tax profits [40].

The location cost equation takes into account the duties and value added taxes associated with alternative production or distribution locations. This tab of the spreadsheet allows users to

specify the duties that are assessed on materials that are required for a particular operation. The basis and value added taxes on finished or distributed goods are also specified. This information along with the cost of processing any required request for drawback and the drawback period are used with the cost of capital to monetize the costs associated with duties and taxes in alternative locations and scenarios

SUMMARY OF GENERAL MODEL

Once the inputs for the alternative locations or scenarios have been entered, this data is tabulated to show the total cost of operations under each alternative. In addition to providing an explicit and clear breakdown of total costs, this also allows for sensitivity analyses to be run (e.g., examining the role of changes in labor rates on location cost competitiveness). This can provide a powerful sales and marketing tool to show potential customers the value of the services on offer and how they compare to probable alternatives. Another key benefit of the tabbed spreadsheet is its transparency and ease of use. Most professionals in today's business environment are comfortable with Excel and will understand how most of the formulas operate. This transparency also allows for easy alteration and updating. In summary the tools provided as part of this project can greatly assist in making and justifying location decisions.

EXTENSION OF MODEL TO THE DISTRIBUTION CASE

The basic extension of the model to case of a distributor trying to determine where to locate their facility requires modifying the spreadsheet such that what were formerly the costs associate with production are now the costs associated with the distribution activities within the distribution facility. Rather than machining centers, there are now storage racks and materials handling centers. The costs of purchasing, installing, and maintaining the material handling systems and the employees who operate the system can be handled like the machinery and operators associate with the production facility. The key is to have system expert populate the spreadsheet with the relevant parameters since the model is only as good as the information that is supplied for the cost calculations.

DISTRIBUTION EXAMPLE IN MEXICO

For illustrative purposes the following scenarios were compared. A US-based distributor is interested in establishing a distribution facility for a customer base in northern Mexico. Specifically, the distributor will supply materials to customers in Monclova, Reynossa, and Monterrey. The options that the distributor is considering are establishing a facility to handle the shipments in Monterrey, Mexico or in San Antonio, Texas. The facility would be a 1000 square meter facility which employs six workers estimated to be moving roughly $20,000 worth of materials on average per day. It is assumed that shipments from the potential facility within Mexico employ Mexican workers and drivers. In San Antonio, the workers would be from the United States, and the laods would be driven to the border by US drivers, and then taken the rest of the way by Mexican drivers. We have assumed that the cost of getting the good to the facility in Mexico is the same as to the facility in the US. But this is exactly the type of assumption that could be handled explicitly by the model. The model results for the total annual cost for the facilities are show in the Figure 1.
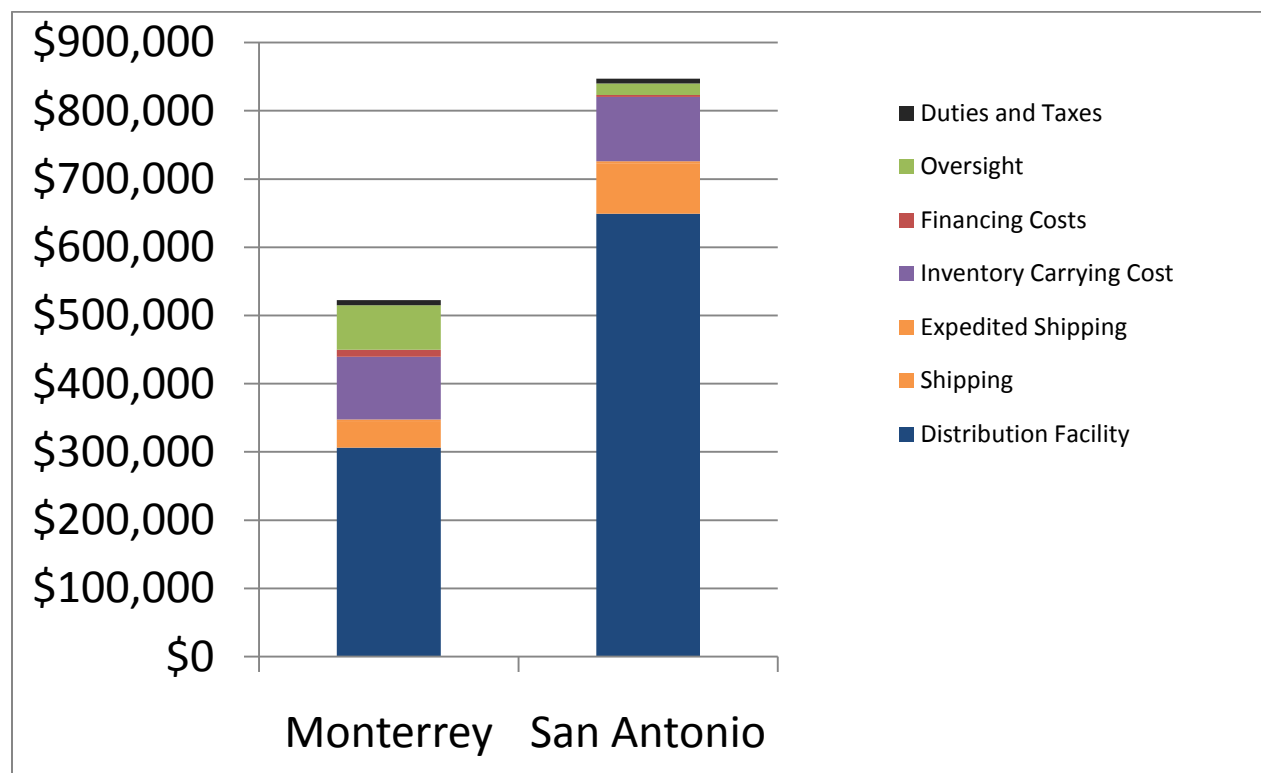
Figure 1 Annual Costs for Locating a Hypothetical Distribution Facility Serving Mexican Customers

In this case, the higher labor costs associated with the operation, and the greater transportation cost show that it would be advantageous to locate this facility in Mexico. However, if the cost of transporting the goods to the distribution facility in Mexico were significantly higher than to the facility in San Antonio, then San Antonio might still be the correct choice. But this particular result underscores the value of locating close to your customers in a distribution environment. It is also worth noting that this model does not take into account relatively intangible benefits of being closer, such as increased responsiveness.

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THE INFLUENCE OF COLLEGE EXPERIENCES ON THE HIRING DECISION: A LATENT COMPARISON OF ATHLETICS, WORK, INTERNATIONAL AND STUDENT ORGANIZATIONS

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EXTENDED ABSTRACT

While obviously not the only reason to attend college, enhancing employability is often an important component of a college education. Students, parents, teachers and administrators have a vested interest in ensuring that students have appropriate preparation for the work force upon graduation. Schools of Business in colleges and universities use industry input and advisory boards to shape curriculum to meet the ever changing needs of the business world.

Like it or not, curriculums are not the only influence on a hiring decision. There is increasing evidence that extra-curricular, co-curricular, and international experiences have an important impact on a candidate's employability. Research linking these activities to the hiring decision has been limited, but pervious research tends to support participation in out of class activities. For example, researchers have found that sports create positive youth development such as confidence, communication, and teamwork skills that are important traits for later on in adult hood (Linver 2009, Trautwein 2008, and Zarrett 2009). Albers-Miller, Sigerstad and Straughan found support for international experiences.

Very little research has examined the degree to which these experiences have a direct impact on the decision to make a job offer. Furthermore, the trade-offs that employers make when comparing candidates with similar academically qualification but with differing out of class experiences has received little academic attention.

The purpose of this paper is to examine the latent decision processes that employers use when evaluation experiences that occur in an academic environment, but outside of the traditional classroom. Specifically, this study uses a conjoint analysis to look at levels of athletic participation (played varsity sports, played intramural sports and played no sports); levels of international experience (participated in a semester long study abroad, participated in a faculty-led summer study abroad, had no college-related international experience); levels of work experience (worked 2 years on campus in a clerical position; worked 2 years and worked up to manager of a student run enterprise on campus and completed 2 years of internship credit off campus); and levels of student organization participation (held a leadership position in student organization, participated in a student organization in major field, did not participate in a student organization). Implications for administrators and extra-curricular development are provided.

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A RESEARCH OF SERVICE OUTCOMES IN TAIWAN: THE ROLE OF PATIENTS' QUALITY PERCEPTIONS AND WAIT TIME

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ABSTRACT

Wait time is a continuing issue in healthcare services. U.S. studies reveal wait time is inversely related to healthcare service outcome and patient behavior and attitudes. However, Taiwan, despite being an important center for global healthcare services, has not been the subject of much research attention regarding wait time and its impact on patient perceptions and behavior. In our study, patients in Taiwan completed a self-report questionnaire on how wait time and service quality characteristics relate to service outcome. Results indicate the influence of healthcare service quality and wait time on service outcome. Research and managerial implications are discussed.

INTRODUCTION

Today's consumers are pressed for time. Consumers spend increasing wait time for services, and show sharper reaction against waiting. Enhanced perception of wait time affects satisfaction, and creates negative behavior. Speedier service is a vital tool of sustained competitive advantage in services such as healthcare (Iversen and Luras 2002). Although this phenomenon was investigated over five decades ago (Hinch et al 1955); sparse research attention is found on outcomes of time lost while waiting on medical service providers, who should be cognizant of its impact on their practice. We conducted a study in Taiwan, an important center for healthcare services, where little research focus is found on wait time. Moreover, Taiwan promotes "medical tourism", outsources medical services, and would be subject to international service quality standards; hence the relevance of investigating outcomes of quality perceptions and wait time.

CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

Much research on effects of service quality perceptions and wait time is at the descriptive level, and gives a fractured view of patient attitudes and behavior. It is vital to find a more integrated model, that incorporates concurrent effects of quality perceptions and wait time. While research attention has mainly focused on the West, we have little understanding of this phenomenon in Taiwan, an important U.S. trading partner (CIA World Factbook 2007; GlobalEdge 2007). Moreover, both medical tourism (Scandlen 2007), and medical outsourcing (Marlowe and Sullivan 2007) are relevant to Taiwan's economy, resulting in compulsion to establish alignment with international service quality standards (Modern Healthcare 2007). Practitioners' view is the focus of some research (Chen, Lin and Lee 2002; Hsieh, Thomas, and

Rotem 2005; Liu 2003; Richter 1993); however, there is meager attention to patients' notions of service quality, perceptions of wait time, and their impact on service outcomes. The constructs of interest would include patient attitudes, including perception of quality, satisfaction, probability of recommending the provider, and probability of repeat visits (Figure 1). We attempted to obtain answers to these issues through a study in Taiwan, and results would be useful to all stakeholders in the healthcare system.
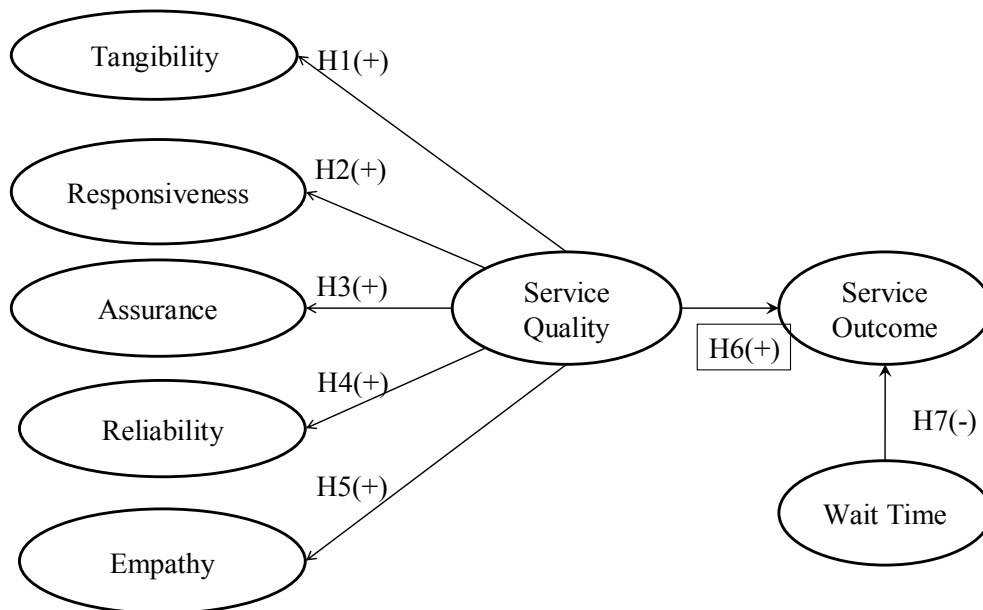
Figure 1 Conceptual Framework

Healthcare service quality has been researched (Berglund 2005; Mroz and Berglund 2004; Scandlen 2007), along with its impact on sustainable competitive advantage (Rapert and Wren 1998), and the importance of patient perceptions in defining quality (Berwick 2002). Wait time is a vital element of quality perception. Economics-based models have been used, favoring solutions like increased shifts by doctors (Rice 2007). Total Quality Management approaches recommended alternate ways of reducing wait time (Valdivia and Crowe 1997). Demographic variations have been studied (Bendall-Lyon and Powers, 2002; Hekmat et al. 1998; Hill and Joonas 2005; Ho et al. 1998). Service quality and measurement (Licata et al. 1995; Otani and Harris 2004; Taylor 1994), and antecedents of patient satisfaction and medical provider selection have been examined (Andrus 1984; MacStravic 1984). Patient perception of quality and patient satisfaction appear to be the prime research focus.

We discussed above, that time is an essential resource for today's consumer, and there is some research attention on negative impact of wait time on satisfaction and service quality perceptions (Andrus 1984; Hill and Joonas 2005; Katz et al. 1991; Taylor 1994), and also on choice of medical provider (Andrus 1984; Hill and Garner 1991; Katz et al. 1991; Taylor 1994). On examining causes of changing service providers in a variety of areas Keaveney (1995) observed variables to include price, inconvenience, core service failure, service encounter

failures, and failed employee responses to service failures. Excessive wait time, or inconvenience, was felt to be an important determinant in switching behavior. Excessive wait time in a model to explain satisfaction (Akinci and Sinay 2003), was a complaint among one in every five respondents.

In a model of the decision to change providers (Duck 1991), the process began with patients recognizing dissatisfaction, registering grievances, and resulting eventually in dissolving the relationship. In contrast, providers aim at long-term patient relationships, since loyalty is determines the service providers' financial results (Evanschitzky and Wunderlich 2006). In order to achieve this aim, providers must necessarily explore the adjustment to patient needs (Huynh 2004). However, Baby Boomers, who are an increasing proportion of healthcare seekers, seem to lead the general decline in loyalty among all age groups (Lipke 2000).

At least one study evidenced that wait times of bank customers were inversely related with overall customer satisfaction, and directly with customer stress (Katz et al. 1991). In addition, customer satisfaction was found to be related to how they perceive "acceptable" wait time. A U.K. research showed wait time to be related to satisfaction in for healthcare customers (Hurst 1992), and were replicated in another study (Hill and Joonas 2005). Moreover, regardless of perceived high service quality, inconvenience was established as a reason for switching providers. An example of this is wait time, with a fifth of healthcare customers citing dissatisfaction due to this factor (Akinci and Sinay 2003).

A determinant of quality perceptions and patient behaviors was evidenced to be wait time (Hill and Joonas 2005). It was found that wait time affects quality perception, satisfaction, and manifestation of loyalty though recommending the provider and repeat visits. Majority of respondents considered a wait of half an hour or more to be "unacceptable"; despite the fact that most patients faced wait times less that what they described as acceptable, yet, many underwent unacceptable wait. Patients would hold off on taking action until unacceptable waits became quite frequent or very frequent. Action taken by over 90 per cent of patients was found to reflect earlier results (Ackinci and Sinai 2003), ranging from complaining behavior, thinking about changing providers, to changing providers.

In the 1990's, healthcare facilities faced mounting closures (Wertheim and Lynn 1993), and cost controls were seen as a solution. Quality concerns notwithstanding, a more pertinent solution would be to offer quality service despite higher costs (Jensen 1987 p. 47), thereby retaining customers (Burda 1992; Cleverly 1993). A tenable measure of service quality is imperative for healthcare providers. Based on the above discussion, the study hypotheses are:

H_{1-5}: In healthcare service in Taiwan, the dominant dimensions of service quality (SQ) will include tangibility, responsiveness, assurance, reliability, empathy.

H_6: Patient perception of providers' service quality will affect service outcomes, comprised of satisfaction, loyalty (recommending the provider), loyalty (repeat visits), and overt action by the patient (culminating in switching providers) of provider services in Taiwan.

H_7: Wait time will affect service outcomes, comprised of satisfaction, loyalty (recommending the provider), loyalty (repeat visits), and overt action by the patient (culminating in switching providers) of provider services in Taiwan.

METHODOLOGY

Sample Description

We conducted a survey among about 1000 persons in Taiwan that have visited a healthcare provider within the previous six months. Questionnaires were distributed in waiting areas around offices of medical service providers and other locations. Participants did not know the researcher personally, and responses were anonymous. The final sample size was 905, representing a response rate of 90.5%. The sampling method successfully solicited respondents with diverse personal characteristics in terms of gender, age and income as shown in Table 1.

Table 1
Sample Characteristics

Construct	Items	No.	%
	18-35	446	49.3
	36-50	262	29
	51-60	181	20
	61-70	3	0.3
Age	71 and over	13	1.4
	Male	439	48.51
Sex	Female	466	51.49
	9,999 or less	175	19.34
	10, 000-19,999	286	31.60
	20, 000- 29,999	260	29.84
	30, 000-39,999	106	11.71
Income	40, 000- 49,999	68	7.51
Total		905	100.00

Measures

The questionnaire elicited responses on four areas in relation to a medical services provider recently visited. A modified version of the SERVPERF (Cronin and Taylor 1994), based on Parasuraman's 1988 SERVQUAL model, measured the five quality factors—tangibility, reliability, responsiveness, assurance, and empathy. Overall service quality (SQ) was measured on a five-point Likert like scale. Service outcome (SO) was measured through a semantic differential scale, covering feelings toward the doctor, feelings toward the service, covering repeat visits, probability of recommending the provider, overall quality, and satisfaction. Further, some categorical information was sought, that might impact the relationships under study, such as frequency of visits, and severity of typical medical problem. Finally, the questionnaire addressed wait time (WT) through the length of wait time, acceptable wait time, and the frequency of unacceptable wait time that might encourage activism. Some demographic data was also collected, such as gender, age and income.

Tables 2 and 3 list all the measures of model constructs.

Table 2
Evaluation of the Structural Model

Items	Item-Construct Loading		Cronbach's Alpha	Average Variance Extracted
	Standardized	t-statistic		
Tangibility			0.96	0.61
1. The doctor has up-to-date equipment.	0.79	--		
2. The doctor's physical facilities are visually appealing.	0.64	21.04		
3. The doctor's employees are well dressed and appear neat.	0.77	21.06		
4. The appearance of the physical facilities of the doctor is in keeping with the type of services that he/she provides.	0.86	23.69		
Reliability			0.93	0.79
5. When the doctor promises to do something by a certain time, he/she does so.	0.78	--		
6. When you have problems, the doctor is sympathetic and reassuring.	0.87	26.62		
7. The doctor is dependable.	0.88	25.38		
8. The doctor provides services at the time it promised.	0.80	28.20		
9. The doctor keeps accurately records.	0.79	23.74		
Responsiveness			0.92	0.93
10. The doctor tells customers exactly when services will be performed.	0.80	--		
11. You receive prompt service from the doctor's employees.	0.71	22.85		
12. Employees of the doctor are always willing to help customers.	0.88	26.93		
13. Employees of the doctor respond to customer requests promptly.	0.88	26.55		
Assurance			0.86	0.96
14. You can trust the employees of the doctor.	0.86	--		
15. You feel safe in your transactions with the doctor's employees.	0.80	39.79		
16. Employees of the doctor are polite.	0.79	29.45		
17. Employees get adequate support from the doctor to do their jobs well.	0.84	32.52		
Empathy			0.89	0.79
18. The doctor gives you individual	0.87	--		

attention				
20. Employees of the doctor know what your needs are.	0.84	31.40		
21. The doctor has your best interests at heart.	0.72	25.07		
22. The doctor has operating hours convenient to all the customers.	0.69	23.22		
Service Outcome			0.79	0.71
23. I would describe my feelings toward the doctor as	0.83	--		
24. My continued use of the doctor is	0.93	37.45		
25. My recommending this doctor to my family, friends, and co-workers is	0.92	36.19		
26. The overall quality of this doctor's services is	0.89	34.73		
27. My overall feeling towards this doctor's services can be described as	0.88	33.67		
Wait time			0.74	0.63
How long do you usually have to wait at the doctor's office before the doctor sees you?	0.45	6.53		
What do you consider an acceptable amount of wait time?	0.08	2.00		
How often would the wait time have to be "unacceptable" before you would consider taking some action?	0.90	7.21		

Data Analysis

Data analysis excluded cases with missing values. Furthermore, testing examined the assumptions underlying the use of structural equation modeling. Regarding sample size, the generally accepted minimum sample size necessary to ensure appropriate use of maximum likelihood estimation is 100-150 (Anderson and Gerbing 1988). However, situations involving model misspecification, model complexity, non-normality of data, or the use of alternative estimation procedures require larger sample sizes (Hair, Anderson, Tatham and Black 1998). Our large sample size was designed to minimize the effects of any violations of normality. PRELIS2 tested the normality based on the skewness and kurtosis of the observed variables (Bollen, 1989). All the samples displayed significant kurtosis and skewness p-values for most observed variables. However, the large samples partially compensated for the existing kurtosis, reducing parameter estimate bias (Hair et al. 1998). Finally, testing revealed almost no outliers.

Following Anderson and Gerbing (1998), model testing utilized a two-stage structural equation model. Confirmatory Factor Analysis (CFA) assessed construct validity, regarding convergent validity and discriminate validity. Subsequently, path analysis empirically tested the

research hypotheses (Chaudhuri and Holbrook 2001; Li and Calantone 1998).

Measurement Model Service Outcome

In order to further confirm the five-factor SQ model, a second-order confirmatory factor analysis (SCFA) was conducted because this technique provides a more rigorous interpretation of dimensionality than is provided by the EFA. In addition, a SCFA can assess the convergent and discriminant validity of the SQ construct. LISREL 8.80 was used as the analytical tool for the estimation of the measurement model.

We assessed two separate measurement models. Specifically, one model focused on the second-order factor of SQ and its associated five dimensions, including tangibility, responsiveness, assurance, reliability and empathy. The other measurement model focused on the latent variables of service outcome and wait time. To assess these measurement models, we reviewed a number of goodness-of-fit indices, including RMSEA, CFI, RNI, TFI and a Chi-square/degree of freedom value. Together, these indices indicated an acceptable fit.

Structural Model Evaluation

This study assesses the quality and adequacy of the proposed measurement model by examining unidimensionality, convergent validity, reliability, discriminant validity, and metric equivalence. Unidimensionality is assessed based on the performance of principal component analyses on all items. Since all items had a loading of 0.65 for the hypothesized factor and a maximum loading of 0.30 for the other factors, unidimensionality was confirmed for each construct.

Convergent validity was supported owing to the good overall model fit, and the high statistical significance ($p<0.05$) of all loadings (Hildebrandt 1987; Steenkamp and Van Trijp 1991). We examined the convergent validity (i.e. the degree of association between measures of a construct) by reviewing the t-statistics for factor loadings. In terms of the parameter estimates (factor loadings), the loading items for each factor were set exactly as suggested by the earlier EFA outcome (see Table 3). The criteria value used to identify a given loading item is 0.4 or higher. In fact, all items have a loading higher than 0.69 with the highest being 0.97 (see Table 2). The fact that all t statistics are significant at the 0.01 level showed that all indicator variables provide good measures to their respective construct (Anderson and Gerbing 1988). These results generally supported the convergent validity of the model.

Cronbach's alpha values exceeded 0.70, indicating acceptable reliability (Nunnally, 1978). We assessed the discriminant validity (i.e. the degree to which items of constructs are distinct) by using the "variance extracted" test. Discriminant validity is satisfied if the variance shared between measures of two different constructs (the squared correlation) is less than the amount of variance extracted by the items measuring each construct. Empirical results (see Table 4) indicated that the discriminant validity is achieved in this study.

Furthermore, Table 2 shows that all of the composite reliability measures exceeded 0.6, corresponding to the minimum identified by Bagozzi and Yi (1988). The above demonstrates

satisfactory reliability for all constructs. Further, this study used LISREL 8.52 (Joreskog and Sorborn 1989, 1993) to estimate the proposed measurement model. The estimation results indicated reasonable overall fit between the model and the observed data. Table 4 lists GFI exceeding 0.9 for all three types of construct models (Bagozzi and Yi 1988). Additionally, NNFI and CFI significantly exceeded the recommended .90 threshold level (Bollen, 1989; Hoyle and Panter 1995; Hu and Bentler 1995), demonstrating reasonable data fit to the model.

Table 3
Goodness of fit statistics

Model/Construct	χ^2/df	GFI	RMSEA	NNFI	SRMR	AGFI	CFI
CFA-Overall	2.79	0.92	0.03	0.99	0.023	0.91	0.99
Sequential path model	3.13	0.85	0.08	0.97	0.065	0.81	0.98
Suggested Values	<3	>0.90	<0.06	>0.90	<0.08	>0.80	>0.95

Table 4
Covariance Matrix of Latent Variables

	Tangibility	Reliability	Responsiveness	Assurance	Empathy	Service Outcome	Service Quality	Wait time
Tangibility	1							
Reliability	0.69	1						
Responsiveness	0.75	086	1					
Assurance	0.76	0.87	0.95	1				
Empathy	0.69	0.79	0.86	0.87	1			
Service				0.82		1		
Outcome	0.65	075	0.81		0.75			
Service Quality	0.78	0.89	0.97	0.98	0.89	0.84	1	
Wait time	-0.19	-0.21	-0.24	-0.22	-0.20	-0.25	-0.22	1

Path Model and Hypothesis Testing

Table 5 lists the assessment of overall model fit and the results of testing the research hypotheses. For the conceptual model, Figure 2 illustrates the estimated structural paths and reveals the hypothesized relationships between latent constructs and their corresponding standardized path coefficients. In the conceptual model, significant path coefficients are thick-lined in the figure and all significant relationships between latent constructs follow the hypothesized direction, strongly supporting the proposed model and related hypotheses. A second assessment of the structural model focuses on testing each of the previously formulated hypotheses.

To test Hypotheses H_1- H_5, that the dominant dimensions of SQ include tangibility, responsiveness, assurance, reliability, empathy, we conducted an SCFA on both data sets. Our findings indicate that each of the five are significant dimensions of the second-order factor of SQ (see Figure 2). Together, these results lend support to H_1- H_5. To test Hypothesis H_6, we examined the hypothesized casual model as shown in Figure 1. It is noteworthy that the effect of

SQ on service outcome (i.e. SQ→SO) is significant. As for Hypothesis H_7, the impact of wait time was found to be significantly negative as expected. (i.e., WT→SO).

Table 5
Overall Model Fit and Testing of Hypotheses

Causal Path	Hypothesis	Expected Sign	Path Coefficient	t-value	Assessment ($p \le .05$)
Service Quality→ Tangibility	H 1	+	0.78	20.27	s
Service Quality→ Responsiveness	H 2	+	0.97	27.35	s
Service Quality→ Assurance	H 3	+	0.98	30.99	s
Service Quality→ Reliability	H 4	+	0.89	23.05	s
Service Quality→ Empathy	H 5	+	0.89	27.48	s
Service Quality→ Service Outcome	H 6	+	0.83	24.58	s
Wait time→ Service Outcome	H 7	-	-0.05	-2.03	s

Note: $\chi^2_{(354)}$=3.13, p=0.0000, RMSEA=0.08; GFI=0.85, AGFI=0.81; CFI=0.98; NFI=0.97; NNFI=0.97, s=significant.
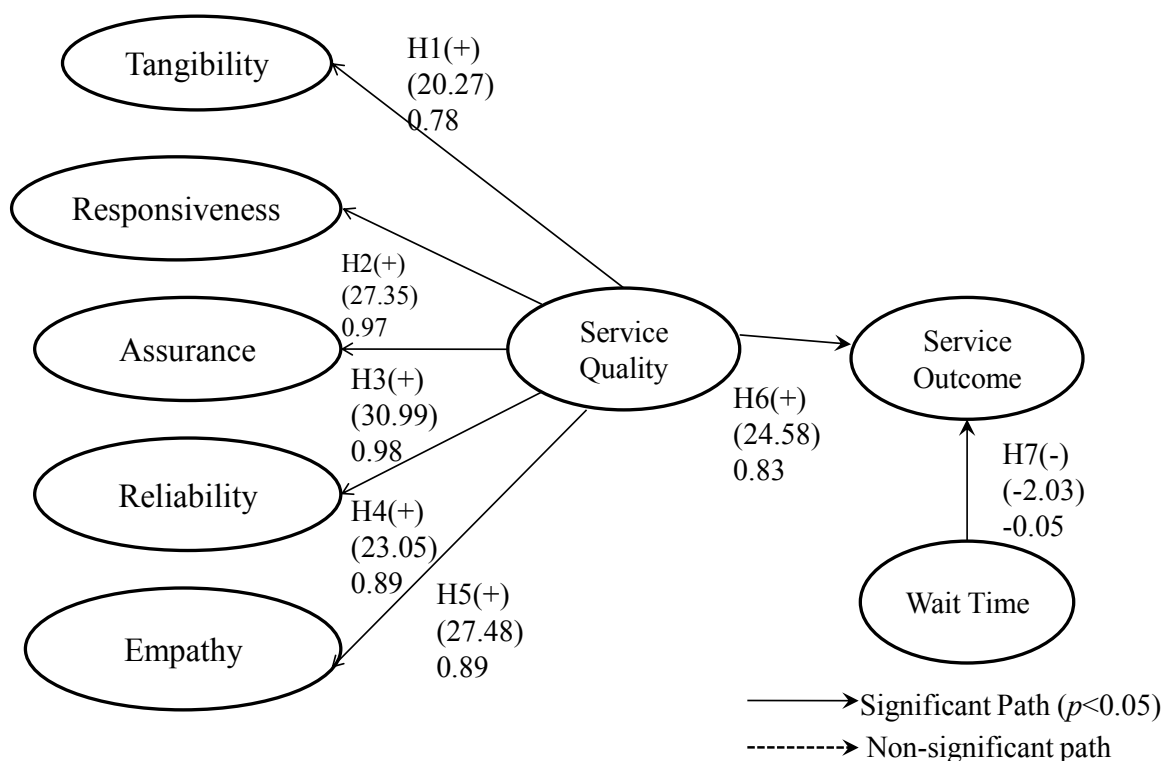
Note: Numbers in parenthesis are *t*-values, others are standardized path coefficients
Figure 2 Results of hypothesized framework

DISCUSSION AND IMPLICATIONS

This study set out to investigate the impact of dimensions of service quality, and overall service quality, on service outcome. In addition, this study tested the effect of wait time on service outcome.

Dimensions of Service Quality as Determinants of Service Outcome

We employed a performance-only approach (Cronin and Taylor 1992) to develop an appropriate instrument. All five dimensions of service quality were found to be of significant to the patients, namely tangibility, responsiveness, assurance, reliability, empathy. An advantage of the second-order model proposed in the present study is that it provides an opportunity for service providers to analyze customers' perceptions of SQ at a higher level of abstraction. The second-order model yields direct, actionable information at the attribute level (i.e. individual indicators in each of the first-order factors) for service managers. Additionally, it allows service mangers to assess the contribution of a theoretically important component of the latent construct and their relationship with another related construct (e.g., service outcome). Among the five important dimensions identified in this study, some are more important than others. Responsiveness and Assurance seem to be relatively more important than the others (Figure 2). Thus, efforts should be made to signal current and potential hospital customers about the quality of these two dominant service factors. This finding has distinct implications for practitioners. For instance, longitudinal benchmark comparison with other providers on five dimensions of SQ could reveal patterns not discovered by studying individual items only and, in turn, identify a need for intervention in a specific area.

Overall Service Quality as a Determinant of Service Outcome

The results of the present study conform to the service literature: overall SQ has a significant direct impact on service outcome. This observation indicates that managers need to monitor SQ, and ensure intervention that would enhance this measure, with a view to improving performance.

Wait Time as a Determinant of Service Outcome

Increased wait time seems to negatively influence patient satisfaction with the services, the likelihood of recommending the doctor to others, and the likelihood of repeat visits. Patients seem to balance these factors in their decisions as to whether or not to continue the relationship. It would seem that, at some point, regardless of how good the doctor is perceived to be or how much he/she is liked, respondents become dissatisfied with the provider as they experience unacceptable waits.

This study indicates that patients face unacceptable waits (50.6% respondents said they their wait is unacceptable "once a while," while 19.1% respondents said they "often" encounter unacceptable wait time). It is not difficult for providers to gather data relating to issues patients face with themselves (a high response) or staff. Patient dissatisfaction needs to be assessed and addressed- literature points to satisfaction being a major factor in patient loyalty, which is a key

determinant of service providers' financial viability ((Evanschitzky and Wunderlich 2006).

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THE EFFECT OF CULTURE ON THE CONTEXT OF AD PICTURES AND AD PERSUASION: THE ROLE OF CONTEXT-DEPENDENT AND CONTEXT-INDEPENDENT THINKING

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ABSTRACT

Since Americans have a context-independent way of thinking while Chinese have a context-dependent way of thinking, we assume that different ways of thinking may influence the context of ad pictures and consumers' ad attitudes. We first content analyzed 286 Chinese ads and 775 U.S. ads across 17 magazine categories. We found that contextualized ads appeared more frequently in Chinese magazines. However, the effect of culture on advertising was moderated by product class (goods vs. service), product categories, and magazine categories. Second, we checked the readers' attitudes towards ads with or without context and found expected cultural differences in ad attitudes. However, the effect of culture on ad attitudes might be moderated by involvement. Finally, research and managerial implications are discussed.

INTRODUCTION

Cross-cultural studies in advertising have shown that advertising differs significantly between East Asian and Western cultures and people from different cultures have different attitudes towards different ad stimuli. This is because members of distinctive cultures have different values, attitudes and preferences, and advertising should reflect the indigenous cultural values of its intended audiences (Han and Shavitt 1994; Kim and Markus 1999; McNeil and McDaniel 1984).

Although past research has contributed substantially to our understanding of the effect of culture on advertising, the impact of culture on the context of ad pictures (e.g., whether the advertised product is embedded in a social context or not) still remains unexplored. Pictures are widely used in ads (Meyers-Levy & Peracchio, 1995; Unnava & Burnkrant, 1991). Empirical studies have shown that picture size (Rossiter and Percy 1980), color of picture (Meyers-Levy and Peracchio 1995), completeness of picture (Peracchio and Meyers-Levy 1994), and presence of picture (Kisielius and Sternthal 1984) have a significant effect on cognitive processing and ad and brand attitudes. Kisielius (1982) and Mitchell and Olson (1981) found that favorable (or unfavorable) attitudes towards pictures can enhance (or reduce) ad attitudes.

Studies have shown that East Asians and Westerners have different ways of thinking (Cousins 1989; Nisbett *et al.* 2001). East Asians have a context-dependent way of thinking. They tend to direct their attention to the context or field as a whole (Nisbett *et al.* 2001, 293), especially the specific context of daily life (Cousins 1989). As a result, advertisements in East

Asian cultures are more likely to present the product in a social context (e.g., one or more "typical" consumers using the product). For example, an advertisement for wedding rings could show the bride and groom wearing the rings. In contrast, Westerners have a context-independent way of thinking. They tend to isolate the objects from the context. As a result, an advertisement in the U.S. may isolate the product from its social context and rely heavily on a format that highlights the product and its characteristics. For example, an advertisement for a wedding ring would show the ring alone, devoid of any social context. Therefore, contextualized ads may appear more frequently in East Asian cultures but non-contextualized ads may appear more frequently in Western cultures. Moreover, people from different cultures may have different attitudes towards ads with or with context.

The purpose of this paper is to examine whether ads in East Asian cultures differ from those in Western cultures in terms of the context of ads. Specifically, this paper examines whether ads in East Asian cultures are more likely to be embedded in a social context. This paper also examines whether the effect of culture on an ad would be moderated by product class (goods vs. services) and categories, and magazine categories. Finally, this paper checks people's attitudes toward ads with or without context.

THEORETICAL BACKGROUND

Culture and Advertising

A large body of work which relied on content analysis provides a broad and compelling account of how cultural values and ideas are reflected in advertisements. It shows that ads in East Asians cultures reflect East Asian values such as family relationship and benefit, respect to elders and authorities, social status and group consensus while ads in the U.S. reflect the western values such as individuality, independence and personal success (Belk and Pollay 1985; Belk and Bryce 1986; Cheng and Schweitzer 1996; Han and Shavitt 1994; Ji and McNeal 2001; Lin 2001; Mueller 1987, 1992; Zandpour *et al*. 1992).

Lin (2001) also found that ads in the U.S. used more time-oriented and more product merit appeals. Hong *et al*. (1987) found that Japanese ads contained more emotional and fewer comparative appeals than American ads. Kim and Markus (1999) found that 95% of Korean ads (vs. 65% of American ads) used conformity themes. In contrast, 89% of American ads (vs. 49% of Korean ads) used uniqueness themes. Madden, Caballero and Matsukubo (1986) found that Japanese magazine ads were generally more informative than U.S. ads. Rice and Lu (1988) found that Chinese magazine ads generally contain more information than Western magazine ads.

Zhou, Zhou and Xue (2005) compared the visual characteristics in TV commercials between China and the U.S. They found that U.S. ads presented more complete visual stories, identified their brand names earlier, and used more direct product comparisons than did Chinese ads, but tradition and history were used more often in TV commercials in China than in those in the U.S.. This is because China is a high-context culture while the U.S. is a low-context culture.

Some scholars also examined people's attitudes toward ads. They found that generally,

ads emphasizing individual benefits were more persuasive for Westerners while ads emphasizing collectivistic benefits were more persuasive for East Asians (Han and Shavitt 1994; Wang *et al*. 2000; Zhang and Gelb 1996).

Although advertising in East Asian cultures seems to reflect the traditional cultural values, there is evidence that Western values are integrating into advertising in East Asian cultures (Belk and Pollay, 1985; Belk and Bryce, 1986; Cheng and Schweitzer 1996; Ji and McNeal, 2001; Mueller, 1987; Zhang and Shavitt, 2003) due to economic development, the increasing exposure to Western products, music, movies, television shows, and magazines, and also increasing travel.

Although past literature has revealed cultural differences in ads, it has a significant methodology problem. Most papers were based on samples from one or two magazine categories (e.g., Han and Shavitt 1994; Hong *et al*. 1987; Mueller 1987, 1992), and some were even based on a couple of magazines or TV channels (e.g., Cheng and Schweitzer 1996; Han and Shavitt 1994; Ji and McNeal 2001; Lin 2001; Mueller 1987, 1992; Zandpour *et al*. 1992; Zhou, Zhou, and Xue 2005). Advertisements from women's magazines may differ significantly from those from computer magazines; TV commercials from NBC may differ significantly from those from MTV. So their samples may not be good representative of cultural values. This may also explain why some scholars did not find the cultural differences in some cultural dimensions or categories.

Moreover, almost all studies which analyzed the contents of the ads between Eastern and Western culture did not check people's attitudes toward ads. Content analysis has been criticized by providing little insightful information (Samiee and Jeong 1994). Specifically, content analysis shows what ad content is rather than how it influences consumers' attitudes (Lerman and Callow 2004). Therefore, it contributes little to both theory building and marketing practice (Kover 2001). Literature showed that generally, ads whose appeals match one's cultural orientation should be more persuasive (Han and Shavitt 1994; Zhang and Gelb 1996; Wang *et al*. 2000), but some scholars found that the effect of culture on ad attitudes may be moderated by product characteristics (e.g., personal vs. shared products; Han and Shavitt 1994), use conditions (public vs. private; Zhang and Gelb 1996), or novelty (Aaker and Williams 1998). Therefore, past literature based on content analysis contributes little to finding out how people from different cultures evaluate different ads and under what conditions are their attitudes changed.

Abstract and Concrete Thinking

The most significant difference between East Asian cultures and Western cultures is the extent to which the self is defined in relation to others (Markus and Kitayama 1991). The independent self-construal is more dominant in Western cultures (e.g., the U.S.), where people view the self as a bounded, unitary and stable entity that is separated from social context (Singelis 1994). In contrast, the interdependent self-construal is more dominant in East Asian cultures (e.g., China, Korea and Japan), where people emphasize attending to others, and the importance of interdependent relationships and harmony with others.

For East Asians, in contrast to those from Western cultures, an appreciation of the

relationship between self and others makes oneself an integral part of the context in which the person is imbedded (Markus and Kitayama 1991). They therefore pay more attention to context (Nisbett *et al*. 2001), resulting in greater cognitive elaboration and appreciation of context, especially when others are present (Markus and Kitayama 1991). As a result, for East Asians, specific social contexts are more likely to serve as the units of representation than are one's unique internal attributes (Markus and Kitayama 1991). East Asians, then, have a context-bound mode of thinking (Kühnen, Hannover and Schubert 2001), which is defined as "involving an orientation to the context or field as a whole" (Nisbett *et al*., 2001 293). East Asians tend to direct their attention to a particular context, "a part of the real-life settings" (Cousins 1989, 124). This implies that knowledge about persons, events or objects will not be abstract and generalized across contexts, but instead will remain specific to the focal context (Markus and Kitayama 1991).

In contrast, Westerners are more likely to pay more attention to dispositions and attributes and to describe themselves by emphasizing internal dispositions, with few references to the surrounding contexts (Cousins 1989). Therefore, abstract terms will serve as their units of representation (Markus and Kitayama 1991). As a result, Westerners develop a more context-independent mode of thinking (Kühnen, Hannover, and Schubert 2001), which is defined as "involving detachment of the [focal] object from its context" (Nisbett *et al*., 2001, 293).

A great deal of empirical evidence supports the context-dependent and context-independent distinction. Masuda and Nisbett (2001) presented realistic animated scenes of fish and other underwater objects to Japanese and American participants and asked them to recall what they had seen. They found that the Japanese were more likely than the Americans to pay attention to background or context information and recalled more information about a background environment, although both the Americans and the Japanese were equally likely to refer to the focal fish. Moreover, Japanese participants made about twice as many statements regarding the relationships between the object and the environment (e.g., "The big fish swam past the gray seaweed"). In addition, the first statement by Japanese participants referred to background information, whereas the first statement by American participants referred to the focal fish. Similarly, when asked to compare two flickering images, the American participants detected more changes in focal objects, while the Japanese detected more changes in the background scene (Masuda and Nisbett 2006).

Ji, Peng and Nisbett (2000) used the classic Rod and Frame Test (RFT) to ask participants to judge the position of the rod. In the test, a 16-inch square frame rotated independently of a rod that sat inside it. Both the rod (the black line at the end of the box) and the frame (the box) could be turned independently. They asked participants to judge when the rod appeared to be vertical, or "straight up and down," regardless of the position of the frame. They found that American participants were more attentive to the object and its relation to the self than to the field. As a result, American participants were less context-dependent. In comparison, Asian participants paid more attention to the field, and to the relationship between the object and the field. So Eastern Asian participants were deemed to be more context-dependent. By monitoring the eye movements of participants, Chua, Boland and Nisbett (2005) found that Americans concentrate on focal objects sooner and longer than East Asians, who concentrate on the background and away from focal objects.

In summary, individuals with an interdependent self-construal are more context-dependent and more likely to direct their attention to the context than are individuals with an independent self-construal, who are more context-independent and tend to isolate focal objects from the context.

RESEARCH HYPOTHESES

Glenn, Witmeyer and Stevenson (1977, 53) argue that those who are attempting to persuade others should "select approaches consistent with their own past experiences within the cultures to which they belong, and that they are selected, in part, on the basis of their ability to handle a style congruent with the culture." Wang *et al*. (2000) argue that cultural match results from the ad appeal's congruence with consumers' self-schemata. Self- and product-image theory argues that consumers will have a more favorable attitude toward ads and brands if ad appeal and style are congruent with their self-schema (Sirgy 1982). Thus, ads whose appeal or style is congruent with cultural orientation should be more persuasive and result in more favorable attitudes than ads with an incongruent style. Therefore, ads in a country should reflect its indigenous cultural orientation (Han and Shavitt 1994; Pollay and Gallagher 1990). This argument has been evidenced by many empirical studies (Han and Shavitt 1994; Hong, Muderrisoglu and Zinkhan 1987; Mueller 1987, 1992; Wang *et al*. 2000; Wang and Chan 2001; Wang and Mowen 1997; Zandpour, Chang and Catalano 1992; Zhang and Gelb 1996). Chinese have a context-dependent mode of thinking and Americans have a context-independent mode of thinking (Abel and Hsu 1949; Ji, Peng and Nisbett 2000; Morris and Peng 1994; Morris, Nisbett and Peng 1995). Therefore, Chinese are more likely to expect ads in which products are embedded in a social context, but Americans are less likely to do so. As a result, in order to make ads more persuasive, Chinese magazines may rely more on contextualized ads but the U.S. magazines may prefer ads without a context. Therefore, we hypothesize:

H1: Contextualized ads appear more frequently in Chinese print magazines than they do in U.S. print magazines.

Although advertising is a reflection of culture, as a cultural artifact, it may nevertheless serve as a distorted mirror which reflects only certain attitudes, behaviors and values (Pollay 1986; Pollay and Gallagher 1990). In this regard, cultural values in advertising may be moderated by product category (Cutler and Javalgi 1992; Leiss, Kline and Jhally 1990; Ryans 1969), product characteristics (Han and Shavitt 1994), use conditions (Zhang and Gelb 1996), or different media (e.g., local vs. international magazines; Wang and Chan 2001; Nelson and Paek 2007). Products can be classified into two groups: physical goods and services. Since goods are tangible, it is easy to highlight a physical product without presenting any social context. In contrast, it is very difficult to highlight a service without any social context, because services are intangible (Zeithaml, Parasuraman, and Berry 1985). In order to make a service tangible, marketers often associate it with something tangible or use a story to dramatize it. Indeed, the common prescription for advertising services has been to "tangibilize" them (Levitt 1981). Since Chinese tend to direct their attention to the context, they may contextualize most ads. As a result, for them there should be no difference between ads for goods and ads for services. But since Americans have a context-independent way of thinking, they tend to separate the product from

the context; however, they may tend to put services in a social context because they want to make services tangible. Therefore, we hypothesize:

H2a: There is no difference between ads for goods and ads for services in Chinese print magazines in terms of contextualization.

H2b: Contextualized ads appear more frequently for services than for goods in U.S. print magazines.

H2c: For ads for goods, contextualized ads appear more frequently in Chinese print magazines than in U.S. print magazines.

H2d: For ads for services, there is no difference between Chinese and U.S. magazines in terms of contextualization.

Physical goods and services can be further classified into different categories such as auto, beauty and personal care, clothing, food and drink, financial products, tourism and travel-related products, etc. Different categories may have different characteristics and requirements. For example, clothing and beauty products may need a demonstration; electronics and PC may need to highlight the unique features and attributes. Moreover, magazines can also be classified into different categories. Ads in fashion and beauty related magazines may differ significantly from those in food and wine magazines. So, an additional research question is posed to explore the difference in different product and magazine categories.

Research question 1: Is cultural difference in advertising regarding contextualization moderated by product and magazine categories?

STUDY 1

Sample Selection

In order to make sample ads more representative and decrease the idiosyncratic nature of certain magazines or products (e.g., most ads in fashion magazines are for apparel, beauty and health products), we selected ads in magazines from 17 subject categories (about two magazines for each category). We collected 286 ads from 36 Chinese magazines, and 775 ads from 32 U.S. magazines. All magazines chosen were published in 2007. All ads were for consumer products and contained images. Pure word ads were excluded because it is hard to reach a high inter-judge reliability (percentage of agreement between judges). Duplicated ads were also excluded. The U.S. magazines were selected according to their popularity in each category at yahoo.com and magazineagent.com, as well as their availability in local book stores. All U.S. magazines were national and some were even international magazines. Chinese magazines were selected according to their popularity in each category at www.zcom.com and www.people.com.cn, recommendations of book stores, and availability in local book stores. All Chinese magazines were national magazines. Only one Chinese magazine is the Chinese edition of a U.S. magazine. We did not choose many Chinese editions of U.S. magazines because Nelson and Paek (2007) found that ads in such magazines are more standardized than ads in local magazines. Therefore,

cultural differences would be moderated or even disappear.

Coding Scheme and Procedure

A Chinese bilingual student and an American student were recruited to judge whether an ad was contextualized. They were blind to the purpose of the study and the specific hypotheses. They were trained, and practiced coding twenty ads collected from magazines published before 2007. They were asked to code the ads into either contextualized ads or context-independent ads. If a social context was present in an ad (e.g., someone was using the advertised product; someone was demonstrating the benefit(s) of the advertised product; or the advertised product was imbedded in a social context, e.g., a car on the road), the ad was coded as contextualized; if only the product was highlighted and no social context was present, the ad was coded as context-independent. The inter-judge reliability was 90%. The conflicts were resolved by discussion between the judges.

Product Category

All physical products were classified into ten product categories. The categories, adapted from Katz and Lee's (1992) study, were apparel and accessories, auto and parts, beauty and personal care, medicine, jewelry and watches, electronics, PC and accessories, food and drink, home and others.

For services, we only compared two categories: tourism and travel-related products, and recreational, cultural and sports products (RCS). This is because we only found 33 service ads from Chinese magazines. Moreover, they are scattered into different categories with very few samples. Third, most Chinese service ad categories and U.S. service ad categories are not comparable (e.g., there were 36 financial product ads (36% of service ads) in the U.S. magazines, but we did not find any such ads in Chinese magazines).

Results

All tests were based on Fisher's Exact Test unless specified. The result showed that ads in Chinese magazines were more contextualized (76.9%) than those in the U.S. magazines (56.1%; p = .000). So hypotheses 1 was supported. For Chinese ads, there was no significant difference in terms of contextualization between ads for goods (77.1%) and ads for services (75.8%; p = .829). H2a was supported. For the U.S. ads, ads for services were more contextualized (75.8%) than ads for goods (53.3%; p = .000). H2b was supported. For goods, ads in Chinese magazines were more contextualized (77.1%) than ads in the U.S. magazines (53.3%; p = .000). H2c was supported. However, for services, there was no significant difference between the Chinese (75.8%) and the U.S. ads (75.8%; $\chi^2(1) = 0$, p = 1.000). H2d was supported. Please see figure 1 for results.

For physical goods categories (see table 1), we found a significant difference between Chinese and U.S. ads in auto and accessories (China: 74% vs. US: 45%; p = 0.001), beauty and personal care (China: 90% vs. US: 67%; p = 0.002), electronics and accessories (China: 76% vs. US: 53%; p = 0.005), food and drink (China: 59% vs. US: 33%; p = 0.057), and home products (China: 84% vs. US: 63%; p = 0.075). However, there was no significant difference between

Chinese and U.S. ads in apparel and accessories (China: 90% vs. US: 82%), jewelry and watches (China: 70% vs. US: 50%), computer and accessories (China: 50% vs. US: 60%), medicine (China: 82% vs. US: 67%), and other (China: 83% vs. US: 80%; all ps > .1).

For tourism and travel-related products, contextualized ads appeared more frequently in U.S. magazines (97%) than those in Chinese magazines (56%; $p = 0.005$). For RCS, there was no significant difference between Chinese (90%) and U.S. ads (100%; $p = 1.000$). For services as a whole, there was no significant difference between Chinese (76%) and U.S. ads (76%; $p = 1.000$).

For magazine categories (see table 2), we found significant difference between Chinese and US ads in auto (China: 92% vs. US: 40%; $p = 0.003$), entertainment (China: 100% vs. US: 55%; $p = 0.018$), family (China: 88% vs. US: 36%; $p = 0.015$), fashion and style (China: 94% vs. US: 77%; $p = 0.039$), food (China: 80% vs. US: 42%; $p = 0.063$), home decoration (China: 86% vs. US: 47%; $p = 0.001$), and women's (China: 83% vs. US: 50%; $p = 0.016$).

Discussion

Our findings show that culture does have a significant effect on the context of ad pictures. Generally, contextualized ads appear more frequently in Chinese magazines than in U.S. magazines. But the effect of cultural difference disappears for service products. Moreover, the effect of culture on the context of ad pictures can also be moderated by product class and categories, and magazine categories.
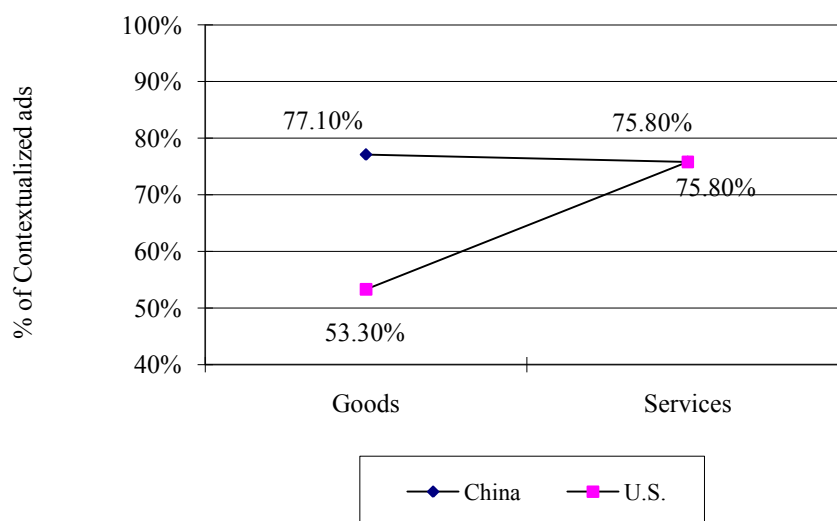
Figure 1 Study 1 Results: Culture x Product Class Interaction

Table 1
Comparison of Ads across Product Category

| Product Category | Contextualized Ads | | | | Fisher's |
| | China | | U.S. | | |
	#	%	#	%	Exact Test
Physical Goods					
Apparel	12	92%	42	82%	n.s
Auto	31	74%	63	45%	0.001
Beauty/Personal Care	36	92%	63	67%	0.002
Computer	9	50%	12	60%	n.s.
Food/Drink	10	59%	48	33%	0.057
Electronics	48	76%	43	53%	0.005
Home	26	84%	31	63%	0.075
Jewelry/watches	9	69%	18	50%	n.s.
Medicine	9	82%	32	67%	n.s.
other	5	83%	8	80%	n.s.
Total	195	77%	360	53%	0.000
Service	25	76%	75	76%	n.s.

Table 2
Comparison of Ads across Magazine Category

| Magazine Category | % of Contextualized Ads | | | | Fisher's |
| | China | | U.S. | | |
	#	%	#	%	Exact Test
Auto	11	92%	21	40%	0.003
Business	14	61%	24	53%	n.s.
Computer & Internet	14	52%	14	64%	n.s.
Entertainment	8	100%	27	55%	0.018
Family	7	88%	14	36%	0.015
Fashion & Style	30	94%	75	77%	0.039
Food	8	80%	10	42%	0.063
General Readership	40	85%	18	60%	0.016
Health	2	100%	32	47%	n.s.
Home Decoration	25	86%	20	47%	0.001
Music	3	33%	19	48%	n.s.
News & Politics	11	52%	6	38%	n.s.
Parenting	4	80%	37	66%	n.s.
Photography	18	82%	20	63%	n.s.
Sports	3	75%	10	53%	n.s.
Travel	7	78%	50	75%	n.s.
Women's	15	83%	38	50%	0.016
Total	220	77%	435	56%	0.000

STUDY 2

Although we find cultural differences in the contextualization of ad pictures, we still know little about how people evaluate ads with or without context. According to the dual-processing models, the Elaboration-likelihood Model (ELM) (Petty, Cacioppo, and Schumann, 1983) and the Heuristic Systematic Model (Chaiken, 1980), ad persuasion follows two routes: central or peripheral. When viewers lack sufficient motivation (because of low relevance) or ability (because of personal traits or external interference) to process information in an ad, they may invest few cognitive resources to process attribute-relevant information, and base their attitudes on peripheral cues such as a picture's attractiveness, source characteristics, or music. In contrast, when ad-processing motivation is high, readers are thought to engage in greater cognitive elaboration, allocating a large portion of their mental resources to scrutinize and elaborate on all available attribute-relevant information. So persuasion is mainly based on attribute-relevant information rather than peripheral cues. Since people will base their evaluation mainly on attribute information and pay less attention to the pictures under high-involvement situations, cultural differences would be moderated under high-involvement situations. Therefore, we expect:

H3: Cultural differences in terms of ad attitudes will be weaker under high- involvement situations than under low-involvement situations.

Under low-involvement situations, people pay more attention to ad pictures. Therefore, culture will have a significant effect on people's attitudes toward ads with or without context. Since East Asians have context-dependent thinking while Westerners have context-independent thinking, we hypothesize:

H4a: East Asians will generate more favorable attitudes toward contextualized ads than non-contextualized ads.

H4b: East Asians will generate more favorable attitudes than Westerners toward contextualized ads.

H4c: Westerners will generate more favorable attitudes toward non-contextualized ads than contextualized ads.

H4d: Westerners will generate more favorable attitudes than East Asians toward non-contextualized ads.

Method

Design. In order to text our hypotheses, a 2 (involvement: high vs. low) x 2 (culture: China vs. U.S.) x 2 (ad: contextualized vs. non-contextualized) between-subject factorial design was used.

The Choice of Culture and Participants. Past studies suggest that Chinese tend to direct their attention to the context (Ip and Bond 1995; Triandis *et al*. 1990) and Americans have a context-independent way of thinking (Cousins 1989), so 94 American students in a public southeastern university in the U.S. and 91 Chinese students in a public southwestern university in China participated in the study. The original ad and questionnaire were drafted in English and then translated into Chinese. A back translation by a different translator was used to ensure the veracity of the Chinese version.

Stimuli. A digital camcorder was used as the target product because the product category is of enough interest for the participants to be able to process the ads meaningfully. A completely fictitious name (Classa) was used to eliminate the effect of prior experience with established brands. An ad with four ad pictures was created according to the ad messages adapted from those used by Unnava and Burnkrant (1991). The ad described four attributes of the digital camcorder (size, low light performance, zoom and the ability to capture sports action; see table 3). In concrete pictures, real social contexts are present (e.g., a child blowing out the candles on a birthday cake.). However, in abstract pictures, products are separated from social contexts, and only the product is shown (e.g., only a candle is present). Participants completed three contextualization measures to check the manipulation between contextualized and non-contextualized ads (1 = not contextualized / separated from the social contexts / pallid; 7 = contextualized / embedded in the social contexts / vivid).

Table 3
Ads with Concrete versus Abstract Pictures

Ad Copy	Concrete Pictures	Abstract Pictures
Ultra compact size and less than one pound.	Picture of a digital camcorder held by a hand	Picture of a digital camcorder
Excellent Performance under low light conditions. A light as dim as a candle is enough.	Picture of a child blowing out the candles on a birthday cake.	Picture of a candle.
Capture the scene from a long distance with 12X optical and 480X digital zoom.	Picture of people coming down a roller coaster and screaming.	Picture of the lenses of a digital camcorder.
Help you to improve your sports skills. Records all your movements with great accuracy and plays them back at different speeds to analyze your mistakes.	Picture of a tennis player making a shot.	Picture of a tennis racket and ball.

Procedure. Participants were first asked to read a cover story and advertisement. They were first told that a large-scale consumer electronics manufacturer was planning to test a new digital camcorder and ad for the new product in their area. Therefore this company needed consumers' opinions about the new product. Participants in the high involvement situations were also told that the new product will be available soon and that they were participating in an important survey and they were in a small group of students whose opinions would be valued heavily. Those in the low involvement situations were told that the new product will not be available soon and that they were in a large group of students whose opinions would be averaged. After reading the ad, they were asked to evaluate their attitudes toward ads and a series of ancillary measures and a "Ten Statement Test" (TST) in which they were asked to respond ten times to a question, "Who am I?" Finally, the participants were thanked and dismissed.

Cousins (1989) used a Twenty Statement Test. However, we used a Ten Statement Test (TST) because students in a pretest found it very difficult to complete twenty statements. The coding schema used by Cousins (1989) was adapted to code the statements into two categories and four subcategories. Physical (e.g., I am 23 years old), social (e.g., I am a marketing major), concrete preference (e.g., I like swimming; I like cats), concrete wish (e.g., I hope to be an accountant), and activity (I am doing a project for my marketing class) were coded as concrete statements. Global preference (e.g., I like music/sports/animals), global wish (e.g., I wish the world to be better), pure attribute (e.g., I am friendly), qualified attribute (I am nice to my friends), and other global statements were coded as abstract statement. Statements were also coded as self-related or other related. Two judges coded the TST into two groups. Inter-judge reliability was 92%.

Dependent Variables. Participants completed three ad attitude questions on a 7-point Likert scale (1 = bad/not at all likeable/unfavorable; 7 = good/likeable/favorable). An average of

these responses led to a three-item ad attitude index (Cronbach's α = 0.883). We only measured the ad attitudes and didn't measure the brand attitudes and purchase intention because people from different cultures may have different attitudes toward famous or non-famous brands.

Result

Manipulation Checks. The number of concrete statements was subjected to a one-way ANOVA with culture as an independent variable. The result showed that Chinese ($M = 6.09$) were more concrete than Americans ($M = 3.46$; $F(1, 183) = 85.769$, $p < .01$).

The number of correctly recalled attribute cues was subjected to a 2 (culture) x 2 (involvement) ANOVA. Only a significant main effect of involvement emerged ($M_{high} = 2.30$, $M_{low} = 1.66$; $F(1,181) = 22.352$, $p < .01$). Readers paid more attention to the attribute information under high-involvement situations than under low involvement situations.

The mean of contextualized index ($\alpha = 0.857$) was subjected to a 2 (culture) x 2 (involvement) x 2 (ad) ANOVA. Only a significant main effect of ad emerged ($M_{context} = 4.71$; $M_{non-cont} = 3.53$; $F(1, 177) = 59.886$, $p < .01$). People thought that contextualized ads were more contextualized than non-contextualized ones.

Ad Attitudes. The hypotheses were tested on a 2 (culture) x 2 (involvement) x 2 (ad) ANOVA. The results are shown in Table 4. The three-way ANOVA revealed a significant three way interaction ($F(1, 177) = 17.875$, $p < .01$). Therefore, a 2 (culture) x 2 (ad) ANOVA was conducted for high- and low-situations respectively. For high-involvement, ANOVA revealed a marginally significant interaction effect between culture and ad ($F(1, 85) = 3.576$, $p < .07$). For low-involvement, ANOVA revealed a significant two-way interaction effect ($F(1, 92) = 62.484$, $p < .01$). H3 was supported. Cultural difference in ad attitudes was weaker under high-involvement situations than under low-involvement situations.

Since the two-way ANOVA for high-involvement was significant, post hoc contrasts were conducted. Chinese still generated more favorable attitudes toward the contextualized ad ($M = 4.76$) than non-contextualized one ($M = 4.03$; $F(1, 41) = 8.417$, $p < .01$). However, there was no significant difference for Americans between the contextualized ad ($M = 4.91$) and the non-contextualized ad ($M = 4.81$; $F(1, 44) = 0.225$, $p > .1$). Moreover, when exposed to the contextualized ad, there was no significant difference between Americans ($M = 4.91$) and Chinese ($M = 4.76$; $F(1, 41) = 0.393$, $p > .1$). When exposed to the non-contextualized ad, Americans (M = 4.81) generated more favorable attitudes than Chinese ($M = 4.03$; $F(1, 44) = 10.9437$, $p < .01$).

Under low-involvement situations, post hoc contrast showed that Chinese generated more favorable attitudes toward the contextualized ad ($M = 5.08$) than the non-contextualized one ($M = 3.29$; $F(1, 46) = 54.406$, $p < .01$). H4a was supported. When exposed to the contextualized ad, Chinese ($M = 5.08$) generated more favorable attitudes than Americans ($M = 4.39$; $F(1, 46) = 8.044$, $p < .01$). H4b was supported. Americans generated more favorable attitudes toward the non-contextualized ad ($M = 5.21$) than the contextualized ad ($M = 4.39$; $F(1, 46) = 13.400$, $p < .01$). H4c was supported. When exposed to non-contextualized ad, Americans ($M = 5.21$)

generated more favorable attitudes than Chinese ($M = 3.29$; $F(1, 46) = 74.721$, $p < .01$).

Table 4
Study 2 Results: Means and Standard Deviations

Involvement	Culture	Ad	Mean	SD	N
High	Chinese	Contextualized	4.76	0.82	21
		Non-cont.	4.03	0.83	22
	American	Contextualized	4.91	0.71	22
		Non-cont.	4.81	0.76	24
Low	Chinese	Contextualized	5.08	0.85	24
		Non-cont.	3.29	0.83	24
	American	Contextualized	4.39	0.84	24
		Non-cont.	5.21	0.70	24
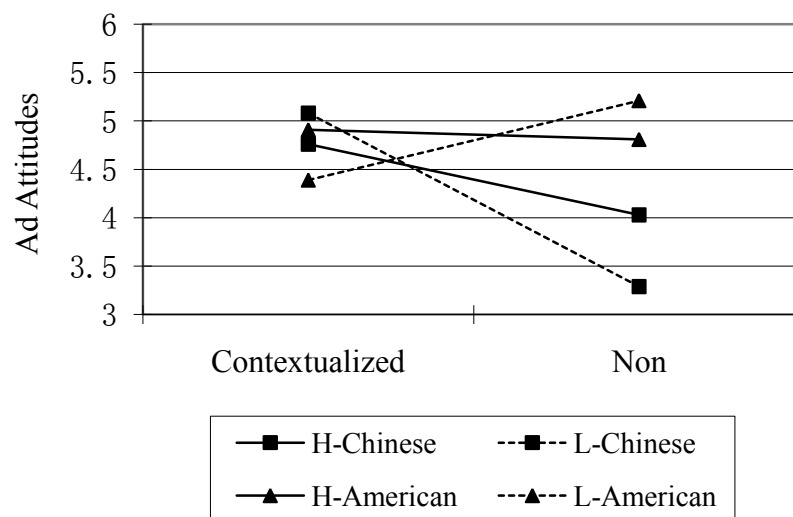
Figure 2 Study 2 Results: Culture x Ad Interaction

Discussion

Our findings showed that culture does have an impact on ad attitudes but its effect may be moderated by involvement. Under low-involvement situations, culture has a stronger impact on people's attitudes toward ads with or without context. Chinese prefer contextualized ads to non-contextualized ones while this tendency is reversed for Americans. Under high-involvement situations, the effect of culture on ad attitudes is weaker because people pay more attention to the attribute information. However, culture still has a significant impact on ad attitudes under high-involvement situations, so peripheral cues (context of pictures) influence people's ad attitudes, especially when people have strong negative attitudes toward the peripheral cues. This may be because readers always pay their first attention to the peripheral cues (Aaker and Maheswaran 1997). Their first impression may influence their subsequent ad processing.

GENERAL DISCUSSION

Traditionally, scholars in cross-cultural advertising research have paid more attention to the appeal and information content of ads, while no scholar has examined the cultural differences in context of ad pictures. This study first content analyzed 286 Chinese and 775 U.S. magazine ads across seventeen magazine categories and finds that contextualized occurs more frequently in Chinese ads than those in the U.S. However, findings here also suggest that the effect of culture on advertising was moderated by product class (goods vs. services), product categories and magazine categories. We also examined readers' attitudes towards different ads. Generally, Chinese generated more favorable attitudes toward contextualized ads than toward non-contextualized ads but Americans preferred non-contextualized ads to contextualized ones. The effect of culture on ad attitudes may, however, be moderated by involvement. The impact of culture is weaker under high-involvement situations than under low-involvement situations.

Our findings shed some light on the literature because we are the first to examine the effect of culture on ad context. Our findings are robust and representative because our sample ads are from 17 magazine categories while many studies in the cross-cultural advertising relied on just a few magazines, or magazines from a single category. We also contribute to the literature by checking readers' ad attitudes.

Managerial implications

This study has some managerial implications. First, ads in East Asian cultures should be embedded in a social context because most ads in East Asian cultures are contextualized and East Asians generate more favorable attitudes toward contextualized ads, even under high involvement situations. In contrast, ads in Western cultures should be non-contextualized because Westerners have favorable attitudes toward such ads, especially under low-involvement situations. However, this guideline is just a general one. The companies should customize advertisements according to the characteristics of the products or magazines. For services, ad pictures should be contextualized to generate more favorable attitudes of consumers. For apparel and beauty related products, contextualized ads would be better. But for PCs, food and wines, highlighting the unique design and features would be better. Non-contextualized ads may, however, result in less favorable attitudes of East Asians. An alternative to address this issue is to contextualize the products while using additional pictures to highlight the unique designs and features.

Academic implications

Our findings suggest that the effect of culture can be moderated by product and magazine categories. Therefore, cross-cultural studies analyzing the content of ads should not rely on a few sources or sources from a few categories. Moreover, although some scholars argue that content analysis is superficial, content analysis can reveal information that cannot be revealed by experiments because it is impossible to conduct an experiment for every product category. However, cross-cultural scholars should not rely on content analysis only. They should dig deeper to explore how consumers evaluate ads under different situations after content analyzing the ads.

Limitations and future studies

This study also has several limitations. Firstly, this study only examined ads with pictures because pictures are much easier to code than words. Certainly, words can also be used to create a social context. Future studies should check whether cultural differences in contextualization are also reflected in words. Secondly, this study only examines cultural differences by using ads from Chinese and U.S. magazines. Future studies should use ads from other East Asian cultures, such as those from Korea and Japan. Thirdly, future research could compare findings explored here with evidence collected from other media. In other words, perhaps the findings displayed here are consistent for magazine advertising but inconsistent for other media. Fourthly, we did not examine whether the consumers' positive attitudes toward ad pictures can be moderate by strong or weak argument. Fifthly, future studies should also check consumers' attitudes toward ads by using other products (e.g., services).

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THE CHANGING NATURE OF CONTROVERSIAL ADVERTISING: A CONTENT ANALYSIS STUDY

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EXTENDED ABSTRACT

Wilson and West (1981) define unmentionables as "products, services, or concepts that for reasons of delicacy, decency, morality or even fear tend to elicit reactions of distaste, disgust, offence or outrage when mentioned or when openly presented" (p. 92). Katsanis (1994) defines unmentionables as "products are those which may be offensive, embarrassing, unhealthy, harmful to the environment, sexually oriented, or controversial to some significant segment of the population." (p. 8). Furthermore, academic literature interchangeably uses "unmentionables", "socially sensitive products" and "indecent products" (Fahy et al. 1995; Rehman and Brooks 1987; Shao 1993; Shao and Hill 1994a, b; Wilson and West 1981). Key to understanding unmentionables is the personal or cultural revulsion that accompanies such advertising; these reactions may be moral, psychological or emotional (Katsanis 1994) and are not easily subject to dissipation or disavowal (Pitt and Abratt 1988).

Controversial ads have been characterized as those which might be embarrassing or offensive to the audience (Rehman and Brooks 1987). A review of offensive advertising literature by (Christy 2006) provides a four-dimensional framework, where the advertised product, the execution of advertisement, the medium, and the demographics of target audience are the key components. Offensiveness of advertisements is thus seen as multidimensional construct with two key dimensions: offensiveness of the product/service advertised and the very execution of that advertisement (Barnes and Dotson 1990). Offensiveness of advertised products can thus be understood through several proposed frameworks. For example, self-defense products, such as pepper spray, might depict a violent encounter thus eliciting offensive reaction by a consumer yet the product itself is not perceived as offensive. It is also not necessary to use outright violence or nudity to offend audiences; depicting women in subservient or sexual images is highly objectionable to certain audiences (Christy 2006).

The current research's contention is that there will be cyclical pattern in how unmentionable products are portrayed in the media. The primary purpose of this study was to examine if such pattern exists and, if it does, which products/services follow cyclical pattern. More specifically, by using a sample of 1442 advertisements from youth-oriented magazine spanning 22 years, we were able to demonstrate changes in product occurrences.

Using runs test, three out of six product categories (tampons, skincare, razors, hair removal products, feminine pads, facial cleansers) exhibited pattern that were consisted with oscillation hypothesis. Hair removal products (p<0.05), hair shavers (p<0.05), and tampons (p<0.05) were the product categories that demonstrated cyclical trend.

Commercial and academic sectors of the advertising industry hold a view that

"advertising in a mirror of the values and needs". Results suggest that such view may be incomplete and that there might be other, external events that trigger oscillations.

Managers should be aware that some products may transition out of the unmentionable realm while other may remain locked-in and stay sacred. More research is needed to predict which products categories are prone to such transitions.

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MARKETING PRINCIPLES AND COLLEGE STUDENT RETENTION PROGRAMS: APPLICATIONS TO HISPANIC STUDENTS

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ABSTRACT

Colleges and universities are facing increasing challenges. Many of these challenges are the result of technology advancements and changing student needs. These institutions have many similarities with corporate America, as they are faced with shrinking budgets, while also facing increased competition for attaining and retaining their customers—students. Many university administrators believe that Hispanics represent a critical population of students to attract, since they are the largest and fastest growing ethnic group in the United States. This paper seeks to apply marketing principles to college retention, as well as identify different means of attaining and retaining Hispanic college students.

INTRODUCTION

The new millennium has brought increasing challenges to colleges and universities throughout the United States and in other nations. Many fresh forms of instructional delivery have been developed, assisted by innovative technologies. The resulting Internet classes and degree programs, along with instructional support programs such as Blackboard and e-mail have altered the nature of college teaching.

At the same time, a new generation of instructional competitors has emerged. Programs such as the University of Phoenix, DeVry University, and others compete for both traditional age and non-traditional students by offering the convenience of study at home without needing to physically attend a college campus. In response, many traditional universities offer online programs designed to match these competitive efforts.

In this turbulent environment, traditional college and university programs continue to be offered to on-campus students.

At the same time, the demographics of students engaged in higher education are changing. Many university administrators believe that Hispanics represent a critical population of students to study. The Hispanic population is the largest and fastest growing ethnic group in the United States. According to the Census Bureau's 2007 American Community Survey, Hispanics account for 45.4 million or 15.1% of the population (*Business Wire,* 2009). The U.S. Hispanic population is projected to nearly triple, resulting in one in three people in the U.S. being of Hispanic origin in the coming decades (*Business Wire*, 2009).

As a result, more Hispanics and minority students, the more historically underrepresented groups of students, can be expected to seek college degrees. The increase of Hispanics in higher education has been significant, with approximately 22% of college age Latinos enrolled in college; however this group still lags behind other racial groups in terms of the percent enrolled at a university or college. College age Caucasians have approximately a 40% enrollment rate, Afro-Americans hold a 30% enrollment rate, and Asian/Pacific Islanders have a 56% enrollment rate (Santiago & Brown, 2004).

Many Hispanic students are the first in the family to enroll in higher education. The challenges of retaining them at a given institution are significant. This may be due in part to the potential general perception that, relative to their peers, such students have poorer academic preparation, differing motives for entering college, lower levels of parental support and involvement, and different expectations regarding a college experience. These create significant obstacles to academic success (Saenz et al, 2007).

This report represents an attempt to apply marketing concepts regarding customer retention and service recovery (e.g. Clow and Baack, 2010; Hart, Heskett, and Sasser, 1990) to the administration of college and universities, particularly with regard to student retention and the Hispanic student population. This paper begins with a review of the three pillars of customer retention as they apply to the college environment. Next, more detailed attention is given to the process of service recovery, which is an organization's response to a service failure. Service recovery tactics may be aimed at customer dissatisfaction as well as reducing customer defections. Implications are then examined with special attention given to Hispanic college students.

CUSTOMER RETENTION

There are three "pillars" of customer retention (Clow and Baack, 2010). The first is building customer loyalty. Maintaining quality relationships constitutes the second pillar. The third pillar is responding to customer complaints and defections. These activities may be adapted to colleges and universities, as is described next.

Customer Loyalty and Quality Relationships

Loyalty to any type of service provider, whether it is an insurance company, instructional institution, financial institution, or even a hair styling salon, may be divided into two key elements: (1) emotional attachment and (2) behavioral responses. On campus, these reactions are impacted by the quality of the relationships between students and professors, administrators, advisors, and other students.

At an instructional institution, emotional attachment often builds when a student feels welcome, comfortable, and supported. It is not unusual to hear a person state that he/she "loves" a professor or a student organization. This type of emotional affection results from two sources: (1) the quality of instruction in the classroom, including the learning environment and (2) other on-campus activities.

Quality of instruction often emerges when students report that a professor "cares," takes time to answer questions, treats students with respect, and delivers what the student considers to be valuable information. Faculty members who demean students or grade their work in ways that appear to be harsh or unjustifiable damage perceptions of the overall quality of instruction. At the same time, students are not helpless. Many are willing counsel others as to which professors to avoid and which to take. Web sites such as "Rate My Professor" are also used to make decisions about courses and professors.

Large institutions tend to have lower retention rates as compared to small institutions (Astin & Oseguera, 2005). This suggests that a smaller, more intimate educational setting may be conducive to building loyal relationships; the learning environment may be perceived as being more supportive and of higher quality.

It is in the second area, the quality of other on-campus activities, where emotional loyalty may be built. A vast number of interactions can build such loyalty, including intramural programs, student clubs, sororities and fraternities, dorm life, on-campus employment, and attending events such as sports, music concerts, and seeing speakers and other presenters who visit the school.

Behavioral responses take the form of referrals and other word-of-mouth endorsements to family members, friends, and former high school classmates. Further, behavioral responses are likely to include being more diligent about attending classes, studying harder to achieve higher grades, and spending more time on-campus. The most notable behavioral response is that the student continues to re-enroll until he or she has graduated. Even at that point, additional behavioral responses are possible, including returning for events such as homecoming, making financial donations to the institution, and enrolling in graduate programs.

College and universities are more likely to prosper when they operate at high levels of capacity, with regard to student enrollment. A balancing act is likely to emerge between being fully "booked" and providing the personalized attention that students crave. When the balance is achieved, loyalty grows.

Degree attainment serves as an indicator of a quality on-campus atmosphere. Degree attainment at an institution indicates that the student was sufficiently loyal to the institution to ultimately earn a degree. Many university faculties and student affairs personnel are interested in degree attainment because it signifies that various efforts were successful. It is clearly of great interest to university administrators and admission officers because there are considerable costs associated with recruiting new or additional students to fill spaces created by those who have dropped out (Astin & Oseguera, 2005).

A student/institution relationship develops over time and may be influenced by institutional efforts and policies. Previous studies indicate that retention, and thus loyalty, are affected by student living accommodations. Institutions that require freshman on-campus residency or those that house a large percentage of new students in campus residence halls often achieve better student degree completion rates. Purely commuter institutions often experience greater attrition. (Astin & Oseguera, 2005).

Service Recovery

In the field of marketing, service recovery, the third pillar of customer retention, occurs when company's staff responds to a service failure. When a customer receives services that do not meet his or her expectations, the likely responses are to either complain or to seek a new provider. When a customer has had bad experience and complains, the firm's employees should make every effort to rectify the situation. These efforts are service recovery activities.

Effective service recovery can actually build positive feelings toward the firm following a negative encounter (McCollough and Bharadwaj, 1992). When a customer leaves, attempts may be made to recover the customer and entice the individual to give the organization another chance. Both processes begin after a service failure occurs.

Service Failures on Campus

A service failure occurs when customer expectations are not met. Bad hair cuts, "rush" orders that arrive late, and poorly cooked meals at restaurants are examples of service failures. Such events lead to negative consequences. An unhappy customer will tell approximately eleven (11) people about a negative experience, while only telling six (6) about a positive encounter (Hart et al, 1990). Also, customer dissatisfaction is related to brand-switching, or finding a new company with which to do business (Clow and Erdem, 1998; Warren and Gilbert, 1993).

On a college campus, a service failure occurs when a student has a bad experience. Two separate types of service failures are possible: (1) failure in the classroom, and (2) failure of the support services outside of the classroom.

A *failure in the classroom* takes the form of failing to meet a student's expectations. Examples include professors who test on materials that were not covered or assigned, professors whose exams are so rigorous that only a small minority of students pass the test, and professors that insult students, ignore questions, fail to keep office hours or respond to student inquiries, and those that either miss classes or have them led by unprepared graduate students.

Typical responses to these types of service failures include dropping the class, telling other students to avoid the professor, filling out angry and insulting course evaluations, filing complaints with the administration, and leaving the university.

The second form of service failure is related to *support services*, such as billing students for tuition, completing applications for grants and scholarships, reporting grades to students, providing acceptable on-campus living experiences, providing reasonable parking facilities, and offering acceptable food for on-campus meals.

Each of these failures can be highly frustrating, especially to incoming freshmen and transfer students who are less well versed in how to respond to the administration. These types of service failures can create antagonism between students and faculty members, as well as with university administrators.

In a marketing service failure, customers consider four factors: (1) who is responsible for the dissatisfaction, (2) the magnitude of the dissatisfaction, (3) whether or not the dissatisfaction could have been prevented, and most importantly (4) what is being done to fix the situation (Folkes, Keletsky, and Graham, 1987). The fourth and final element is known as service recovery. On campus, the person responsible can be a professor, support staff employee, or fellow student. The magnitude of the dissatisfaction depends on the nature of the event and whether or not the incident could have been avoided. Service recovery is what can be done to fix the situation.

THE PROCESS OF SERVICE RECOVERY

Service recovery is any attempt made by a professor or administrator to address the failure. Service recovery efforts affect subsequent levels of satisfaction with the college and more generally the field of education, as well as other key responses and outcomes.

Past research indicates that customers who are dissatisfied can be recovered. There are four common tactics which are used in service recovery situations, including (1) promptness, (2) courtesy, (3) effort, and (4) a sense of professionalism (Hoffman, Kelley, and Rotalsky, 1995). Promptness means the customer receives a quick response, even when the reply is unsatisfactory. There is some evidence which suggests that such a negative response will not have as powerful of a dissatisfactory impact if it is delivered quickly (Johnston and Hewa, 1977). Courtesy includes politely listening to the complaint and then rendering a respectful or polite response. Effort is the perception that the employee is or was trying hard to find a way to fix the problem, even when he or she fails. Professionalism is the perception that the employee knows "what he/she is doing," and has a sense of detachment associated with not taking a complaint personally while seeking to find an acceptable outcome (Hoffman et al, 1995).

In dealing with disillusioned students, these approaches would seem to be valuable. Any faculty or staff member who knows a student believes that something has happened which was unfair or handled badly could respond using these same guidelines. A prompt explanation for the problem may mitigate some of the negative reaction. Being courteous is always advisable. Also, a student believes that the university employee "tried hard" to fix a problem (effort) is likely to express stronger satisfaction with the school and the individual involved. Finally, the perception that members of the university handled an issue in a professional manner bodes well for the college and future relationships between the student and others on campus.

Mediating Factors

There are mediating factors that might affect success levels of service recovery efforts. One issue is the student's level of involvement. In the case of a college experience, as noted, those who live on campus and/or are employed on campus may engage a university in ways that are not the same as other students. These experiences immerse the students in the campus and its culture, and help them become part of that environment. Full time students are likely to be involved in the institution in ways that are not the same as part time students, and those who view the college program as the key factor in their futures are likely to engage in the university

experience in different ways.

Student perceptions of the likelihood of success also impact perceptions of the programs and subsequent emotional attachment to the program and institution. Many students make decisions about staying or leaving based on perceptions of this likelihood.

Institutions normally seek to identify students to target for acquisition and retention, which is similar to trying to identify the best target market for a university. As evidence, there have been studies that suggest non-selective institutions, or those with open admission policies, tend to experience lower retention rates (Astin & Oseguera, 2005). This would seem to indicate an ineffective selection process or a poor match exists between student skills, desires, and motivations, and the institution's offerings.

Reactions to service failure are probably going to differ as well. For example, one student may respond to what is perceived as an unfair grade with an "Oh well, no big deal"- type of reaction. Another may become extremely angry and demand immediate "justice." The same holds true for a student who loses a scholarship due to the failure of a support staff member. One may not be upset where another feels badly violated.

Another mediating factor is the severity of the service recovery failure. When an unfair grade is the one that ultimately leads to a student being dismissed from the university, it will have a much greater impact. A student who is dropped from classes due to a failure to pay tuition that is actually a clerical error by a staff member may be enraged by worries about damage to his or her credit rating as well as the inconvenience of having to be reinstated in each course.

Finally, students who believe a service failure is the result of some form of discrimination, whether it is racial, based on gender, or on some other factor, are likely to view the failure as a much graver issue.

Outcomes

When a service failure incident has occurred, those in the provider organization will either respond utilizing service recovery techniques or they will not. In general, the presence of quality service recovery techniques should have a positive impact on subsequent outcomes, which can be categorized as: (1) satisfaction with the provider, (2) positive future intentions, and/or (3) negative future intentions.

Previous research indicates that when a person receives redress for a service failure in a satisfactory manner, the individual is more likely to express *satisfaction with the service provider*. At the same time, the person may be more cautious and tentative about future dealings with that organization. On balance, however, satisfaction with a college or university experience has long term implications for the individual and the institution.

The most *positive future intention* would be the willingness to return to the college or university for the next semester. Beyond that, a positive future intention is to ultimately graduate from the university. This changes the student role to that of an alumnus, one who might support

the university into the future. Other positive future intentions include referrals to potential new students including family members, friends, and former classmates.

Many times, the lack of quality service recovery techniques will lead to *negative future intentions*. Johnson and Hewa (1997) describe what are called "retaliatory behaviors" connected to service failures. These include nursing a grudge, complaining to others and trying to turn them against the vendor firm, withholding opportunities for business, and other vengeful activities.

On a university campus, retaliatory behaviors might include writing letters to the campus or local newspaper, sending out negative word of mouth by in person and over the Internet, complaining directly to the President or Board of Regents, and in the extreme, filing a lawsuit or legal action. Unresolved conflicts and unsatisfactory responses to service failures on campus may be connected to such retaliatory behaviors.

The most salient negative future intention would be to enroll at a different college. With the variety of educational options that are currently available, and with declining student pools, student retention remains a critical issue for many colleges and universities. Successful service failure programs might assist in retaining students and generating more favorable emotional and behavioral responses.

SPECIAL CIRCUMSTANCES: RETENTION OF HISPANIC STUDENTS

Many minority students are the first in their families to attend college and sometimes are foreign born. Consequently, their emotional connections to an institution are predominantly going to be created by their own activities, relationships, and motivations. To a certain extent, these students are "clean slates." Institutional leaders may get to decide and somewhat control the types of relationships they build with them.

Attaining loyalty among Hispanics and other minority student groups can be more challenging due to cultural differences, cultural barriers, and the lack of knowledge about the higher education system. Such students often face greater educational obstacles. The lack of role models and sometimes lack of parental involvement influence the individual's educational preparation (Maceli, 2009). The problem may be worsened when Hispanic students come from lower socioeconomic classes, are foreign-born, or come from households where English is not the primary language spoken (Saenz, et al, 2007).

These problems may be addressed through the utilization of the three pillars of customer retention. The pillars are building student loyalty and quality relationships as well as responding to service failures.

Student Loyalty and Quality Relationships

Building loyalty and quality relationships includes the proactive effort to retain customers (in this case, Hispanic students). The process begins during recruiting efforts. As noted, selectivity of institutions is connected with the number of students completing degrees. More selective institutions experience higher the rates of completion. This is true when students have

similar academic preparations prior to entering college (Fry, 2004).

Evidence suggests that Hispanic students tend to enter less selective college and universities than their Caucasian peers (Fry, 2004). Consequently, an institution seeking to retain students would be advised to identify the characteristics the institution possesses that would attract and promote success among students. Then efforts can be made to recruit students that are a match, including understanding of family matters might affect the Hispanic student's selection process.

During the recruiting process, communication is vital. Many Hispanic students have family obligations that are of immediate concern, and the benefits of education are too intangible to be considered valuable in their present situations. Often, for Hispanics in particular, their perception of family roles and obligations propels them into the work force at ages younger than their white counterparts. Many struggle with high school and/or received a poor education in high school. They may have few adult role models to encourage their educational efforts; which continues during higher education (Fry, 2004).

A great number of Hispanic high school students believe that they do not need a college degree to be successful. They also tend to believe they will encounter discrimination in college (Fry, 2004). Building student loyalty and quality relationships would include addressing these perceptions and concerns.

The college's recruiting team should also be aware that Hispanic undergraduates are nearly twice as likely to have children or elderly dependents and they are more likely to be single parents (Fry, 2004). This often requires additional efforts through programs such as on-campus day care.

Another major obstacle Hispanics encounter is the cost of tuition. Many need to work and earn money to be able to afford to go to school. This means financial aid packages, on-campus work programs, and course scheduling can be adjusted to suit these financial needs.

Once the student reaches campus, another layer of communication becomes critical. Effective universities make sure that Hispanic students have someone on campus that they will know and trust and who is also knowledgeable about university life. This person should be someone the students can identify with and provide quality advice.

The contact person can make a significant difference to in a student's success. Some retention programs use such liaisons to periodically check the progress of their students, including checking on attendance and grades. This means the student becomes less likely to "fall through the cracks" as quality relationships develop.

Such an on-campus advisor-mentor is crucial, because approximately one third (33%) of Latino adults, which is twice the percentage than their Caucasian counterparts, indicated in the Pew Hispanic Center/Kaiser Family Foundation *National Survey of Latinos* that proximity to home and family is a major reason why they did not go to college or failed to finish college if they started (Fry, 2004). Fry notes that almost half of Hispanic students reside with their parents,

compared to less than one-fifth of Caucasians.

If possible, the advisor should be of the same racial descent. Seeing and communicating with someone who is similar makes it possible for the student to feel more comfortable, trusting, and involved. It is especially beneficial when the contact can communicate in their first language. When the contact also communicates with the parents and/or other family members, uncertainty is taken out of the situation. The family gains trust in the institution because of their trust in this person. In essence, a friendly face and resource is one proactive key to retention.

Existence of programs targeted to minorities is not enough. Institutional commitment to minorities can be measured by identifying the financial and academic programs and general climate that contribute to the success of minorities and other disadvantaged students (Mingle, 1987). This includes looking at the connection between individual characteristics and institutional characteristics that ultimately lead to success.

To increase persistence of Hispanics and other minorities, facilitating the development of social relationships as early as possible in these students' academic career is helpful. Social relationships will have a positive and meaningful impact for this group of students. Institutional leaders can seek out ways to cultivate these relationships.

Academic departments can facilitate retention by helping students feel as though they belong to a group and helping them to develop social relationships. Opportunities for peer involvement can be developed to create such a positive environment. Further, offering employment opportunities for minority students on campus would be a simple way to help them embrace the college experience (Maceli, 2009).

RESPONDING TO SERVICE FAILURES

Many Hispanic and minority students face the same service failures encountered by other students. At the same time, failure in the classroom, and failure in the support services may be the result of different and more unique circumstances.

Failure in the classroom results when instructors or not sensitive to the unique needs of these students. Many Hispanic and minority students do not have the same quality of educational experiences when entering higher education. They may need to be identified early on as requiring tutoring in different areas where their skills may be inadequate. Unless these weaknesses are identified before the student becomes discouraged, the odds increase that the student will decide to quit.

While there cannot be special grading or different assignments, those who fail to carefully clarify instructions and those are not available to assist the students increase the chances for failure. In contrast, instructors that provide written rather than verbal instructions and clear rubrics to help students understand what is expected of them are likely to perceived as improving the learning environment. The same list of support services that are given to other students apply to Hispanic students. The primary difference may be that any failure may also be perceived as having an element of discrimination contained in it.

When there is a problem, the service recovery techniques of promptness, courtesy, effort, and professionalism should be applied. This means institutional employees should be willing to address problems, even when they are not always able to remedy the problem immediately. University leaders should be aware of the potential for discrimination and harassment along with the more standard forms of service failure that may occur on campus.

As with many organizations, when someone on the "inside" become involved in an issue, that issue is often addressed and resolved more quickly. Any display of effort and professionalism bodes well for the continued success of the student.

CONCLUSIONS

The three pillars of customer retention apply to many circumstances. The ultimate goal of customer retention is to ensure the long-term success of an organization. In the case of colleges and universities, retention programs can be expanded to Hispanics and other minority groups, in order to ensure the long-term viability of these institutions as they face new challenges.

Hispanic student populations encounter many of the same types of service failures that affect other student groups. University leaders should be aware that in addition to these issues, many unique circumstances are also present in the Hispanic community. By building quality relationships with students and seeking to develop loyalty to the institution, both the student and the college benefit from increasing on-campus diversity and involvement. Responding to service failures may help to foster these relationships and ultimately benefit all concerned.

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CONSUMER BEHAVIOR WITHIN THE TEEN SEGMENT: AN INVESTIGATION OF THE RELATIONSHIP BETWEEN SHOPPING ORIENTATION AND SPARE TIME ACTIVITY

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ABSTRACT

Teen consumers are a significant contributor to the economy today, and as a result of the growing size and the spending power of this market segment, retailers place great value on gaining a better understanding of the lifestyle of this group. Little information has been obtained about shopping orientation and the relationship between spare time activities among teens. Identifying shopping orientations with regard to spare time activity is essential for retailers attempting to capture the teen consumer. The researchers examined the relationships between shopping orientations of teens and spare time activity. Results indicated significant relationships. Findings and implications are discussed.

INTRODUCTION

For years, retailing and marketing researchers have examined shopping orientations to gain a better understanding of patronage behaviors (Darden & Howell 1987; Shim & Kotsiopulos 1992a; 1992b) and increase the focus of marketing efforts on specific niche groups. Shopping orientations are shoppers' styles of engaging in particular shopping activities; are formed through prior experiences, personal preferences, and lifestyles; and are used to predict shopping behavior. Therefore, knowledge of the shopping orientations and behaviors of consumer groups must be updated continually to best understand consumer demands. Consequently, consumers with different shopping orientations portray varied attributes and behaviors in regards to shopping preferences (Gutman & Mills 1982; Lumpkin 1985).

Among the many different market segments, the teen market is a desirable group to study in regards to consumer behavior research (Goldsmith, Flynn & Moore 1996; Kwon & Workman 1996; Palengato & Wall 1990). Today, teens spend an estimated $179 billion annually (Newspaper Association of America 2007) and influence annual parental spending of over $1,100 on apparel per teen (Piper Jaffray 2009). In addition, the teen segment, comprised of adolescents age 12 to 19, is expected to grow to 34 million by 2010, which is the fastest growing generation in history since the Baby Boomers (Taylor & Cosenza 2002).

As a result of the size and impact of the teen market, it is critical for the retailers to gain a better understanding of the shopping orientations and preferences of this economically powerful group. Shopping orientations are defined as being specific to the act of shopping, but because shopping orientations are conceptualized as a specific dimension of lifestyle and

operationalized on the basis of activities, interests, and opinions (Li 1997), shopping orientations likely are related to leisure time and self-fulfillment social activities, or spare time activities. As a result, because teens are engaged in a wide variety of spare time activities, and very little academic research has been conducted to explore the relationship between the importance of shopping orientations and spare time activity, the purpose of this study was conducted in order to examine the relationship between shopping orientation and spare time activity among teens, age 13 to 18, living in the United States.

BACKGROUND

Consumer behavior has been a topic of academic research for decades; the first textbooks on the subject were written in the 1960s (Mowen 1993). Fundamental to the study of consumer behavior has been research and evaluation. Researchers have sought to gain a better understanding of the ways consumers become involved with products and the impact the involvement has on patronage behavior (Tigert, Ring, & King 1976; Traylor & Joseph 1984). One of the ideas that evolved out of the study of consumer behavior is the concept of shopping orientation.

Shopping orientation is a concept that has been difficult to define due to the numerous variables that are used to analyze consumers' orientations toward shopping. The definitions of shopping orientation provide the perspective of shopping as a multifaceted personal, social, and economic situation (Darden & Howell 1987; Shim & Bickle 1994; Shim & Kotsiopulos 1993). Specifically, Shim and Kotsiopulos (1993) discovered that shopping orientation is a complex social and recreational, as well as economic, situation that may be influenced by consumer differences, store type, and product category.

Shopping is not only an economic activity but also psychological and social. When retailers understand their target market's shopping orientation, they can develop market strategies that greatly contribute to success. Shopping orientation provides an indication of the way consumers perform their task of shopping. Shopping orientations will vary according to individual demographic and psychographic characteristics. For retailers to increase consumer satisfaction and sales, retailers must understand that different groups of consumers portray varied shopping orientations. Since shopping orientations tend to differ by merchandise category and by group of consumers studied, there is a need to examine the shopping orientations of apparel shoppers.

Shopping orientations of today's consumers are different than past generations, based on social, cultural, and economic changes in society (Shim & Kotsiopulos 1993). Shopping orientations have been one of the ways used to classify consumers based on their shopping behaviors (Gehrt & Carter 1992), and researchers have developed shopping orientation profiles to better understand consumers and their shopping behavior (Huddleston, Ford, & Bickle 1993; Lumpkin 1985). Shoppers with specific shopping orientations show distinctive consumer characteristics and differences in market behavior, including unique needs and preferences for store attributes and merchandise type. Consumers evaluate both store attributes and merchandise offerings to make decisions regarding what store or stores will cater to their particular needs (Gutman & Mills 1982; Lumpkin 1985).

Ultimately, the shopping orientations of teen consumers can be evaluated to provide information for retailers to develop merchandising and marketing plans, and to provide information for customers in order to make decisions regarding patronage of specific retailers. Retailers agree that segmenting and developing an understanding of target groups are important to differentiating products and enhancing shopping propensity (Taylor & Cosenza 2002). It is essential for retailers to have a clear understanding of shopping orientations and shopping behaviors in order to develop strategic plans that formulate plans to react to specific market group demands.

RESEARCH QUESTIONS

As a result of a study of the background of the problem, the researchers proposed that shopping orientations may be related to the favorite spare time activity of teens. However, since little research has been conducted in regards to consumer behavior of teens and spare time activities, the following research questions were developed:

RQ1: *What are shopping orientations of teen consumers?*
RQ2: *What are the favorite spare time activities of teen consumers?*
RQ3: *Are shopping orientations related to spare time activity among teen consumers?*

METHODOLOGY

The research results reported here were partial results from a larger study of teen consumers. The population for the study was female and male consumers, aged 13 to 18, residing in the United States, who had access to the Internet. The sample group consisted of a random sample of teens living throughout the United States. Subjects were 3,600 random members of Zoomerang.com's 250,000 teen Internet users. This group was selected because of the ease of access to a broad group geographically and reduced issues with parental permission; surveying individuals under that age of 18 in person is problematic.

Zoomerang.com placed the survey online, sent emails that allowed survey access, and captured responses in a database. Pursuant to university IRB requirements, before beginning the online survey, participants age 13 to 17 had to seek permission from parents to participate and had to acknowledge that fact at the beginning of the survey. Complete responses for 440 participants resulted in a response rate of 12.2%.

A questionnaire was developed using an adaptation of Dillman's (2007) Tailored Design Method. The self-administered, Web-based questionnaire was designed to acquire information regarding participants' demographics, shopping orientations, and lifestyles. Demographic questions included inquiries about the following items: (a) gender, (b) educational status, (c) employment status, (d) personal monthly take-home pay from job during school year, (e) primary source of month income, (f) secondary source of income each month, (g) typical monthly income from parent or relatives during the school year, (h) summer employment status, (i) personal monthly take-home pay from job during summer, (j) ethnic identification, and (k)

total number of people living in household.

For information about shopping orientations, the questionnaire elicited information about those shopping factors most important to the participants by requiring them to respond to a matrix question consisting of 13 statements. Eight of the statements focused on consumer shopping orientations through the use of the Shopping Enjoyment Scale (Gutman & Mills 1982), while five of the statements focused on fashion interest through the use of the Clothing Interest Scale (Lumpkin 1985). The participants were asked to rate each statement regarding shopping enjoyment and fashion interest to the extent the statement applied to their beliefs on a four-point, Likert-type summated ratings scale that listed four responses ranging from (1) strongly disagree to (4) strongly agree. Scores were analyzed separately for shopping enjoyment and fashion interest. In addition, total scores were calculated by adding both shopping enjoyment and fashion interest to obtain an overall shopping orientation score. Higher scores indicated higher levels of shopping orientation, and lower scores indicated lower levels of shopping orientation. Among the lifestyle questions, the question relevant to this segment of the study asked participants to indicate their favorite spare time activity among *play sports*, *go to sports events, watch television*, *go to movies, surf the Internet*, *go shopping*, *go to concerts*, *exercise*, *dine out at restaurants*, *listen to music*, and *other*.

ANALYSIS AND RESULTS

Description of the Sample

The participants were female (50.2%) and male (49.8%), ranging in age from 13 to 18, with the greatest percentage being age 17 (24.3%). The vast majority were white, non-Hispanic (87.0%). All lived at home with at least one parent, and the largest percentage (34.1%) reported four persons living in their household. The majority were enrolled in high school (68.4%), followed by 108 enrolled in junior high (24.5%). The sample group was evenly distributed throughout the United States according to state of residence. The largest percentage of participants were from Pennsylvania (9.8%), followed by New York (7.5%), Texas (5.5%), and Florida (5.0%). Overall, participants from 45 states responded to the survey. In addition, about half of the participants lived in urban areas (48.3%), while the other half were evenly split between suburban (26.8%) and rural (24.9%) areas.

The majority of the participants did not work during the school year (74.1%) or the summer months (53.0%), thus, only a minority worked part-time during the school year (24.8%), or part-time (33.4%) or full-time (13.6%) during the summer. Parents (71.8%) or current job (20.7%) were the most frequent primary sources of monthly income, while parents (47.0%), relatives other than parents (32.5%), and savings from earlier summer jobs (14.3%) were the most frequent secondary sources of monthly income.

Shopping Orientations

Participants were asked to respond to statements about their shopping orientations, specifically shopping enjoyment and fashion interest. When asked about shopping enjoyment, the vast majority of participants agreed or strongly agreed to *I enjoy walking and*

shopping through a mall (71.2%). More than half agreed or strongly agreed to *shopping is fun* (59.7%), *I enjoy browsing even when I am not planning to buy* (54.1%), and *I like to shop in many different stores* (53.9%). Less than 50% of teens agreed or strongly agreed to *I like to go to new stores to see new apparel trends* (49.8%), *I often go shopping to get ideas even though I have no intention of buying* (46.8%), *I go apparel shopping often* (39.6%), and *I don't like to go apparel shopping* (38.4%) (see Table 1).

Table 1
Frequencies and Percentages of Shopping Enjoyment Items

	Strongly Disagree		Disagree		Agree		Strongly Agree	
	n		n		n		n	
I enjoy walking and shopping through a mall	61	3.9	66	5.0	89	3.0	24	8.2
Shopping is fun	86	9.5	91	0.7	41	2.0	22	7.7
I enjoy browsing even when I am not planning to buy	89	0.2	13	5.7	54	5.0	84	9.1
I like to shop in many different stores	91	0.7	12	5.5	50	4.1	87	9.8
I like to go to new stores to see new apparel trends	11	5.2	10	5.0	47	3.4	72	6.4
I often go shopping to get ideas even though I have no intention of buying	14	5.9	20	7.3	62	6.8	44	0.0
I go apparel shopping often	15	6.1	51	4.3	23	8.0	51	1.6
I don't like to go apparel shopping	43	2.5	28	9.1	13	5.7	56	2.7

When asked about fashion interest, the distribution of responses was very similar for all of the statements. The largest percentage of participants agreed or strongly agreed to *I enjoy apparel like some people do such things as books, music, and movies* (45.7%), *I would like to be considered one of the best dressed* (44.8%), and *planning and choosing my wardrobe can be included among my favorite activities* (42.5%). Fewer participants agreed or strongly agreed to *apparel is so attractive to me that I am tempted to spend more money than I should* (37.7%), and *I would rather spend money on apparel than anything else* (34.1%) (see Table 2).

Spare Time Activity

Participants were asked to respond to the lifestyle question, "what is your favorite thing to do in your spare time?" by selecting one answer from among *play sports*, *go to sports events*, *watch television*, *go to movies*, *surf the Internet*, *go shopping*, *go to concerts*, *exercise*, *dine out at restaurants*, *listen to music*, and *other*. The largest percentage of teens (22.7%)

indicated *other* as their favorite with the activities most often specified as *other* being *hanging out with friends, playing video games,* and *reading*. The frequency of responses to the other activities were *play sports* (20.8%), *listen to music* (14.6%), *surf the Internet* (12.2%), *watch television* (11.9%) *go shopping* (6.5%), *go to movies* (5.7%), *go to sports events* (2.1%), *exercise* (1.6%), *dine out at restaurants* (1.4%), and *go to concerts* (0.5%).

Table 2
Frequencies and Percentages of Fashion Interest Items

	Strongly Disagree		Disagree		Agree		Strongly Agree	
	n	%	n	%	n	%	n	%
I enjoy apparel like some people do such things as books, music, and movies	19	7.0	20	7.3	22	7.7	9	8.0
I would like to be considered one of the best dressed	06	4.1	37	1.1	34	0.5	3	4.3
Planning and choosing my wardrobe can be included among my favorite activities	27	8.9	26	8.6	24	8.2	3	4.3
Apparel is so attractive to me that I am tempted to spend more money than I should	44	2.7	30	9.5	04	3.6	2	4.1
I would rather spend my money on apparel than anything else	61	6.6	29	9.3	94	1.4	6	2.7

Shopping Enjoyment/Fashion Interest and Spare Time Activity

Prior to testing, the teen participants' responses about their favorite spare time activity were analyzed. The analysis resulted in the identification of seven types of teens based on favorite spare time activity. *Sports teens* (26.0%) were those that reported their favorite activity as *play sports*, *go to sports events*, or *exercise*. The *Internet/video game teens* (23.8%) were those that reported *surf the Internet* or *play video games* (identified through specifying in the *other* category) as favorite activities. The *music teens* (18.0%) were those who most preferred *listen to music* or *go to concerts. Television teens* (12.1%) selected *watch television* as their favorite spare time activity. *Entertainment teens* (7.7%) indicated *go to movies* or *dine out at restaurants* as favorite activities. *Shopping teens* (6.9%) were those that indicated *go shopping* as their favorite activity. Finally, the *hang out with friends teens* (5.5%) (identified through specifying in the *other* category) reported *enjoy being with friends* as their favorite spare time activity. The seven teen groups were used in the analyses.

A one-way MANOVA was conducted on shopping enjoyment and fashion interest

with spare time activity. The overall multivariate effect was significant, F (12, 708) = 5.35, $p <$ .001, and the univariate analysis revealed significant effects for spare time activity on shopping enjoyment, F (6, 355) = 7.89, $p <$ .001, and fashion interest, F (6, 355) = 8.56, $p <$ .001 (see Table 3).

Table 3:
Multivariate Analysis of Variance of Shopping Orientation Subscales and Favorite Spare Time Activity

	n	Mean	SD	F	p
Shopping Enjoyment				7.89	.000
Shopping Teens	25	3.43	.35		
Entertainment Teens	28	2.89	.75		
Hang Out With Friends Teens	20	2.78	.73		
Music Teens	65	2.54	.80		
Sports Teens	94	2.39	.83		
Internet/Video Game Teens	86	2.36	.87		
Television Teens	44	2.36	.82		
Fashion Interest				8.56	.000
Shopping Teens	25	3.41	.48		
Entertainment Teens	28	2.48	.79		
Hang Out With Friends Teens	20	2.44	.78		
Sports Teens	94	2.19	.90		
Music Teens	65	2.14	.85		
Internet/Video Game Teens	86	2.11	.99		
Television Teens	44	2.09	.89		

Post hoc comparisons using the Scheffé test indicated that the *shopping teens* (M = 3.43) and *entertainment teens* (M = 2.89) had greater scores for shopping enjoyment than the *hang out with friends teens* (M = 2.78), *music teens* (M = 2.54), *sports teens* (M = 2.39), *television teens* (M = 2.36), and *Internet/video game teens* (M = 2.36).

Additional post hoc comparisons using the Scheffé test indicated that the *shopping teens* had greater scores for fashion interest (M = 3.41) compared to the *entertainment teens* (M = 2.48), *hang out with friends teens* (M = 2.44), *sports teens* (M = 2.19), *music teens* (M = 2.14), *Internet/video game teens* (M = 2.11), and *television teens* (M = 2.09).

Overall Shopping Orientation and Spare Time Activity

A one-way ANOVA was conducted on overall shopping orientation. Results revealed significant effects for spare time activity on overall shopping orientation, F (6, 355) = 8.77, $p <$ .001. Post hoc comparisons indicated that *shopping teens* had greater scores on shopping orientation (M = 3.42) compared to the *entertainment teens* (M = 2.73), *hang out with friends teens* (M = 2.65), *music teens* (M = 2.38), *sports teens* (M = 2.32), *Internet/video game*

teens (*M* = 2.27), and *television teens* (*M* = 2.26) (see Table 4).

Table 4:
Analysis of Variance of Shopping Orientation and Favorite Spare Time Activity

	n	Mean	SD	*F*	*p*
Shopping Orientation				8.77	.000
Shopping Teens	25	3.42	.30		
Entertainment Teens	28	2.73	.73		
Hang Out With Friends Teens	20	2.65	.73		
Music Teens	65	2.38	.74		
Sports Teens	94	2.32	.83		
Internet/Video Game Teens	86	2.27	.89		
Television Teens	44	2.26	.81		

CONCLUSIONS AND DISCUSSION

Teens are a growing, critical market in the retail industry today, thus, results of this study provided implications for retailers. Teen consumers are a market with diverse characteristics and continually changing needs, therefore the shopping orientations of teens are predicted to affect the retail marketplace for years to come. As teens are exposed to different elements, they form opinions and attitudes about shopping, and shopping orientations may be directed toward particular fashion retailers or brands, or used generally for the activity of shopping. Retailers should closely examine the lifestyles, including spare time activities of teens to create marketing plans that are tailored to specific types of teens and their shopping orientations.

Retailers must consider how best to appeal to the varied interests of teen shoppers. By evaluating the shopping orientations and spare time activities of the growing teen market, retailers can cater to consumer demands. Not surprisingly, results of the current study indicated that *shopping teens* had the highest levels of shopping enjoyment and fashion interest. However, results also suggested that opportunities exist in developing appeals to other teens based on their spare time activities, especially to *sports teens, Internet/video game teens,* and *music teens*, the three largest groups of teen shoppers.

While the concept of entertaining consumers during shopping is not a new idea, it has increased in importance for the teen market, due to their demands for interactive technologies and entertainment in a social retail environment. Of the teens surveyed, 26% indicated sports as their favorite spare time activity. With the increased awareness and emphasis on lifestyle sports for teens such as skateboarding, inline skating, BMX, and motocross, retailers should consider the potential impact of store atmospheres that reflect the attitudes and activities behind these sports. Additionally, 23.8% of the study participants indicated that Internet and video games were favorite spare time activities. Consequently, retail formats, atmospheres, and merchandise assortments that place greater emphasis on entertainment technologies, such as

interactive games, appealing websites, Facebook, and Twitter, and provide settings for teens to gather together in a fun way will appeal to a larger teen market. Finally, music and entertainment are evident as strong appeals to the teen market and create an excitement or enthusiasm among the group. Music that caters to the teen market is diverse, ranging from Miley Cyrus to Beyonce as well as Kanye West and the Black Eyed Peas. Marketers must study the segments within the teen group to analyze how music trends can serve as a lifestyle influence in the creation of attractive atmospheres for teens.

Consequently, as a result of the growing size and the spending power of teen consumers, retailers must focus efforts to determine potential consumer expenditures by merchandise category within this group. The teen consumer market has grown up with many shopping options, however, retailers that are most likely to maintain a competitive edge for the teen market are companies who prepare strategic plans that react to consumer demands and create direct market strategies that are tailored to fit niche markets. Based on the findings of this study, information about shopping orientations provides data about consumers that will allow all participants in the merchandising process to plan effective methods of catering to the teen market segment.

In order to explore shopping preferences further, we recommend the following suggestions for additional research:

- Investigate relationships between shopping orientations and spare time activities among the tween segment, aged 8 to 12.
- Expand the sample to include a larger ethnic distribution of participants to recognize cultural differences regarding shopping orientations.
- Further the study to take a global perspective by analyzing the lifestyles and shopping orientations among teen consumers from select countries.

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AN APPLICATION OF CONJOINT ANALYSIS IN THE CONTEXT OF CONSUMER EVALUATION OF CO-BRANDED PRODUCTS

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ABSTRACT

This paper describes an application of conjoint analysis in the context of consumer evaluation of co-branded products. The authors examine how consumers actually evaluate the co-branded product. The results show that consumers rely more on the analytical evaluation strategy than on the constructive evaluation strategy in their co-branded product evaluation. The negative correlation between the analytical and the constructive evaluation strategy implies that these two evaluation strategies are mutually exclusive and, thus, shows the existence of the consumer heterogeneity in the choice of the co-branded product evaluation strategy. The authors conclude with discussions based on the conceptual and empirical evidence.

INTRODUCTION

Co-branding, a different term for brand alliances is an important brand management strategy (Keller and Lehmann, 2006; Kumar 2005; Rao, Qu, and Ruekert 1999). In this research, focal interest is on the co-branded product. The co-branded product refers to a bundled product of which each key component part has its own brand and contributes to the total value of the product. Co-branded products are found in several different industries ranging from the financial industry (Visa card applicants can acquire Delta Airlines mileage), the franchising industry (McDonald's "Happy Meal" includes Disney's character toys), the telecommunication industry (Verizon partners with the Samsung cellular phone) to the food industry (e.g., Kellogg's low fat ingredients are in the Healthy Choice cereals).

In the marketing literature, the research streams of co-branding involve the signaling effect (Rao, Qu, Ruekert 1999), new market development (Shocker, Srivastava, and Ruekert 1994), brand extension strategy (Desai and Keller 2002; Kumar 2005), and brand fit (Simonin and Ruth 1998; Mao and Krishnan 2006). Although the extant research enhances our knowledge in the areas of co-branding, research about how consumers actually evaluate the co-branded product is still untapped (Bottomley and Holden 2001). The central thrust of this research is to investigate the process by which a consumer identifies and evaluates a co-branded product. The process requires looking at the composite value of the individual brands while evaluation necessitates a search for the integral values from the individual brands.

In presenting this research project, we *first* conceptualize the two evaluation strategies (analytical versus constructive evaluation strategy) for the co-branded product from the

consumer perspective, *second* we examine the effect of the evaluation mode on the evaluation strategies, and *third* we provide the preliminary results from the conjoint analysis, a useful decompositional technique to measure the attitude structure for co-branded products. *Last*, we conclude with a discussion involving study limitations and directions for future research.

CO-BRANDED PRODUCT EVALUATION STRATEGIES

To address the co-branded product evaluation strategy, it is important to understand the co-branding process. In general, the co-branded product consists of the two component brands. One component brand is likely to inform the consumers of the product category and, thus, it is called the "primary brand." The other component brand plays an important role of enhancing the product differentiation for the co-branded product within the primary product category (Kumar 2005) and is called "secondary brand." For example, the consumers of the Healthy Choice cereal from Kellogg may expect the good taste from the Kellogg brand (primary brand) while desiring to be freed of their fat concerns by the Health Choice ingredient (secondary brand).

Analytical Evaluation Strategy

The analytical evaluation strategy refers to the approach a consumer takes to assess the unique value provided jointly by the primary and the secondary brand in developing the co-branded product. The information integration theory (Anderson 1981) provides the foundation of the analytical evaluation strategy and suggests that consumers access, process, and evaluate the multi-attributes of the object and eventually integrate the new cues into their existing beliefs and attitudes (Anderson 1981). Thus, consumers' evaluation is made based on a weighted function of all attributes associated with the co-branded products.

With this approach, a consumer may employ the top-down process (Mao and Krishnan 2006) to minimize error and effort during the evaluation of a co-branded product. For example, a consumer evaluates the primary brand to capture the category information and then examines the second brand to understand its differentiation from other similar products in that category. Thus, for example, Healthy Choice cereal from Kellogg evidences a strong brand (Kellogg) among other cereal brands and the Healthy Choice ingredient creates product differentiation within Kellogg's other product lines.

Constructive Evaluation Strategy

Constructive evaluation strategy involves a focus on an integral value of a co-branded product which is more than the unique value of each (or any) of the individual brands. With this approach, a consumer tends to diagnose the synergy reflected in the integration of the primary and secondary brands and often seeks an abstract or superior-level value beyond the brand fit of the two brands.

This approach adopts the constructive consumer choice process theory (Bettman, Luce, and Payne 1998) which posits that because of limited working memory, bounded rationality, inefficient computation ability, and personal difference, a consumer's evaluation is inherently incomplete. Thus, rather than relying on pre-determined information about brands, a consumer may be willing to build brand knowledge that is most applicable for the current evaluation

environment.

Brand knowledge refers a combination of consumers' category identification, awareness of the character of the product, personal values, images, personal experiences, affective responses, and overall judgment (Keller 2003). Consumers with different brand knowledge may pursue different goals in the evaluation of the co-branded product. Accordingly, here, the co-branded product could be less competitive with other brands in the same category as the primary brand and may even compete with non-comparable alternatives (Bettman and Sujan 1987; Johnson 1984). For example, the Healthy Choice cereal from Kellogg may compete not only with the other cereal brands but also other diet foods (e.g., diet cookies, diet drinks, or healthy ingredients). In this instance, the co-branded product is strategically even more important as it allows entry into a new market that individual brands may not be able to penetrate separately (Rao 1997).

PROPERTIES OF THE CO-BRANDED PRODUCT EVALUATION STRATEGIES AND PROPOSITIONS

Brand Familiarity Effect

In evaluating a co-branded product, brand familiarity may influence choice of evaluation strategies. If consumers are familiar with individual brands within the co-branded product, their preferences toward these brands are relatively stable and pre-determined (Bettman and Sujan 1987). Thus, computation of the unique value of the individual brands is easy and rapid, promoting the benefit of using the analytical evaluation strategy. In contrast, if a consumer is not familiar with the individual brands in the co-branded product, it is necessary to build new brand knowledge by searching for relevant information and justifying the quality of the information. According to Keller (2003), brand knowledge is constructively developed by interacting with a variety of cues involving category information, descriptive features, personal values, images, thoughts, feelings, attitudes, and experiences. The brand knowledge development process continues to execute until consumers obtains their individual goals or find personal value in the co-branded product (Bettmann, Luce, and Payne 1998). The constructive evaluation strategy is the way of leading consumers to achieve their individual goals by investigating the integral value of the co-branded product.

Proposition 1: when a consumer is familiar with the individual brands in the co-branded product, the analytical evaluation strategy is preferred to the constructive evaluation strategy.

Proposition 2: when a consumer is unfamiliar with individual brands of the co-branded product, the constructive evaluation strategy is preferred to the analytical evaluation strategy.

Evaluation Mode Effect

The "evaluability" of an attribute refers to "*whether the attribute is difficult or easy to evaluate*" (Hsee, Loewenstein, Blount, and Bazerman 1999). Evaluability may be an important issue in the multi-attribute approaches and, thus, in co-branded product evaluation. There are two types of evaluation modes: separate evaluation and joint evaluation. Separate evaluation describes the evaluation context in which brands are evaluated one at a time. Joint evaluation

occurs when the brands are evaluated simultaneously.

Evaluation mode is critical in the evaluation of the co-branded product because some attributes have high evaluability in the joint evaluation mode but not in the separate evaluation and *vice-versa*. Nowlis and Simonson (1997) empirically show that enriched attributes such brand, image, and country of origin receive more weights in separate evaluation than joint evaluation. This implies that in the separate evaluation, a consumer is likely to focus on the brand information more selectively than other attributes, which triggers the use of the analytical evaluation strategy. However, in the joint evaluation mode, a potential de-biasing process may be arise. For example, consider that the set of ASUS with the Intel brand is competing with that of Dell with the Intel brand. In the joint evaluation mode, the role of the Intel may immediately disappear because both Dell and ASUS use the same Intel. However, it does not necessarily mean that a consumer excludes the Intel in the evaluation process and only focuses on the primary brands (Dell vs. ASUS). Instead, a consumer may feel the need for additional information and personal meaning that can be found during the co-branded product evaluation. This process is related to the constructive evaluation strategy.

Proposition 3: in the separate evaluation mode, the analytical evaluation strategy is more accessible than the constructive evaluation strategy.
Proposition 4: in the joint evaluation mode, the constructive evaluation strategy is more accessible than the analytical evaluation strategy.

Research design

A conjoint analysis was conducted to examine the consumer's preference structure embedded in the co-branded product. In this preliminary test, *first*, we examine whether the respondents actually use either the analytical evaluation strategy or the constructive evaluation strategy. *Second*, we test whether the choice of the evaluation strategies is influenced by the evaluation mode.

In exchange for extra credit, the 153 undergraduate students from a large public university participated in this study. The students were randomly assigned to several conjoint tasks and were asked to evaluate several microwave concepts. Each design used a 2^3 full factorial of three (3) features. The features and their levels were selected by examining actual advertisements from magazines, fliers, the Internet, and newspapers. Table1 lists the features and the levels that were used in the study.

Table1: Microwave Features and Levels Used in This Study

Feature	Level
Primary Brand (Microwave)	Oster Microwave (L1); GE Microwave (L2)
Secondary Brand (Door Material)	Plastic Door (L1); Stainless Steel Door (L2)
Price	$56.99 (L1); $66.99 (L2)

Note: (L1) refers to the level1 and (L2) pertains to the level2 of the feature

The data collection procedure follows the traditional conjoint analysis process. First, each

respondent was shown the three sets of features and their levels in each conjoint task and for all 16 conjoint tasks. For each conjoint task, half of the respondents were given a 21-point scale and asked to the rate each profile one at a time (see the figure1) in terms of the purchase intention while the rest of students were asked to evaluate all profiles jointly (see the figure2).

Second, at the end of the product evaluation, two evaluation strategies related questions were asked using a 7-point scale ranging from "strongly disagree" to "strongly agree." These two questions are 1) I evaluated the concept by considering all attributes jointly and 2) I evaluated the concept by considering only a few key attributes separately.

Figure1: Example of a Conjoint Task in the Separate Evaluation

Profile #1
Manufacturer Brand: GE Microwave
Door Material Brand: Plastic Door by Best Plastic
Price: $56.99
Question: if this microwave is available in the market, how likely would you buy this microwave using the scale below?
Very unlikely to buy (0) ----------------- Very likely to buy (20)

Note: these 8 conjoint tasks are shown one profile at a time from the profile#1 to the profile #8 (Separate Evaluation).

Figure2: Example of a Conjoint Task in the Joint Evaluation

	Profile#1	Profile#2	Profile#3	Profile#4
Manufacturer Brand	Oster Microwave	Oster Microwave	Oster Microwave	Oster Microwave
Door Material Brand	Plastic Door by Best Plastic	Plastic Door by Best Plastic	Stainless Steel Door By Best SS	Stainless Steel Door By Best SS
Price	$56.99 ( )	$66.99 ( )	$56.99 ( )	$66.99 ( )
	Profile#5	Profile#6	Profile#7	Profile#8
Manufacturer Brand	GE Microwave	GE Microwave	GE Microwave	GE Microwave
Door Material Brand	Plastic Door by Best Plastic	Plastic Door by Best Plastic	Stainless Steel Door By Best SS	Stainless Steel Door By Best SS
Price	$56.99 ( )	$66.99 ( )	$56.99 ( )	$66.99 ( )

Question: if this microwave is available in the market, how likely would you buy this microwave using the scale below?

Very unlikely to buy (0) ------------------ Very likely to buy (20)

Note: these 8 conjoint tasks are shown simultaneously (Joint Evaluation).

RESULTS

First, we assess whether respondents actually used two different evaluation strategies in the conjoint analysis. As shown in the figure 3, the results show that the analytical evaluation strategy (mean = 5.2, std.dev. = 1.4) was used more than the constructive evaluation strategy (mean = 4.0, std.dev. = 1.8). A paired t-test result revealed that the difference between the two evaluation strategies was statistically significant (t= -5.7, d.f. = 124, $p < 0.01$).

Figure3: The Preference of the Analytical Evaluation Strategy versus the Constructive Evaluation Strategy in Conjoint Analysis (n=153)
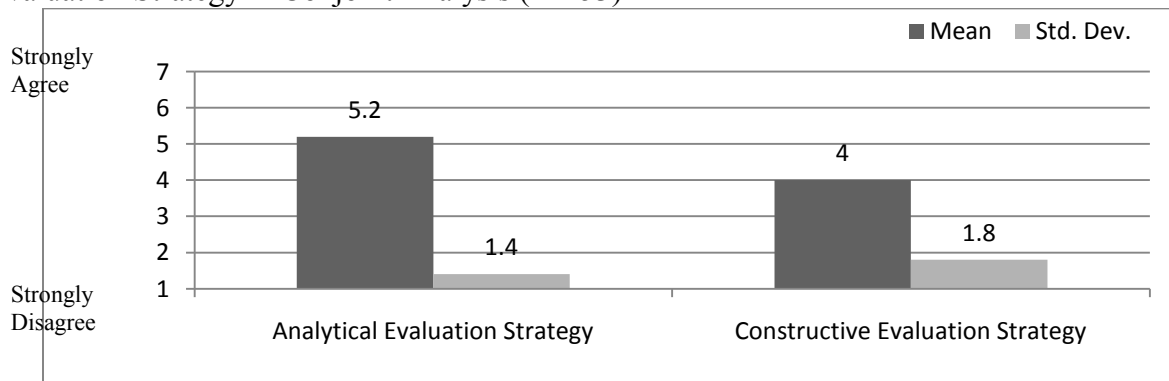
Second, we explore the effect of the evaluation mode on the choice of the evaluation strategies. As shown in the figure 4, although the effect of the evaluation mode is not statistically significant, mean scores of the results marginally support our predictions presented in proposition 3 and proposition 4. For instance, as we predicted, in the separate evaluation, the mean score of the analytical evaluation mode (mean = 5.22) is higher than that of the constructive evaluation (mean = 5.15). In the joint evaluation the mean score of the constructive evaluation mode (mean = 4.10) is higher than that of the analytical evaluation mode (mean = 3.86)

Figure 4: The Effect of Evaluation Mode on the Preference of the Analytical Evaluation Strategy versus that of the Constructive Evaluation Strategy (n=153)
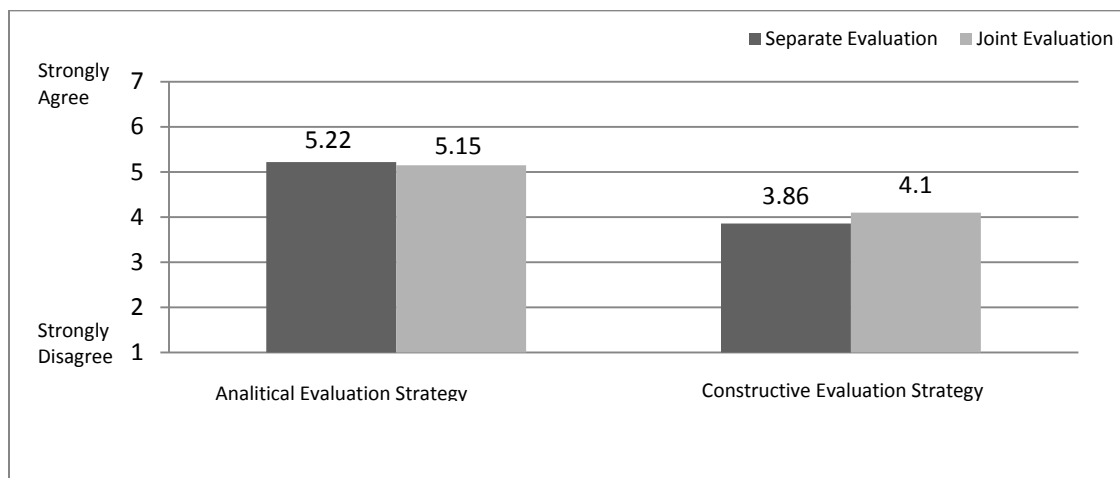
Last, to determine whether a consumer interchangeably uses the analytical and constructive evaluation modes or different consumers use different evaluation strategies, we examined the correlation between the two evaluation strategies. As shown in the figure 5, the result shows that there is a negative relation between the analytical evaluation strategy and the constructive evaluation strategy. It implies that while some respondents use analytical evaluation, other respondents use constructive evaluation.

Figure 5: Correlation between the Analytical Evaluation Strategy and the Constructive Evaluation Strategy (n=153)
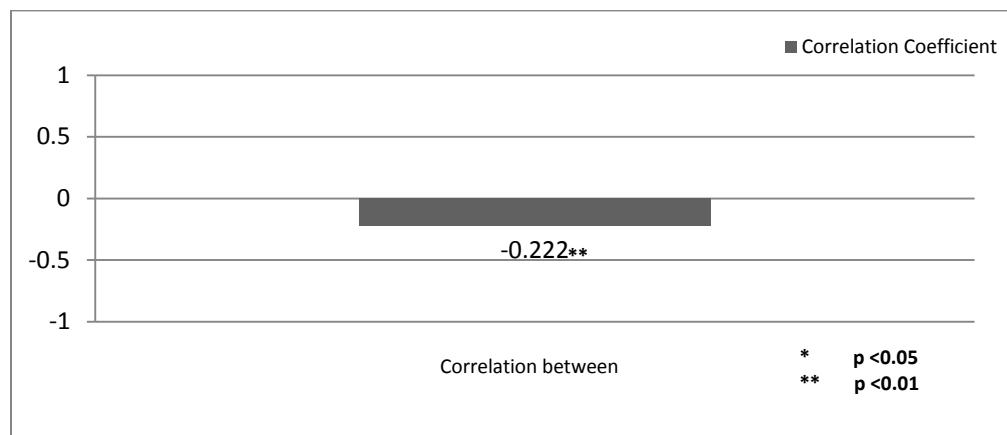
DISCUSSION

This study can provide contributions to both the academic and managerial realms. Based on the findings, we show that, from the consumer perspective, there exist two evaluation strategies for co-branded products. The analytical evaluation strategy is likely to be employed when a consumer is familiar with the individual brands. This approach is also useful when the co-branded products are evaluated one at a time. In contrast, the constructive evaluation strategy seems to be efficient when a consumer is not familiar with the individual brands. The approach seems to be easy to access when the co-branded products are evaluated jointly. We find that these two evaluation approaches are mutually exclusive, indicating that there exists consumer heterogeneity in selecting an evaluating strategy. In summary, we argue that the choice of an evaluation strategy depends on the evaluation mode and the degree of brand familiarity.

Brand managers should be aware of the strategic usefulness of the co-branding strategy. First, from the firm's perspective, the co-branding strategy is very useful to access a new market, entry into which the firm may find very difficult if it attempts to do so alone. For example, ASUS is a leading motherboard manufacturer in Taiwan, and to enter the US market, it decided to equip its computers with the Intel's chip and sell them through Best Buy. Second, from the consumer perspective, co-branding products or services provides more comprehensive solutions and creates additional consumer benefits. For example, consumers may enjoy customizing their new computer's features through the Dell's website while they may less worry about the quality from the Intel chip.

Several issues remain unresolved and can become future research directions. *First*, we consider the brand evaluation strategy from the value (utility) perspective. However, brand evaluation can be significantly influenced by non-physical or intangible attributes, such as image. As Keller (2006) mentioned, a brand's intangible value and a consumer's mood should be equally considered in the brand research. *Second*, this research focuses on how a consumer evaluates co-branded products from the information processing perspective. However, it is still not clear how learning, memory, and experience impact co-branding evaluation. The brand extension literature reveals that when consumers obtain positive experiences from their

previously utilized brand, the brand extension is more effective because of spillover effect (Simonin and Ruth 1998). Thus, consumers are likely to rely on their previous experience with individual brands in the co-branded product. Future research should enhance our knowledge in the co-branded product evaluation strategy by further investigating these issues.

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NETIQUETTE: MAKE IT PART OF YOUR SYLLABUS

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EXTENDED ABSTRACT

Just like face-to-face classes, students engaged in distance education communicate, participate and interact. While online instructors presumably monitor the discussion boards, it is recommended that specific rules are set to ensure that students comply with established etiquette. Developing online classroom etiquette or "netiquette" at the onset of the course or online program can help avoid future conflicts in the virtual classroom.

Recently, a student in a graduate-level online course sent the following e-mail to his instructor:
... I have observed that some students' discussions are at the line or crossing the line... I am specifically referring to discussions which delve into personal attacks or personal disagreements as opposed to staying in the realm of healthy topical discussions in which students may disagree about the topical areas in appropriate academic banter...

Given the student's comments, what should the instructor do? How can the instructor avoid this situation in the future?

Netiquette or Internet etiquette is the new way of defining professionalism through network communication. Researchers have suggested that online students generally have a clear understanding of what is within the realm of acceptable netiquette. For virtual classroom purposes, netiquette deals with the notions of respect, harmony and tolerance often manifested in the tone or function of the interactions (Curtis and Lawson 2001; Brown 2001).

A quick search on the Internet generated results where several educational institutions provided their Netiquette policies in their respective websites. These policies were presented along with either the Student Code of Conduct or Code of Ethics. While is approach is certainly acceptable, it begs the question of how many students actually read, or even glance over, the mandated student conduct rules.

Therefore, it is prudent for instructors to clearly define netiquette expectations and consequences of any breach for each of their courses. As Ragan (2007) noted, these netiquette rules should be distributed at the start of a course. In fact, based on this author's personal experience, it should be included in the syllabus to further underscore the importance of harmony within the online learning environment. If it is included in the syllabus, students become more aware that the outlined netiquette is viewed much like a course requirement and that they should abide with these rules.

Below are some of the commonly utilized Netiquette rules:

Do not dominate any discussion. Give other students the opportunity to join in the discussion

Do not use offensive language. Present ideas appropriately.

Be cautious in using Internet language. For example, do not capitalize all letters since this suggest shouting.

Popular emoticons such as ☺ or ☹ can be helpful to convey your tone but do not overdo or overuse it.

Avoid using vernacular and/or slang language. This could possibly lead to misinterpretation.

Never make fun of someone's ability to read or write.

Share tips with other students.

Keep an "open-mind" and be willing to express even your minority opinion. Minority opinions have to be respected.

Think and edit before you push the "Send" button.

Do not hesitate to ask for feedback.

Using humor is acceptable but be careful that it is not misinterpreted. For example, are you being humorous or sarcastic?

Online students can bring to the discussion table diverse ideas that enhance the online learning experience. Unfortunately, along with this diversity comes the possibility that students may, inadvertently or intentionally, breach etiquette rules. In order to avoid any unpleasant situation, it is highly recommended that instructors include in their syllabus an outline his/her netiquette expectations. Whereas some educational institutions may have broad policies regarding off- and online classroom etiquette, it is prudent for instructors to proactively deter future breach of conduct by specifically indicating in their syllabus the rules and the consequences.

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RUNNER'S RAVE: AN IN-DEPTH ANALYSIS OF THE CROSS-COUNTRY TEAM CULTURE

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EXTENDED ABSTRACT

To understand consumption behavior, researchers must gain insight into consumer passions (Belk, Ger and Askegaard 2003). Researchers have sought to understand key motivators for consumer commitment and relationship building (Lacey 2007). A primary motivating force behind the decision to consume virtually everything is a desire (Belk, Ger and Askegaard 2003).

An important tool for understanding consumer behavior is an in-depth qualitative examination of consumption communities. Shared experiences and perspectives build communities of consumption (O'Sullivan 2009). Managers want to nurture and build brand communities (Schau, Muñiz, and Arnould 2009). Member of brand and consumption communities typically share common values and interests.

College sports teams represent an important type of consumption community. Members of college sporting teams share a passion for their sport. They often share a particular lifestyle with each person as a part of the whole. The members of the team are connected to each other on a level deeper than the sport they share in common. Team members are often observed wearing the same types of clothes, eating together, and spending time together outside of their athletic schedules. Together they form groups for other extracurricular activities.

The purpose of this study is to explore the culture of a college cross-country team. What are the important foundations for creating team or community unity? What influences their lifestyle choices? Using a qualitative ethnographic method, this study developed an in-depth understanding of the cross-country culture by observing, interacting, constructing interviews within the runners' element, and how their decision to be a runner within this subculture has affected those choices. This study provides insight into this consumption environment.

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CORRUPTION, GROWTH, INCOME, AND FDI: THE RICH NATIONS AND THE POOR NATIONS

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ABSTRACT

Wilson (2006) and Swaleheen and Stansel (2007) hold that corruption can impede or augment growth, depending on circumstances. This study tested hypotheses linking corruption, economic growth, national income, and foreign direct investment (FDI) levels. Significant relationships were found between corruption and the other variables, and differences were found between the richer and the poorer nations.

INTRODUCTION

Wilson (2006) and Swaleheen and Stansel (2007) hold that corruption can impede or augment growth, depending on circumstances. In countries with high economic freedom, they hold that corruption increases growth, but in countries with low economic freedom, corruption slows growth. This apparent contradiction has the purpose of the corruption at its root. Countries with higher economic freedom are also likely to be the countries with higher incomes and greater wealth accumulation than the countries with lower economic freedom. In the poorer countries, the form of corruption is often a bribe to make the wheels of government regulation work faster, and is an extra charge to the company that pays it. In the richer countries the bribe is often to assure lax enforcement of rules (e.g., environmental regulations) that make doing business more expensive. Hence, according to Swaleheen and Stansel (2007), corruption in the poorer nations increase a company's costs, while in richer nations corruption tends to reduce a company's costs.

Using macroeconomic data, this study will test the relationships among corruption, growth, income, and foreign direct investment (FDI), and seek evidence that these relationships differ when contrasting richer and poorer countries.

LITERATURE REVIEW

Corruption can be defined as "the misuse of public power (office) for private benefit. In other words, it occurs where public officials have a direct responsibility for the provision of a public service or application of specific regulations (Akcay 2006)." Private corruption can also occur when the resources of a firm are used for private benefit instead of for the benefit of the owners, but this study focuses only on the corruption of public power. This paper first reviews the effects of corruption on the outcome variables of income, growth, and FDI, and then examines the causes/concomitants of corruption.

The Effects of Corruption

Corruption has been reported to be negatively related to national income, that is, countries with lower incomes have higher levels of corruption (Husted 1999; Sanyal 2005). In addition, corruption is negatively related to income inequality (Akcay 2006; Husted 1999; Sanyal 2005; You and Khagram 2005). Studies have also shown that higher corruption levels are associated with lower levels of FDI (Cuervo-Cazurra 2006; Ketkar, Murtuza, and Ketkar 2005: Wei 2000; Zhao, Kim, and Du 2003).

The relationship between higher corruption and lower economic growth has been widely reported (Goorha 2000; Guetat 2006; Gyimah-Brempong 2002; Mauro 2004; Nwanko and Richards 2001). This lower growth is attributed to corruption siphoning capital from wealth-producing activities into private consumption. Wilson (2006), however, reports a difference in the effects of corruption on growth between industrialized and emerging economies, and Swaleheen and Stansel (2007) link higher corruption to lower growth only in countries that have low levels of economic freedom. Several studies have also reported a link between high corruption levels in a given country and weak institutional development (Guetat 2006; Hodgson 2006; Teles 2007). Akcay (2006) reports the link between higher corruption and lower growth, and also notes that higher corruption is associated with inefficient social and political outcomes as well.

Although the causal direction may be questioned, the preponderance of the literature reports that corruption normally causes the outcome variables of (1) slower economic growth, (2) smaller incomes, and (3) lower levels of FDI.

Concomitants of Corruption

Many variables have been associated with corruption. The size of government is positively related to corruption, while the rule of law, judicial efficiency, and federalism are negatively related to corruption. Both political and economic freedoms are negatively associated with corruption, as is educational level (Ali and Isse 2003). In a literature review, Akcay (2006) reports that corruption is also positively related to child mortality and negatively related to government spending on education and public health.

Hofstede's (1980) work culture dimensions have been found to be associated with corruption. The *uncertainty avoidance index* has been found to be positively related to corruption (Husted 1999; Robertson and Watson 2004). The *power distance index* has also been found to be positively related to corruption (Husted 1999; Kwok and Tadesse 2006; Sanyal 2005). The third of Hofstede's dimensions, *masculinity*, is positively related to corruption (Robertson and Watson 2004; Sanyal 2005), while the fourth, *individualism*, is negatively related to corruption (Husted 1999; Kwok and Tadesse 2006).

Husted (1999) also found corruption to be negatively related to per capita GNP and government size. You and Khagram (2005) found both political rights and percent of the population that was protestant to be negatively related to corruption, while countries that had a socialist legal origin had higher levels of corruption. Kwok and Tadesse (2006) found that educational levels, degree of democracy, political constraints, and the rule of law were all negatively related to corruption. The result of all of these relationships has been summarized as

follows:

The implications of these results are obvious. Those poor countries with large and cumbersome bureaucracies, weak and inefficient judicial systems, and poor educational systems can reduce corruption and increase their growth potential by improving their legal systems, investing in education, reducing the size of government, reducing dependence on foreign aid, and decentralizing the power of the state.…those countries that enjoyed a substantial growth rate for the past two decades are those that developed legal, institutional, and educational measures that encouraged bureaucratic honesty and discouraged corruption and malfeasance." (Ali and Isse 2003, 461)

Rather than focusing on the causes and concomitants of corruption, this paper examines only the effects corruption has on the outcome variables of economic growth, per capita income, and FDI.

HYPOTHESES

Based on the above review of the literature, the following hypotheses are offered:
H1: There is a negative relationship between corruption and economic growth.
H2: There is a negative relationship between corruption and per capita national income.
H3: There is a negative relationship between corruption and FDI.
H4: Countries with higher growth will have lower corruption than countries with lower growth.
H5: Countries with higher income will have lower corruption than countries with lower income.
H6: Countries with higher FDI will have lower corruption than countries with lower FDI.

METHODS

The Population

The population studied began with the 165 nations listed in the Heritage Foundation ratings for 2005 (http://www.heritage.org/research/). Nations were excluded from analysis to the extent that missing data made it impossible to include them in the analysis linking corruption with the outcome variables. The actual number of nations included in the study varied with each of the analyses as indicated in the results.

Dependent and Independent Variables

Dependent: *Economic growth rate*. The growth rate selected for use was the average annual percentage growth in gross domestic product in 2005 (World Bank 2008).
Dependent: *Income*. The statistic selected for this measure was the gross national income per capita stated in terms of purchasing power parity (World Bank 2008).
Dependent: *Foreign Direct Investment*. The statistic selected was the average annual FDI as a percent on national income for the 2005 (World Bank 2008).
Independent: *Corruption Perceptions Index*. The independent variable used was the

summated corruption perceptions index (CPI) from 2005 (http://www.transparency.org/).

Analysis

Regression was used to test the first three hypothesized relationships, and t-tests were used to test hypothesis four, five, and six. The median ($6,040) was used to divide richer and poorer countries based on the GNI per capita as expressed in purchasing power parity. The median (3.5%) was also used to divide faster and slower growth countries. Finally, the median (3.0%) was also used to determine higher and lower FDI countries.

RESULTS

With the regression analysis, no relationship was found when using the summated CPI to predict economic growth. Using the CPI to predict income, however, produced an adjusted R^2 of .728 with a significance of $< .001$. The CPI was also found to be associated with FDI, but the adjusted R^2 was only .025, with a significance of .030. Using the Heritage Foundation's corruption measure also produced no relationship with economic growth. This measure predicted income, however, with an adjusted R^2 of .741 and a significance of $< .000$. The Heritage Foundation's corruption measure was also weakly related to FDI, with an adjusted R^2 of only .027 and a significance of .027 (not a misprint). Hence the Transparency International and the Heritage Foundation's corruption indices performed very similarly. Simple regression results of Transparency International's Corruption Perception Index and GDP growth rate, GNI per capita, and FDI as a percent of GDP are reported in Table 1.

Table 1. Simple Regression of Corruption and Income, Growth, and FDI

Dependent Variables ➔				
⬇ **Independent Variable**		GDP Growth	GNI per capita	FDI per capita
Corruption	Adjusted R square	.008	**.728**	**.025**
	Significance	.130	**<.001**	**.030**
	Based of n = ___.	155	**153**	**150**
Significant regression relationships are reported in **bold**.				

In comparing high and low FDI countries, no difference was found in corruption levels. When comparing the richer and the poorer countries based on income level, the predicted relationship was found, with richer nations having lower corruption levels than the poorer countries. Contrary to the hypothesis, higher growth countries also had higher corruption levels than lower growth countries. The results of the relevant t-tests are shown in Table 2, and a summary of the results of the hypothesis testing is provided in Table 3.

Table 2. Difference in Corruption Based on Differences in Income, Growth, and FDI

Variable ⬇	Mean Corruption for Upper Half of the Countries	Mean Corruption for Lower Half of the Countries	t	Sig.	n
Growth	3.6538	4.4385	-2.322	.022	156
Income	5.3705	2.7105	9.891	<.001	154
FDI	4.1989	3.8734	.911	.364	151
Higher corruption scores indicate **lower** levels of corruption.					

Table 3. Summary of Hypothesis Testing

Hypothesis	Relationship	Supported?
1	Corruption → lower economic growth	No
2	Corruption → lower per capita national income	Yes
3	Corruption → lower FDI	Yes—weak
4	High/low growth difference in corruption	Reversed
5	High/low income difference in corruption	Yes
6	High/low FDI difference in corruption	No

DISCUSSION

Although the literature review suggests that corruption has negative effects on economic growth, national income, and FDI, this study showed no support for the high corruption to low economic growth relationship—indeed, the t-test supported the opposite conclusion. Further, the relationship between corruption and FDI, although significant, was very weak. Thus, only the negative effect of corruption on per capita national income was well supported by the data, and the direction of causality in the income-corruption regression is also subject to question. Does lower corruption cause higher income, or does higher income result in lower corruption? Or are they merely correlated with no causation present?

LIMITATIONS

There may be several reasons for this study's lack of support for important parts of the relationships reported in the literature. The corruption measures used represent each nation with only one score and perhaps the measure of corruption has to be more fine grained in order to find results. Also, only one indicator each was used for economic growth, national income, and FDI. Other measures may have yielded different results. Although corruption may have negative effects on national economies, this analysis of data from the World Bank, Heritage Foundation, and Transparency International does not strongly support this idea. Further, perhaps Wilson (2006) and Swaleheen and Stansel (2007) were right with their contention that corruption can either impede or augment growth, resulting in the mixed statistical results obtained.

FUTURE RESEARCH

Further research to link these variables should consider a host of other variables that could affect the relationships tested. These variables could include the Heritage Foundation

variables associated with corruption and corrupt practices, as well as other measures of press freedom, democracy, effectiveness of governance and the judicial system, etc. This study was a first attempt to look for linkages in the most commonly used macroeconomic data available, but it provided only weak evidence. Further studies will have to use a more complex data set to determine the relationships among the relevant variables.

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SERVICE FAILURE, SERVICE RECOVERY AND REPEAT PATRONAGE: A COMPARISON BETWEEN SOUTH AFRICAN, UNITED STATES AND IRISH RESTAURANT PATRONS

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EXTENDED ABSTRACT

Despite organizations' best efforts, service failures do occur due to human involvement in the service delivery process (Mattila & Cranage 2005; La & Kandampully 2004). As it is unlikely that service failures will be totally eliminated, organizations must learn to deal with them by offering effective service recovery (Bamford & Xystouri 2005; Miller, Craighead & Karwan 2000). Properly executed service recovery could enhance customer satisfaction and loyalty (Torres & Kline 2006), directly influence whether dissatisfied customers are retained (Yuksel, Kilinc & Yuksel 2006), and result in higher levels of satisfaction than what customers would have experienced had the service failure not occurred (Schoefer 2008). Service recovery strategies include communicating with customers experiencing a service failure by explaining why it occurred, offering an apology, and offering customers some form of compensation, for example discounts or vouchers (La & Kandampully 2004; Mattila & Cranage 2005; Wirtz & Mattila 2004).

The purpose of this study is to compare the findings from a South African (SA) study to that of a similar study conducted in the US (n=392) and Ireland (n=327) (Mueller, Palmer, Mack & McMullan 2003) concerning service failures, service recovery and future patronage intentions in the restaurant industry.

A non-probability convenience sampling method was used to survey white South African restaurant patrons (n=360) by means of self-administered questionnaires. White respondents were specifically selected because of their similar living standards to those of OECD nations (Devarajan & van der Mensbrugghe 2000, p. 1).

The main causes for service failures reported in all three studies were attributed to service or food problems. As opposed to less than half of Irish respondents (40%), most SA (63.1%) and US (77%) respondents complained about the failure to restaurant staff. A possible explanation for this could be that more Irish respondents experiencing the failure at independent or family owned restaurants (48.2%), whereas the majority of US (89.5%) and SA (75.7%) respondents experienced the failure at franchised restaurants.

Concerning service recovery strategies, most SA respondents (50.2%) indicated that restaurants corrected the mistake or replaced their food, compared to 37% of Irish and 29.3% of US respondents. Fewer SA respondents (10.8%) indicated that the restaurant did noting in response to the service failure than US (21.9%) and Irish (28.4%) respondents. US restaurants were seemingly more inclined to offer customers some form of compensation as service recovery

(48%) compared to SA (29.6%) and Irish (23%) restaurants.

With regards to future patronage, less than half of Irish respondents (37%) indicated that they would dine at the restaurant again, compared to the majority of SA (61.7%) and US (55.6%) respondents who would do so. Remarkably similar percentages of respondents who indicated that an apology was offered for the service failure indicated that they would return to the restaurant in the future (SA = 61.9%; US = 60.8%; Irish = 62%).

Similarities were found between SA, US and Irish respondents with regard to the service failures they experienced and recovery strategies offered by restaurants. SA and US respondents differed from Irish respondents in complaining about the failure and their future patronage intentions. Respondents from all three countries will, however, support the restaurant in the future if an apology was offered for the failure. This finding supports the claim by Wirtz and Mattila (2004) that restaurants do not have to offer compensation to customers who experienced a service failure, provided that service recovery is immediate and an apology is offered.

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MANAGING SERVICE QUALITY IN THE MULTI-UNIT ENTERPRISE: A MIXED METHODS EXPLORATION OF THE ROLE OF THE UNIT MANAGER

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EXTENDED ABSTRACT

Multi-unit retail enterprises, or chains, are organizations that are built from geographically dispersed, standardized units, and they are ubiquitous in the consumer landscape. Consumers like multi-unit enterprises because they promise consistency in service quality – a Gap should be a Gap and a McDonald's should deliver McDonald's food. To avoid disappointing or confusing customers, it is critical that multi-unit enterprises maintain consistent levels of service quality across units. How multi-unit enterprises maintain consistency across units, particularly in the face of differential customer expectations and demands, is the focus of this research. Garvin and Levesque (2008), noted the overlapping areas of responsibility in maintaining quality across the various managerial levels and observed that unit managers are not only accountable for the day-to-day operation of their individual units but are also responsible for implementing new initiatives. As the key to delivering consistent levels of satisfactory quality to customers across units in a chain lies in the integration of the technical and functional elements of services, this research reports two studies exploring the role played by the unit manager in the delivery of service quality.

The first study was a qualitative exploration of the manager's role and consisted of three stages: an exploration of relevant job postings on Monster.com for recurring themes; a series of one-on-one interviews conducted with mid-level operations managers in multiple industries: convenience stores; financial services, and hospitality; and a series of observations of unit managers working for a financial services firm. From these activities the centrality of the manager in delivering service quality, profitability, employee satisfaction, and overall customer satisfaction emerged. Additionally, the qualitative work also highlighted the importance of the paradigms, or operating orientations, through which managers approached the delivery of service quality. Three broad operating orientations emerged: customer-centric, production-centric, and sales-centric. These operating orientations, which are not mutually exclusive, direct managers' behaviors toward customers and employees and are the filter through which a manager interprets and responds to events.

The second, quantitative study was undertaken to confirm the findings from the qualitative approach. Unit managers from two restaurant chains (one quick-service and one casual dining) participated in the research. Scale items were developed specifically for a restaurant context and captured the varying levels of importance (beyond a threshold) of the various elements – customers, production, and sales. Where appropriate, the items were then subjected to exploratory factor analyses and correlation analysis.

Results from the second study indicate that managers' approaches to the creation and

delivery of service quality differ between managers. It is likely that a manager more customer-centric than production-centric will allocate more and better effort (e.g., more capable employees) to customer service than to production. It also appears that these approaches are more complex than initially supposed. A customer-centric orientation is comprised of three sub-dimensions: concern for functional quality, for employee empathy, and for customer outcomes. Similarly, a production-centric orientation is comprised of a concern for technical quality, for operational efficiency, and for costs.

In the two studies presented here we explored the role of the unit manager in delivering service quality and whether unit managers approach the creation and delivery of service quality differently. The findings presented here indicate that this is so. Three distinct operating orientations emerged: a customer-centricity, an operations-centricity and a sales-centricity (one could further argue that manager take an even further nuanced approach to the running of their unit – witness the sub-dimensions of both customer- and production-centricity.).

Why is this important? Store managers contribute to the bottom-line of the corporation through the service encounter – it is the store manager who daily manages customer service, the store environment, and employee behavior. These managers "have considerable discretion over how to assign, sequence, and accomplish tasks" (Garvin and Levesque 2008, p. 110). To be successful, multi-unit enterprises must deliver consistent levels of service quality across units. Understanding how unit managers exercise their discretion through a highly nuanced set of operating orientations is critical in understanding how service quality is profitably delivered across the multi-unit enterprise.

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COMPARISON OF INVENTORY POLICIES IN A SHIPMENT CONSOLIDATION ENVIRONMENT USING SIMULATION

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ABSTRACT

The current work is confined to the operational issue of inventory control and transportation management in a two-stage supply chain which consists of a retailer and a distribution center. In this paper, the distribution center is assumed to operate with a periodic review inventory policy, and the retailer could operate with one of the two policies: a periodic review policy or a continuous review policy. The main objective of this paper is to study the impact of two different inventory policies at the retailer in a two-stage supply chain environment when the distribution center uses shipment consolidation to reduce the cost. Simulation is used to obtain near optimal values and conclusions are made based on statistical tests.

INTRODUCTION

One of the important aspects of supply chain management is inventory management and transportation which are the main components of business logistics. Effective management of inventory are very important in a supply chain such that they reduce the total supply chain cost. Supply chain is a complex network of facilities and organizations with different and conflicting objectives and hence decision making is also a complex process (Lee and Billington 1993). Shipment consolidation involves combining smaller shipments to larger ones, so that significant savings could be achieved in transportation costs (Brennan 1981, Hall 1987). Thus, much of the focus gathered around joint stock replenishment and shipment consolidation with the introduction of the Continuous Replenishment Policy and Vendor Managed Inventory.

In a shipment consolidation program, if managed appropriately by carefully choosing an inventory policy and shipment strategy, the savings will be substantial (Qu et al. 1999). During stock replenishment, shipment of orders and inventory holding incur a cost to both the distribution center (DC) and the retailer. A DC incurs lost sales when a retailer buys goods from other suppliers; hence it is the responsibility of the DC to satisfy the demand of the retailer while keeping the costs as low as possible. Completing this task successfully depends on the inventory policy of the retailer and DC as well as shipment quantities and shipment time from the DC. However, this is only possible when the DC has the flexibility of dispatching items after holding the demand for a small amount of time, or a specific economical amount (quantity) of demand has accumulated. Complementarily, the retailer should be willing to wait for shipments, and there should be trust between the retailer and the DC. Shipment consolidation can be time-based, quantity-based or a hybrid of the two. A time-based consolidation involves dispatching periodic shipments depending on a pre-determined time frame, and a quantity-based consolidation involves sending shipments after a certain quantity of demand has accumulated. A mix of the two

may be when whichever occurs the earliest is followed (Chen et al. 2005). In this paper, a time-based consolidation policy is considered.

This paper studies the impact of two different inventory policies at the retailer by adopting a joint stock replenishment and transportation environment in a two-stage supply chain. A continuous review (*S, S-1*) policy or a periodic review (*R, T*) policy is used at the retailer, and a periodic review (*nQ, R, T*) policy is used at the DC. Simulation is used to obtain the total cost of supply chain, retailer order up to level, DC order size, and the shipment consolidation time which is also the inventory review time at the DC. Then paired t-test is used to compare the two policies.

This paper is organized into six sections including the introduction. The second section gives insights into the work carried out in the field of joint stock replenishment and shipment consolidation, Section 3 describes the simulation model, and Section 4 presents the results. In Section 5, the results are analyzed and Section 6 provides concluding remarks and future research directions.

LITERATURE REVIEW

Abundant literature is available on joint inventory and transportation policies. Although initially, inventory and transportation research areas were investigated individually, researchers have realized that by considering these problems together, additional savings and improvements can be achieved (Bell et al. 1983, Siajadi et al. 2006).

This research is built where we take into consideration the cost at the retailer level in addition to the DC. Cetinkaya and Lee (2000) and Axsater (2001) analyzed a single-stage supply chain and minimized the total expected cost of a DC assuming that the retailers do not carry inventory. Shipment consolidation is an important part and the principles of pure consolidation policies have traditionally been discussed in the logistics trade journals (Newbourne and Barrett 1972). On the other hand, the economic justification of pure consolidation practices has received attention only in the last two decades (Blumenfeld et al. 1985). This research employs the usage of a time based consolidation policy in which both the retailer and the DC order at a particular time period based on the amount of customer demand within that stipulated time period. The inventory policy which we use in the DC is a (*nQ, R, T*) periodic review inventory policy introduced by Hadley and Whitin (1963), and replenishes its inventory from an outside supplier. Under an (*nQ, R, T*) policy, *nQ* denotes the order size where *n* is the number of batches of size *Q* to raise the inventory position (i.e., on-hand inventory plus outstanding orders minus backlog) to the interval of [*R + 1, R + Q*], *R* denotes the reorder point, and *T* denotes the time between inventory reviews.

Two different inventory policies are considered at the retailer, namely, (*R, T*) which is periodic review and (*S, S-1*) which is continuous review. In (*R, T*) policy, R is the order up to level and T is the review time (Hadley and Whitin 1963) and in (*S, S-1*) policy, also called one-one policy (Graves 1985, Svoronos and Zipkin 1991), *S* is the order up to level and an order of size one is placed every time an item is sold. The (*S, S-1*) policy is appropriate when there is a low demand item with high inventory holding cost, or when the fixed ordering cost is negligible

(Moinzadeh 1989).

Oftentimes, there are some situations in which a problem cannot be solved by analytical modeling methods, especially when a problem has many parameters to optimize and is quite difficult to be dealt with analytically. Simulation is one of the tools used by decision makers to examine the changes in the system and the following consequences, with less expense than field experiments which is usually difficult to be carried out (Law and Kelton 1982). In this research, simulation helps us to determine which inventory policy gives better results subject to random customer demand. It is also important to determine which policy should be used under given conditions.

THE SIMULATION MODEL

In order to design the experiments for the simulation study, it is necessary to understand the characteristics of the problem. Figure 1 represents the structure of the supply chain with an outside supplier, a distribution center, and a retailer. The model here is discussed with respect to a single product.
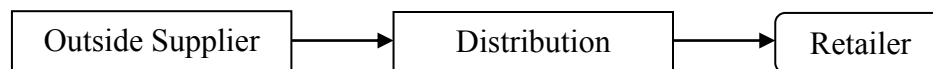
Figure 1: Supply Chain Structure

The DC is served by an external supplier and the retailer replenishes its inventory from the DC. The retailer faces random customer demand, and demand variability is the most important factor that impacts the cost of the supply chain. For instance, a faster response requirement to highly uncertain demand may require the retailer/DC to increase the inventory and also the frequency of shipments from the DC to the retailer. The DC consolidates the shipments based on time elapsed and dispatches them periodically. DC has a (nQ, R_{DC}, T) periodic review inventory policy. Two different inventory policies are considered at the retailer namely, (R, T) which is periodic review and ($S, S-1$) which is continuous review. The shipment consolidation time is also the review time when the retailer is operating under (R, T) policy.

In this model, the following cost components are considered for the DC: ordering, inventory holding, and shipment dispatching costs. On the other hand, the retailer incurs ordering, inventory holding and backlog costs. Lead time between the DC and outside supplier is assumed to be zero.

Notations used:
ΔT : Time interval between two consecutive events
IL_{DC} : Inventory level at the DC
IL_{RL} : Inventory level at the retailer
H : Inventory holding cost per product per unit time at the DC
A : Replenishment cost at the DC
D : Shipment cost at the DC
h : Inventory holding cost per product per unit time at the retailer
b : Backlog cost per product per unit time at the retailer
P : Ordering cost at the retailer

The total expected cost calculation for the DC is as shown below:

$$Total\ Cost_{DC} = Holding\ Cost_{DC} + Ordering\ Cost_{DC} + Shipment\ Cost$$
$$Holding\ Cost_{DC} = IL_{DC} * \Delta T * H \qquad if\ IL_{DC} \geq 0$$
$$Ordering\ Cost_{DC} = Number\ of\ Orders\ Placed\ at\ DC * A$$
$$Shipment\ Cost_{DC} = Number\ of\ Shipments\ to\ retailer * D$$

The total expected cost calculation for the retailer is as shown below:

$$Total\ Cost_{RL} = Holding\ Cost_{RL} + Backlog\ Cost_{RL} + Ordering\ Cost_{RL}$$
$$Holding\ Cost_{RL} = IL_{RL} * \Delta T * h \qquad if\ IL_{RL} > 0$$
$$Backlog\ Cost_{RL} = IL_{RL} * \Delta T * b \qquad if\ IL_{RL} \leq 0$$
$$Ordering\ Cost_{RL} = Number\ of\ Orders\ Placed\ to\ retailer * P$$

The total expected cost calculation for two-stage supply chain (*TC*) is give as:

$$Total\ Cost = Total\ Cost_{DC} + Total\ Cost_{RL}$$

A Monte Carlo simulation technique is adopted in C++ programming language to construct the simulation models. The experiments are designed in such a way to explore the characteristics of (*R, T*) and (*S, S-1*) policy. Here we assume R_{DC}=*-1* for the DC because, in an (nQ, R_{DC},*T*) policy, the inventory position varies from [R_{DC}+*1*, R_{DC}+*Q*] after ordering, and if anything above minus one will result in an on-hand inventory which, in turn increases the holding costs. This is true when lead time between external supplier and manufacturer is zero, else it will result in a backlog cost, and hence *R=-1* may not be optimal. The optimal parameters *T, R* (*S*) are obtained from the simulation. The optimal value of *Q* is obtained using the exact solution procedure described in Capar (2009). Also the cost of DC, retailer and total supply chain are obtained from the simulation. A base case is considered and all other experiments are derived from the base case by varying the ordering cost (*A, P*), demand rate (*λ*), inventory holding cost (*H, h*), backlog cost (*b*), and shipment cost (*D*). A total of 54 experiments are constructed for each policy at the retailer and each experiment is executed in two stages. In the first stage, the optimal parameters along with the costs are determined and the second stage is used to obtain the total cost with the parameters obtained from the first stage. The first stage simulation is executed for 10 trials and 1000 time units and second stage is executed for 30 trials and 50000 time units. The second stage is mainly developed for statistical analysis of the results. The above described experiments are repeated for *S=0* and *R=0* scenarios. These two scenarios represent the case where there is no inventory at the retailer. The events in the supply chain (not in order, depends on the policy under consideration) consists of customer arrival at the retailer, retailer inventory review, retailer ordering, DC inventory review, DC ordering, DC's shipment to the retailer. It is assumed that the demand arrivals at the retailer follow a Poisson distribution.

RESULTS

The results obtained from the simulation were validated against the mathematical model developed in Capar (2009). The (*S, S-1*) policy results were found close to the ones described in the paper. A similar model structure is used to develop the (*R, T*) model but in a simulation environment.

The result for the base case alone is presented here. Table 1 shows the base case and various scenarios considered in this paper. The corresponding optimal values from first stage for

the base case are as shown in Table 2. Referring to Table 2 one can see that the two policies do not differ in terms of optimal parameters (*Q, S or R, T*) but the costs differ significantly. In this paper, only the results for varying ordering cost (*P*) are discussed in detail.

λ	A	D	b	h	H	P
5	500	250	10	5	2.5	125

Table 1: Parameters for the Base Case

$$\lambda \in [1, 9]$$
$$A \in [100, 900]$$
$$\frac{D}{K}, \frac{H}{h}, \frac{h}{b} \in [0.1, 0.9]$$

S > 0 and R > 0						
Inv Policy	**Q**	**R or S**	**T**	**Total Cost**	**DC Cost**	**RL Cost**
R,T	1	34	10.258	174.13	72.75	101.38
S,S-1	1	33	9.718	779.37	76.50	702.87

S = 0 and R = 0						
Inv Policy	**Q**	**R or S**	**T**	**Total Cost**	**DC Cost**	**RL Cost**
R,T	45	0	4.064	302.46	171.09	131.37
S,S-1	45	0	3.458	882.06	181.85	700.20

Table 2: Optimal values for the Base Case

Impact of ordering cost (P) on (R, T) and (S, S-1) policies:

Figure 2: **Relationship between TC and P for (R, T) Policy**
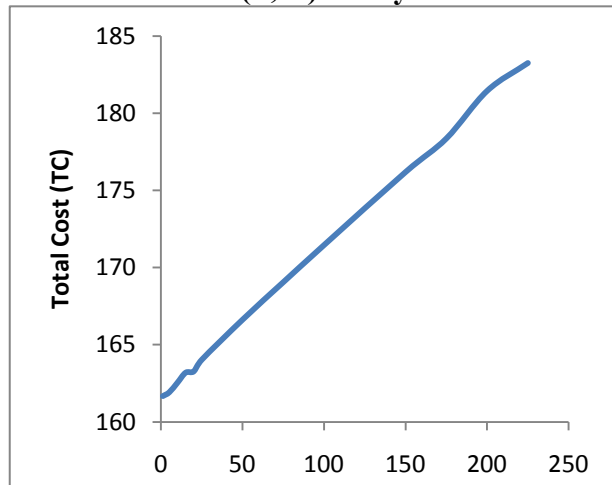
Figure 3: **Relationship between TC and P for (R = 0, T) Policy**
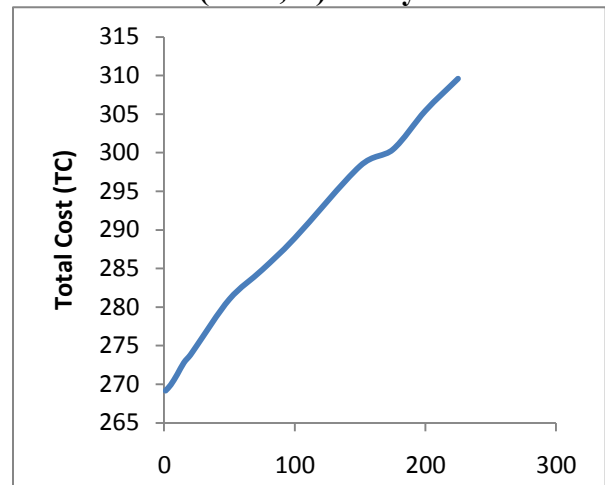
Figure 4: **Relationship between TC and P for (S, S-1) Policy**
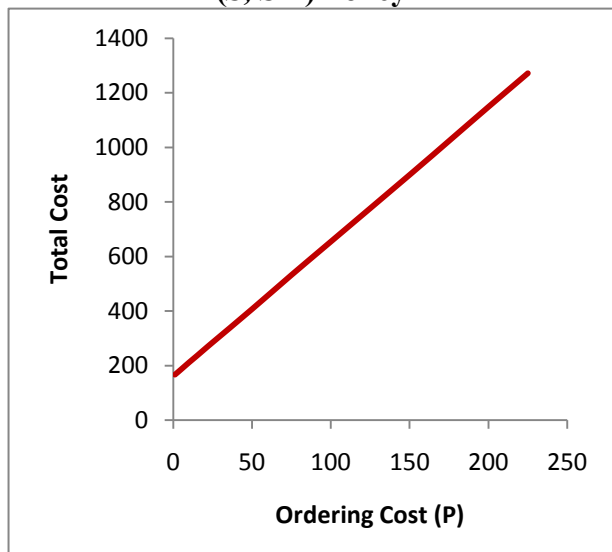
Figure 5 **Relationship between TC and P for (S = 0, S-1) Policy**
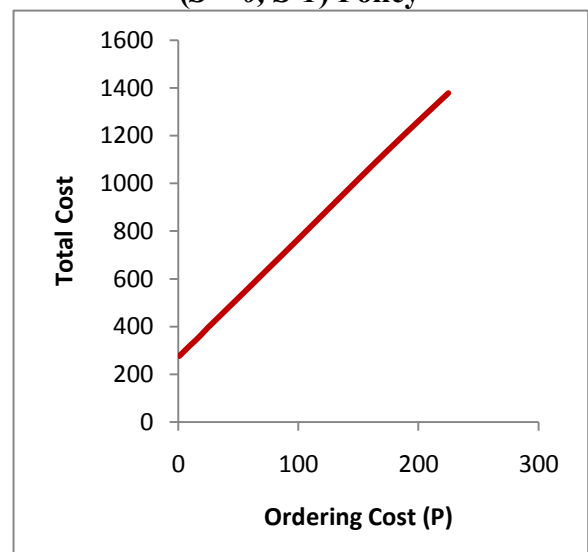
One must note that a continuous review policy orders at every demand arrival whereas a periodic review policy places an order at periodic time intervals. Hence, it can be expected that the total cost for a continuous review (S, S-1) policy to be much higher than that of a periodic review (R, T) policy. This can be further confirmed from the graphs shown below. The cost increases very drastically in case of both (S, S-1) and (R, T) policy along with the increase in ordering cost. This holds good for both the cases when there is inventory (Figure 2 and Figure 4) and, zero or no inventory (Figure 3 and Figure 5) at the retailer.

The two policies can have similar costs when the ordering cost is very low. Thus, if there

is an Information Technology system in place which can place an order every time an item is sold, then (S, S-1) policy is not different from (R, T) policy.

Figure 3 and Figure 5 has the cost for cases where there is no inventory at the retailer i.e., S=0 or R=0. In this case every demand is backlogged and as a result the cost of supply chain increases considerably. It can be seen from graphs (Figure 2 and Figure 3 for (R, T) policy and, Figure 4 and Figure 5 for (S, S-1) policy) that in either policy the cost of supply chain is higher when there is no inventory at the retailer.

The difference in costs $(\Delta = (TC_{R(S)=0} - TC_{R(S)>0})/TC_{R(S)=0})$ between the two cases i.e., the one with inventory and one without inventory, shows that there is a 40% increase in total costs (averaged over all experiments with varying P) in case of (R, T) policy, and there is a 22% increase in costs in case of (S, S-1) policy. Hence, one can conclude from this analysis that it is better to hold inventory at the retailer. This is further investigated using statistical tests in the following section.

Two other interesting cases considered here are the ones with high demand rate and low carrying cost, and low demand rate and high carrying cost. In the first case, (Table 3) results indicate that it is better to hold the inventory at the retailer than at the DC which decreases the demand response time, and in the latter case inventory levels are kept low to reduce the inventory carrying cost. In both cases, because of the ordering cost involved an (S, S-1) policy places more number of orders than (R, T) policy resulting in a higher cost.

L	A	D	b	h	H	P	$\Delta_{(S,S-1)}$ (%)	$\Delta_{(R,T)}$ (%)
1	500	250	10	50	25	125	2.17	5.16
9	500	250	10	1	0.5	125	18.27	64.46
1	500	250	10	50	25	1	4.86	4.95
9	500	250	10	1	0.5	1	68.10	65.59

Table 3: Percentage Increase in Total Cost with no Inventory at the Retailer

SIMULATION OUTPUT ANALYSIS

The output from the simulation model is analyzed using paired t-test (Hair et al 1995). A two sample paired t-test is used to compare two samples from a normal distribution with equal variances or unequal variances. The tests are carried out in MATLAB. A significance level of 5% is used for the tests. A sample size of 30 from the second stage simulation is used for the tests. A left tail t-test hypothesis is as stated below.

$$H_0: \mu_1 = \mu_2$$
$$H_1: \mu_1 < \mu_2$$

The null hypothesis states that the means are equal and alternate hypothesis states that the mean of sample one is less than the mean of sample two. The total cost values from R>0 (S>0) is compared with R=0 (S=0) i.e., with inventory and without inventory for all the 54 cases described above. Here μ_1 represents the mean for sample R>0 (S>0) and μ_2 represents the mean for sample R=0 (S=0). All the tests rejected null hypothesis with p-values close to zero

(<0.0001), which means that the mean of the cost with inventory is less than the mean of the cost without inventory. This again strengthens the conclusion that inventory at the retailer is preferable in this scenario.

CONCLUSION

This paper investigates the performance of a two-stage supply chain under two different inventory policies at the retailer. Through simulation experiments and subsequent statistical analysis of the simulation outputs, we make the following three important observations. First, the total cost for a continuous review policy is more than it is for a periodic review policy when there is an ordering cost. Second, the inventory policies used in the retailer does not make much of a difference when the ordering cost is very low. Third, important conclusion is that the cost with inventory is less than the cost without inventory and hence it is preferred to hold inventory at the retailer.

Although this study provides important insights into traditional supply chain management, we have to state that there are some limitations of this study. First, we consider a two stage supply chain structure with one member at each echelon. This supply chain structure is only a simplified case and in future research studies, modeling more realistic supply chain structures such as considering multiple retailers and also taking into account the lead time at the DC which makes it more complex may better explain the supply chain and extend the results obtained from this research. Second, we assume that the members in the supply chain apply order-up to policies to make their inventory decisions; however, there are other types of inventory policies that can be included in the model. Third the cost structure included in this model does not take into account the lost sales cost at the distribution center.

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A FRAMEWORK FOR COMPARATIVE STUDY OF INDUSTRY & WORKFORCE CONSTRUCTS ALONG THE TEXAS-MEXICO TRADE CORRIDOR

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ABSTRACT

Texas A&M University's Global Manufacturing & Distribution Research Initiative has established a consortium of government and private firms and been conducting a research on how global manufacturing and distribution throughput can be increased in the Texas-Mexico (T-MEX) Trade Corridor. There are three major areas of concentration for the consortium research which include extensive cost analysis for facility location decision, state of physical and logistic infrastructure, and the opportunity for the industry development in the T-MEX region. This paper presents a part of ongoing research on the third aspect of the consortium, that is, opportunity for industry development. It presents a framework for comparative study of industry & workforce constructs with respect to factors such as demographic statistics, existing and emerging industry cluster, and availability of logistic infrastructure. A case study on two cities (one each in Mexico and Texas) is presented to demonstrate the framework. The finding of this research is expected to help both the corporations and economic development agencies in making their important business or investment decisions.

INTRODUCTION

Due to globalized competition, the manufacturing companies are forced to make a lot of hard decisions to grow their market share. In fact in many cases, it has even become a survival or extinction issue. In such scenario, more often than not, the first action is to cut down on labor costs- either through downsizing or through outsourcing to low wage countries such as China. While China and other Asian countries still have low wage advantages as compared to western countries such as the US and Europe, that advantage is eroding swiftly [1,2]. First, the labor wages in China and other Southeast Asian countries are rising rapidly. Second, the western companies in China are facing the human resources challenges particularly at the middle management level. As an alternative, Mexico is another highly favored location for many American, Japanese, and European companies when it comes to lower wages [2]. While Mexico might not have an advantage over China in terms of lower wages, it is certainly considered much superior location with respect to other factors such as proximity to the US, better availability of talents, and the above all, less of a cultural challenge than those in China.

The study on Mexican industrial development and its trade with the US would be incomplete without mentioning the Maquiladora and its history. The Maquiladora industries were established in the Sixties to promote Mexican exports to the United States. The concept was

about a factory that imports materials and equipment from the US for assembly or manufacturing and then re-exports the assembled product back to the USA [3]. While this program has seen through a constant growth in the Mexican export of assembled products, the real gain has started only after implementation of North American Free Trade Agreement (NAFTA). The NAFTA has provided fewer trade restrictions and lower tariffs among its three member countries, US, Canada, and Mexico. Today, Mexico is the third largest trading partner of the US after Canada and China [4]. The interesting point here is although the assembly plants had been moved to Northen Mexico, all the supplier and other support service provider, for long time, were still on the north side of the international border. However, this trend is changing and many tier one suppliers are looking into opportunities to move into Mexico to support their OEM customers [5]. By doing that the suppliers not only can they reduce the transportation costs (because of proximity compared to Asian countries) but also get benefits of comparatively lower labor wages.

Besides OEM and their component suppliers, the third important contributor for the manufacturing growth is the distribution industry of which service has still not been fully understood in Mexico. The job of industrial distributors is to move the products from manufacturers to point of use. While doing that the distributors provide mainly two kinds of services to its customers: 1) they are a technical sales force hence offer technical advice on product knowledge, and 2) they serve as a "one-stop" resource for a wide range of maintenance, repair and operations (MRO) products and value-added services. This business provides a unique opportunity for both Mexican and American companies. During our research, we were told that many distribution firms would like to make a presence in Mexico because their US customers were already there while others saw that as an excellent opportunity to extend their global market share [5]. However, the decision to start a new business or extend the current business into a new location involves many factors, some of which are not so easily available. For example, what kind of industry (ies) to target and where are they located? Do we have talents available to run the operations? What kind of infrastructure is available for smooth flow of supply chain? There are not readily available answers to these questions.

Obviously, the facility location decision problem has a long tradition. There are ample numbers of papers that have studied this problem from the mathematical modeling point of view [5-7]. The same is the case with transportation network design and modeling [8-9], and market growth modeling [10-11]. However, in order to get better outputs from these models one has to have a micro level business intelligence that gets into those models because the quality of output can never be better than the quality of inputs. Our research and interactions with industry have shown that a well structured data collection and analysis framework is still in demand. This paper attempts to narrow down the gap by presenting a framework for collecting and comparing the business intelligence of potential cities. While the proposed framework is generic and can be applied to compare any locations, the paper presents the analysis of the cities that are located along the T-MEX corridor to be in alignment with the overall objective of the consortium. Further the analysis approach has been purposely made simple so that it can be applied with minimum level of training.

The remainder of the paper is organized as follows. Section 2 describes the proposed research framework. In section 3 we present the comparative analysis of two cities: Reynosa

(Tamaulipas, Mexico) and McAllen (Texas, USA). Section 4 describes few sample observations and how those can be used as business intelligence in decision making. Finally, section 5 concludes the paper with some final thoughts and directions for future work.

PROPOSED RESEARCH FRAMEWORK

The main idea behind the proposed framework is to create business intelligence on Mexican and South Texan cities to explore the opportunity for industry development in the region. It is done by analyzing the industry and demographics data in the area with respect to three main dimensions that are: current industry clusters, expected industry growth, and human resources capabilities.

Table 1: Proposed research framework showing important constructs and their measures

Constructs	South Texas and Mexican Cities						
	McAllen	Reynosa	San Antonio	Laredo	Monterrey	..	..
1. Geographic location							
Geographic Data							
Climate							
2. Demographics							
Population							
Median Age							
Population Distribution by Age							
3. Transportation							
Ground							
Air Service							
Ports of Entry							
Rail Service							
Bus Service							
Motor Freight Companies							
Shipping							
4. Workforce							
Labor Market							
Manufacturing Labor Force							
Employment Services							
Age Distribution							
Skills							
Educational Attainment							
Wages							
5. Civic Information							
City Resources/Utilities							
Energy/Utilities Rates							
Water							
Sewer							
Financial							
Electricity							
Natural Gas							
Telecommunications							
6. Taxes							
Tax Structure							
Sales Tax							
State Taxes							
Municipal Services							
7. Education							
Educational/Training Institutions							
Inventory of Education/Training Institutions (those that primarily serve the area/industries)							
Existing Curriculum							
Existing Certificate Programs							
Skills Training Programs							
8. Commercial / Industrial Services							
Quality of Life							
Health Facilities							
Hotels							
Religious Institutions							
Housing							
9. Public Recreational Facilities							
Arts, Culture, Recreation							
10. Industry Clusters - Existing							
Tier 1 and Tier 2 Suppliers							
Supporting Industries - Breakdown of supporting industries within each cluster.							
Products/Services/Customers							
Workforce - Skills, Wages, Education Levels							
11. Industry Clusters - Emerging							
Tier 1 and Tier 2 Suppliers							
Supporting Industries - Breakdown of supporting industries within the cluster							
Products/Services/Customers (anticipated)							
Workforce - Skills, Wages, Education Levels (anticipated requirements)							
12. Major Employers							
For each identified major employer:							
Products/Services							
Customers							
Suppliers							

Table 1 shows the proposed framework used to create necessary business intelligence to help industry with their decision making process. It includes the information on such constructs as geographic locations, demographics, transportation, workforce, civic information, taxes,

education, industrial services, industry clusters (current and emerging) and existing major employers. The framework also provides the measures of these constructs by breaking the main variables into sub-variables. For example, the workforce construct is broken down to overall labor market, manufacturing work force, employment services, age distribution, skill sets, educational attainment, and average wages. These constructs provide both American and Mexican companies with necessary business intelligence that can be used to compare various cities while establishing a new or extending the current businesses.

We suggest a three step approach for conducting this research (see Figure 1). First, a framework is established as shown in Table 1 by consulting corporations and economic development agencies who will be the ultimate consumers of this information. The second step includes data collection from various cities along the T-MEX trade corridor. The majority of information is publicly available although it is scattered in places and less organized whereas some industry and city specific information is collected via personal interviews. Lastly, a common business knowledge and intelligence is created by analyzing the city/industry data.
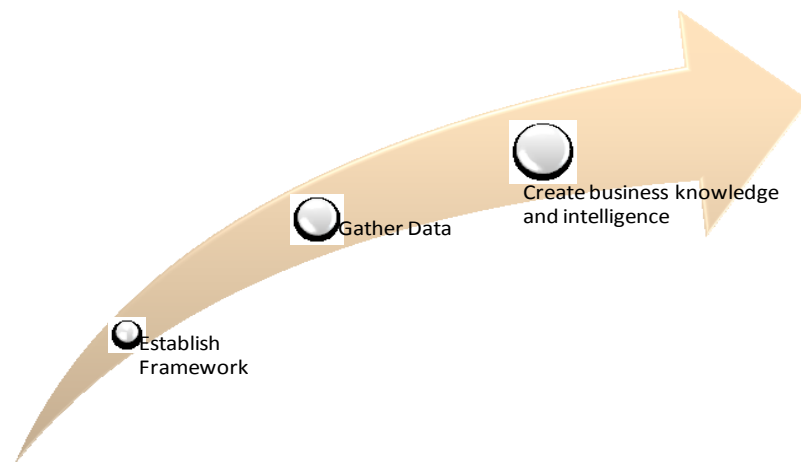
Figure 1: Proposed three-step research approach

CASE STUDY

Although, the consortium research has been collecting information on almost all of the major cities in Mexico (excluding Baja California region) and south Texas, this paper presents the analysis on only two cities. The objective of the case study here is to demonstrate the application of the proposed framework. The two cities considered in this paper are Reynosa (Tamaulipas, Mexico) and McAllen (Texas) as shown in Figure 2. It may be noted that the cities are purposely chosen in pairs to perform a more meaningful comparative analysis. The pairs are formed based on the similarities between the cities so that an 'apple-to-apple comparison can be made. Sections 3.1 and 3.2 briefly present the some key information on Reynosa and McAllen respectively.
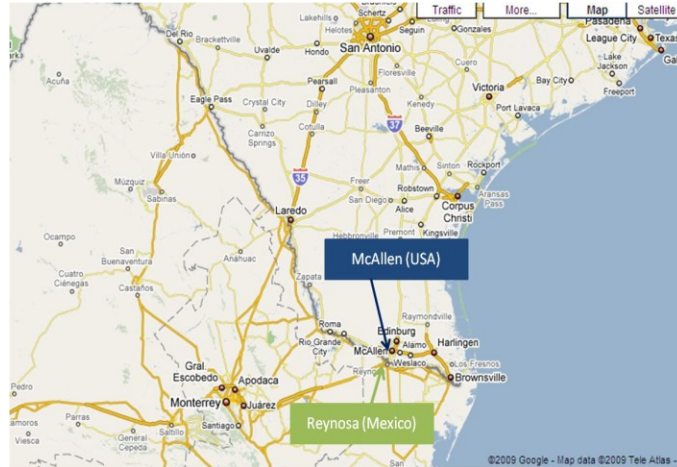
Figure 2: Reynosa and McAllen on the international map (source: Google Map)

Reynosa

Reynosa is located in the state of Tamaulipas in Mexico with population 526,888 covering an area of 3,156 square kilometers. It borders Rio Grande (and USA) to North, Rio Bravo to East, Municipality of Mendez to South, and Municipality of Diaz Ordaz to West [13].

Current and Future Industry Growth

This city is home to 480,000 workers with nearly half of them being employed in maquiladora manufacturing industries [14]. Table 3 depicts the current and emerging industry clusters in the city of Reynosa. It shows that Electronics is the number one current industry cluster in the city followed by Automotive and Textile in number 2 and 3 spots respectively. In future, few new industries including machinery & equipment, medical & optical equipment, and chemical products are expected to grow in Reynosa. Further, *Nokia, LG electronics, Black & Decker, Bissell, Emerson,* and *Delphi* are among the major employers of the city.

Table 3: Current and emerging industry clusters of Reynosa [14]

Current industry cluster		Future industry growth	
Industry Type	Description	Industry type	Description
Electric/Electronic	53 companies	Machinery & Equipment	Biotechnology Companies
	37,8000 plus employees		Recycling Companies
Automotive	27 companies		Hybrid Systems
	16,500 plus employees		Medical & Dental
Textile	17 companies	Medical & Optical Equipment	Veterinary
	2,700 plus employees	Chemical	Organic chemical products
			New fertilizers
			plastic recycling resins

Demographics

In terms of demographics, Reynosa has very large section of its population as youth with median age of 24 years. It means that it has a great potential to train and grow the workforce in future. The stats of education level of the whole State of Tamaulipas is presented in Figure 4. It

shows that nearly 57% of its population has at least high school or higher degrees, which is much higher than the national average of Mexico [15].
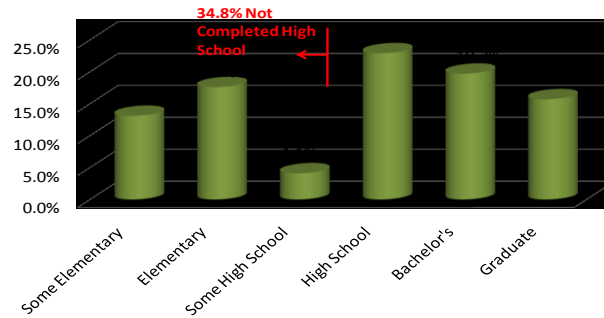
Figure 4: State of Tamaulipas- highest level of education attained [14]

McAllen

McAllen is a mid-size city located in the Rio Grande Valley region of southern Texas, four miles north of Mexican border. The population of McAllen metropolitan statistical area as of 2008 was 723, 433 covering 120.72 square kilometer by the city itself and over 4000 square kilometers by the county [16]. Unlike Reynosa's, the workforce of McAllen is evenly distributed among manufacturing (28%), government (24%), education &health (23%), trade, transportation & utilities (21%), and other miscellaneous (4%) sectors [17].

Current and future industry growth

There are some interesting facts about industry clusters currently present in the Lower Rio Grande Valley (LRGV), which also includes McAllen. For example, there is significantly higher job concentration per capita in the valley than the entire US when it comes to service related jobs such as government, healthcare, and retail (See Figure 5 for more details).

Government
- 1.5 times more concentrated than in rest of USA in 2004
- 10,000 job increase 1999-2004

Healthcare
- 1.8 times more concentrated than in rest of USA in 2004
- 23,000 job increase 1999-2004

Retail
- 1.2 times more concentrated than in rest of USA in 2004
- 2,521 job increase 1999-2004
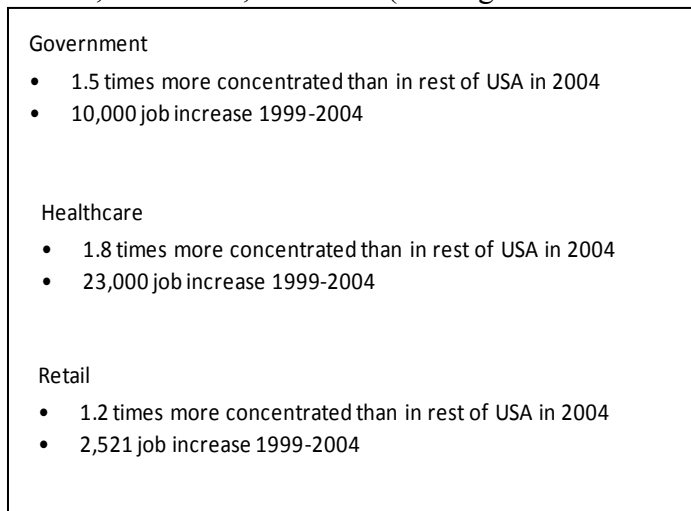
Figure 5: Unique facts about current industry jobs in the LRGV area including McAllen [17]

Among the top employers within manufacturing category are: *Duro Bag Mfg. Co* (paper bags), *Value Frozen Foods Inc* (subsidiary of Patterson Frozen Foods), *H&H Foods* (meat processing & distribution), *VF Intimates* (clothing/Apparel), *Emerson* (Telecommunication and data network), and *Coca Cola Bottling Co.* (Coke and related products). The valley is expecting the service sector to grow in future. Figure 6 provides an outlook of jog growth in future by 2014.
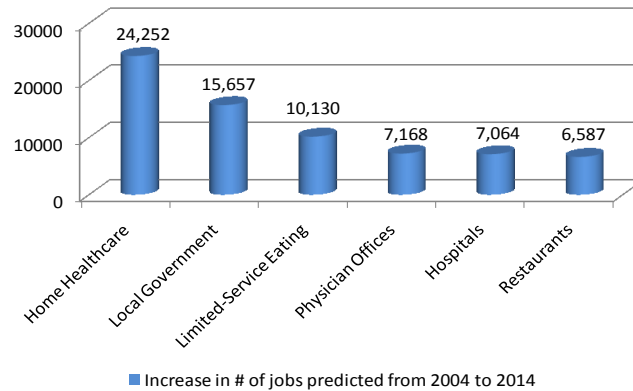
Figure 6: Future job growth in the LRGV [14]

Demographics

In terms of demographics, McAllen also has a younger population compared to both the State and the National level. The median age of McAllen residents is 27 years whereas that of Texas is 33.1 years and the US is 36.6 years. Similar to Reynosa, McAllen also has a great potential to grow its future workforce by providing the suitable training to its youth population. However, in terms of highest education level attained, McAllen has about half of its population with High School or higher degree- slightly less than that of Reynosa (see Figure 7).
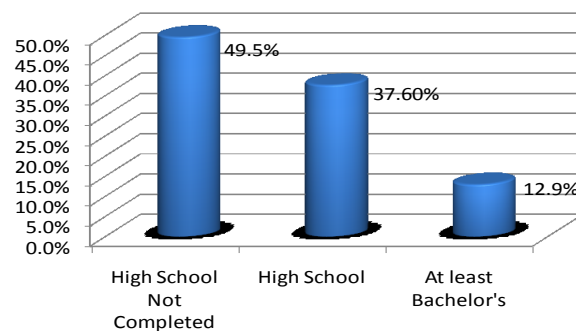
Figure 7: McAllen MSA- highest level of education attained [18]

Creation of Business Knowledge and Intelligence

As mentioned earlier in section 3, the ultimate goal of this research is to create a common knowledge that can be utilized in making business or investment related decisions. This section presents few sample observations that are made based on the case study of the two cities. These

observations can provide important business intelligence for making future investment decisions as described below.

Observation 1: Changing jobs in the LRGV area
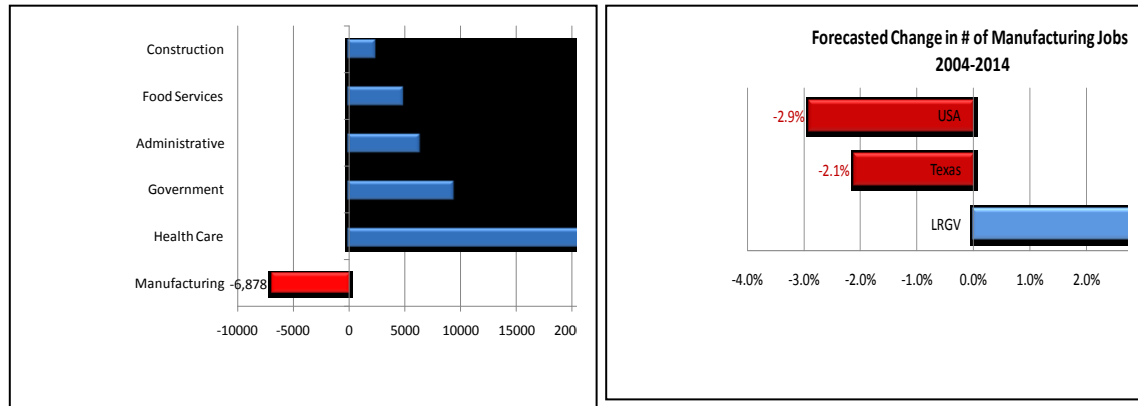
Change in number of jobs 1999-2004

Forecasted change in number of Manufacturing jobs: 2004-2014

Figure 8: Changing jobs in LGRV [14]

Figure 8 shows the changes in job scenario in the LGRV area over time. It reveals that nearly 7,000 manufacturing jobs had been lost in the LGRV from 1999 through 2004 but there had been a significant increase in jobs in other sectors such as construction and service industries (Fig 8(a)). The very interesting point here is despite the expected loss of jobs in manufacturing in Texas and the USA, the number of jobs in manufacturing is expected to grow by 3% in the LGRV in next five years. This information was very important for the local government and institutes of higher education in south Texas in planning the education for the future workforce.

Observation 2: Potential for future workforce development

Both the cities studied during this research have younger population than their respective national median ages. This means that these cities are poised to be in forefront for future workforce. From the economic development agency perspective, younger population means an opportunity for providing training and development to create new workforce. On the other hand from the industry perspective, younger population means larger workforce for the next 20-25 years.
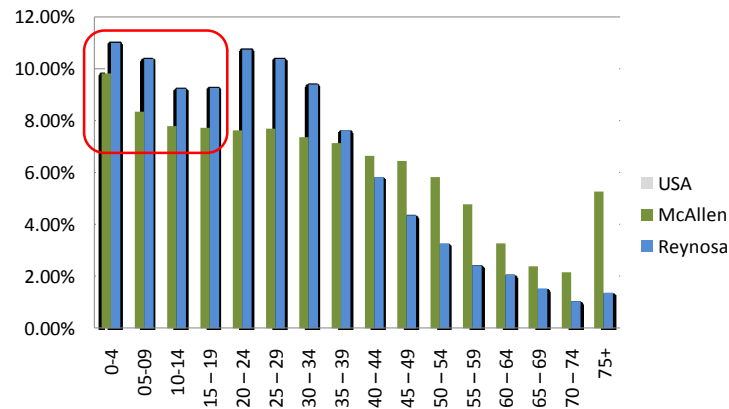
Figure 9: Age distribution- McAllen, Reynosa, and USA [19]

Observation 3: Operations and maintenance cost to run a business in the two cities

One of the decision criteria for locating a manufacturing facility is the potential operations and maintenance cost. The primary drivers of this cost are labor and utility. Table 4 presents a comparative analysis of Reynosa and McAllen with respect to the costs of labor and utilities for two different industrial scenarios. It shows that the costs of utilities are cheaper in McAllen than those in Reynosa but the Mexican city has an advantage over its Texan counterpart in labor wages. To put this information in perspective, Reynosa is a better choice than McAllen for labor intensive operations (expected total costs: $9.7 mill/year versus $16.4 mill/year). On the other hand, McAllen offers an excellent opportunity compared to Reynosa (expected total costs: $8.9 mill/year versus $12.7 mill/year) for an automated facility to lower its operations costs through cheaper utilities.

Table 4: Average labor & utility costs- Reynosa and McAllen

	# Employees	MW*hr/year	Location	Cost / Year+
Company A is Labor-Intensive	600	2,400	McAllen MSA	$16.4 Million
			Reynosa	$9.7 Million
Company B is Highly Automated	300	6,000	McAllen MSA	$8.9 Million
			Reynosa	$12.7 Million

Category	Reynosa	McAllen MSA
Salary in manufacturing (per year)	$7,060*	$26,000
Electricity (per kW*hr)	$1.42	$0.09
Water (per m^3)	$2.00	$0.48
Sewer (per m^3)	$0.68	$0.26

*Converted from Pesos at rate of 11.29 Pesos/USD   +Assumes equal water and sewer consumption

CONCLUSIONS

Texas A&M University's Global Manufacturing & Distribution Research Initiative has been conducting a research on how global manufacturing and distribution throughput can be increased in the T-MEX trade corridor. This paper has presented a framework for comparative study of industry & workforce constructs with respect to factors such as demographic statistics, existing and emerging industry clusters, and availability of logistic infrastructure. Two cities (one each in Mexico and Texas) have been analyzed to demonstrate the proposed framework. Sample observations and how those could be used as business intelligence in decision making was explained. The finding of this research was expected to help both the government and industry in making their important business or investment decisions. In future, this information will be integrated into more comprehensive analytical models that are being developed for selecting warehousing locations and assessing market potential in the region.

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Texas Workforce Commission URL: http://www.twc.state.tx.us/

McAllen Economic Development Corporation, URL: http://www.medc.org/

U.S. Census Bureau, URL: http://www.census.gov/

UTILIZING THE UNDERGRADUATE MARKET RESEARCH COURSE TO TEACH, PUBLISH AND SERVE: A METHOD OF CREATING VALUE FOR STUDENTS, THE PROFESSOR, AND THE SCHOOL

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ABSTRACT

Marketing educators typically operate in an environment that demands that they contribute to their institutions in three critical areas: teaching, publishing and service. This paper provides a framework by which the undergraduate marketing research professor can meet all three of these demands through a single pedagogical approach. By making relatively simple modifications to the preparation and administration of the market research class, the professor can provide students with a more instructive and enjoyable learning experience, provide a valuable service to their institution (and get credit for it), and publish the findings of the entire endeavor.

THE INFLUENCE OF INTERNAL RELATIONSHIP QUALITY ON EXTERNAL RELATIONSHIP QUALITY AND COMPANY PERFORMANCE

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EXTENDED ABSTRACT

"Large, vertically integrated hierarchies are an inefficient means of governance in knowledge-rich and turbulent environments"(Achrol and Kotler 1999, p.417). Relationships have become the prevalent paradigm for firms across industries as a means to profitability. Research has supported the positive effect of external relationship practice on organizational performance (De Wulf et al. 2001; Palmatier et al. 2006; Palmatier et al. 2007) as well as examined the role of the internal relationship as cross-functional coordination, interaction, collaboration, or integration (Griffin and Hauser 1996; Kahn 1996; Ruekert and Walker Jr 1987; Song et al. 1997). However, there is still little research addressing the internal relationship from the network perspective, which takes into account both structural and behavioral aspects of internal networks and the interaction between internal and external actors. This study proposes a model to fill this void in the literature.

In this study we develop a conceptual model of internal and external relationship quality, and their effects on firm performance. The Resource Based View (Barney 1991; Wernerfelt 1984) and Dynamic Capabilities view of organizations (Teece, Pisano, and Shuen 1997) suggest that resources and resource development are the keys to build and maintain competitive advantage. As a result, to establish the influence of internal relationships on external relationship marketing effectiveness, the critical factor is the ability to deploy relationship-based resources acquired and developed internally. These internal positive relational behaviors should also positively affect external relationships since people tend to be consistent in their attitudes and beliefs from person to person.

In the literature on relationship marketing, relationship quality is defined as the strength of the relationship between selling and buying partners. We similarly define internal relationship quality as the strength of the relationship between providing department or functional unit and receiving department or functional unit. Between a firm and its employees, the firm's internal marketing practices substantially effect creation of resources and business performance (Ahmed, Rafiq, and Saad 2003).

We also propose that the two primary relationships are moderated by the degree of market dynamism, top management involvement, and organizational interaction. Specifically, in the theory of dynamic capability, market dynamism is an important variable that helps emphasize the role of dynamic capabilities. Highly dynamic markets require higher speed of competence development. Top management involvement in the establishment of relationship quality as an organizational culture is another moderator of the focal relationship. A relationship-oriented

culture would motivate employees, functional departments, and business units focusing more on collaborating opportunities to develop competences. From a structural perspective, the degree and nature of interaction among internal actors are also important for shaping internal relationships. In this study, the degrees of formalization, centralization, and departmentalization of the organizational systems are the key concerns. Finally, we follow the dynamic capabilities theory to examine the firm's adaptive capabilities, absorptive capacity, and innovative capability moderating effect on the link between external relationship quality and performance.

If the relationships among the constructs in the proposed model of internal to external relationship marketing hold, managers should build into their personnel strategies training time to motivate the appropriate internal relationship indicators that reflect internal relationship quality. To enhance these relationships, top management needs to be involved and must make sure that the necessary systems are in place for appropriate levels of formalization, centralization, and departmentalization.

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SEGMENTING THE GLOBAL MARKET USING TWO VALUE TYPOLOGIES

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EXTENDED ABSTRACT

Developing global marketing intelligence is not an easy task but is increasingly becoming a necessity if a business is to survive in the long run. Global marketing intelligence always involves understanding variations among countries in terms of the economic, political and cultural environment   but considering the more than 200 countries in the world this can be a daunting task. In addition, these environmental variables are never constant but change quite rapidly and companies dealing with overseas business must be ready to anticipate and react to them. This study proposes a framework that attempts to develop global marketing intelligence by combining Hofstede's cultural value dimensions and Inglehart-Welzel's world value dimensions. Specific research objectives are as follows. First, the study attempted to determine the relationship the two dimensions traditional/secular-rational values (TSRV) and survival/self expression values (SSEV) introduced by Inglehart and Welzel (2005) have with key economic indicators such as gross national income per capita as a measure of richness (GNI/p), percentage of people below poverty (PPBP), economic freedom (EF), as well as risk indicators such as country risk (CR), small-scale high frequency risks as measured by opacity rating (OR), and level of transparency measured by corruption perception score (CPI). For comparative purposes, the relationship that Hofstede's five value dimensions has with the two value variables TSRV and SSEV is also investigated. Second, the study compared and contrasted the eight distinct country segments identified by Inglehart and Welzel (2005) using economic (GNI/p, PPBP, EF) and risk variables (CR, OR, and CPI) as well as the five cultural value dimensions introduced by Hofstede (2001). This provided an easy way to compare different country segments that include 87 countries and almost 85% of the world's population based on important environmental variables such as economic, risks, and social-cultural values.

Data for this study came from various secondary data sources that were freely available. Findings are meaningful,   in terms of developing global marketing intelligence, segmenting global markets, and marketing strategy.

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STUDENT SATISFACTION WITH ONLINE CLASSROOM EXPERIENCE: INTERACTIVE EFFECTS OF STUDENT, INSTRUCTOR, AND TECHNOLOGY

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EXTENDED ABSTRACT

The learning experience that determines student satisfaction involves the sum of all interactions students will have with the instructor, learning the material, and with other students. In a traditional classroom setting, as long as the instructor is competent (both in knowledge and delivery) and the student is well prepared, the learning experience for the student will be more often than not a positive one. However, when education is provided at a distance in cyberspace, the technology that is used plays a major role. The instructor, the student, and the technology have to work in unison so that the experience for the student is seamless. If not, the experience for the student will suffer. The focus of this study was to investigate the role that these three interactions have on the learning experience among college students taking online courses.

Hurt, Scott, and McCroskey (1978) defined power in the classroom as a "teacher's ability to affect in some way the student's well-being beyond the student's own control. (p. 124)." While several different frameworks or typologies of power exist, the most influential and often used in research is that by French and Raven (1959). They identified five potential bases of power: referent, expert, legitimate, reward, and coercive. This study will focus only on two of the five power bases, student perception of instructor's referent and expert power. Nonis, Hunt, and Hudson (2009) have reported expert and referent power to positively relate with student satisfaction. What students bring to the classroom measured as personal variables such as self-efficacy, motivation, level of maturity such as age, and level of meta-cognition impact student learning in both traditional and online delivery mediums. Of these variables, self-efficacy beliefs, a student's belief in his or her ability to carry out actions to reach the desired academic goals, is one variable that has been consistently reported to correlate positively with student satisfaction in online delivery mediums (Nonis, Hunt, Hudson, 2009). The reality in an online classroom setting is that if a student doesn't use the technology, he or she will not be able to participate in the class (e.g., usefulness of the technology in an online course is obvious). In this study we focus on ease of technology use as it relates to satisfaction with an online classroom experience. From an educational point of view, no matter how sophisticated or powerful the available technology platform is, if a student doesn't find the platform to be easy to use, the ultimate learning experience will suffer. Literature focusing on self-service technology relating to online shopping has also shown ease of use to significantly relate with customer satisfaction (Wolfinbarger and Gilly, 2001).

H1: The three-way interaction between perceived instructor power, student self-efficacy, and ease of technology use will positively influence student satisfaction with an online classroom

experience. While satisfaction with an online classroom will be higher for those who perceived high instructor power, high student self-efficacy, and high ease of technology use, satisfaction with an online classroom will be lower for those who perceive low instructor power, student self-efficacy, and ease of technology use.

When testing the above hypotheses, an attempt was made to control for technology anxiety and number of online courses a student had completed to date. Data for the study was collected from undergraduate business students in a medium size AACSB accredited university in the mid-south. The total sample for the study consisted of 109 students. The survey consisted of items that measured student perception of instructor's power that included both referent and expert power, ease of technology use, self-efficacy, satisfaction with the online classroom experience, technology anxiety, and number of online courses taken to date. The power measure was derived by taking the average for 10 items that measured instructor's referent and expert power. All measures demonstrated acceptable reliability coefficients as per Nunnally (1978). Prior to running the test, to create high and low group independent variables, the median values for perception of instructor power, self-efficacy, and ease of technology use was employed.

ANCOVA analysis did not support the hypothesis at the 0.05 level of significant but would have supported it at the less restricted 0.10 level of significance. Mean differences show all averages to be in the expected direction. When students perceived high instructor power, self-efficacy, and ease of technology, satisfaction with the online classroom experience was much higher (mean=9.89) than when students perceived low instructor power, self-efficacy, and easy of technology use (mean=6.85).

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MARKETING OHIO'S UNIVERSITIES TO GLOBAL TALENT: CURRENT PERCEPTIONS AND FUTURE POSSIBILITIES

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EXTENDED ABSTRACT

As part of Ohio's Strategic Plan for Higher Education, state policymakers have made it a goal to increase international student enrollment and to globally promote the state's public university system. Yet little is known about the present perceptions of the two groups who will be most directly impacted, 1) international students and 2) domestic students presently attending one of Ohio's eight public universities. Understanding the perceptions of international students is crucial to developing a strong marketing plan in the face of increasing competition from universities worldwide. The views of domestic students are also important as stakeholders who will help shape the experiences of international students, and whose support of public policy in this area is critical as well.

This exploratory study investigates international and domestic student perceptions in the three categories of

1) Public policy
2) Diversity
3) Globalization and economic opportunity in Ohio.

The three research issues relating to public policy dealt with the issue of how domestic students perceived the economic impact of international students on Ohio's economy, specific policy actions towards international students, and some common arguments for and against international students and immigrants. The three hypotheses relating to perceptions of diversity compare how domestic and international students view diversity in general, how they perceive Ohioans view diversity, and how welcome international students feel in Ohio. The five hypotheses related to economic opportunity in Ohio compare how international students and non international students view economic opportunity, globalization, and the economic future of Ohio.

Data were collected using a sample of more than 800 students at a major Ohio four year public university through an online survey. Responses were analyzed using one sample t-tests, independent samples t-tests, and paired samples t-tests for means. Students self classified themselves as either domestic or international students. For the purpose of this study, "international students" defined themselves as current or former international students, including those who are currently permanent residents or citizens but were not in the past. "Domestic students" were defined as strictly those who have never considered themselves to be international students.

The results suggest that domestic students are concerned about Ohio's economic future, have a generally positive perception of the economic benefits of international students, and support policies to increase international student enrollment. Domestic students had a largely pessimistic view of economic opportunities and the effect of globalization currently in Ohio. At the same time, domestic students had an optimistic outlook towards the future and agreed that globalization has the potential to create economic opportunities in Ohio. These results suggest that despite current economic challenges in Ohio, some of which are attributed to globalization, domestic students would embrace policies to create economic opportunities by further globalizing the state. While International students have a generally positive perception of their experiences in Ohio, most do not plan to stay in Ohio after graduation. International students have strong positive feelings towards diversity, and also feels that most Ohioan's value diversity. These sentiments suggest that a global marketing plan for the University System of Ohio that includes references to diversity, the welcoming nature of Ohioan's, and the state's globalized higher education system would be well received by international students.

Through an understanding of the current perceptions of the domestic and international student body, this study provides guidance to help Ohio policy makers better position Ohio in the global marketplace for higher education. In addition, this study also offers public opinion insight to Ohio leaders as they assess potential policy changes to increase the international student enrollment in Ohio public institutions.

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ECONOMIC IMPACTS ON AUTOMOTIVE CONSUMPTION BEHAVIOR: A POST-THEN COMPARISON OF CONSUMER PERCEPTIONS

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EXTENDED ABSTRACT

In any business, it is important to know how consumers change their behaviors when they feel pressured in by the economy. Economists have estimated that the current recession started in October of 2007 and that we are still in that state of recession. Companies are facing critical decisions on marketing spending (Kotler and Caslione 2009).

Perhaps more than before, businesses need to attract and retain customers (Ulin 2009). To do so, companies need a clear understanding of their consumers' perceptions, attitudes and beliefs. Consumers typically change their consumption patterns and reduce spending during a recession (Kotler and Caslione 2009). Goods perceived as luxuries suffer and bargains thrive. When drastic changes in purchasing habits are made, businesses can be hurt from it. Stengel and Caplan (2009) report on a "responsibility revolution" where consumers invest in a social responsible way and purchase "fuel-efficient cars."

The automotive industry has been hit by changes in the economy. Automotive sales are suffering in this economy, with major manufacturers experiencing reduced sales. Some US companies have experience drops of more than 40 percent, including General Motors and Chrysler (Dolan and Bennett 2009). Import sales have suffered as well. Honda sales are off by 20 percent and Toyota sales are down by 13 percent (Dolan and Bennett 2009). Rolls-Royce has experienced a 34 percent drop in sales for the first half of 2009 (Fuhrmans 2009).

Automotive companies need useful information to guide sales strategies, manufacturing, and advertising. The purpose of this research is to measure consumers' perceptions of their own behavior and how they perceive that behavior has changed as a result of the recession. Using a post-then technique, this study sheds light on changes in the use of the Internet, purchase vs. lease, price expectations, features and benefits sought and purchase frequency. Managerial implications are provided.

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STUDY ABROAD PROGRAMS: A COMPARATIVE STUDY

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EXTENDED ABSTRACT

Most colleges and universities offer study abroad opportunities. These opportunities are offered in an array of formats and locations from relatively short, week-long, faculty-led summer programs to year-long immersion programs. One study indicated that participation in these types of programs has more than doubled in the past decade (Clarke et al 2009). Clearly universities, administrators, parents and students believe in the study abroad experience.

Education and travel research is often focused on motivations, increasing participation in study abroad programs and curriculum concerns (Andrews and Henze 2009, Caton and Santos 2009, Relyea, Cocchiara and Studdard 2008, Wardrope et al 2009). For example, Caton and Santos (2009) looked at ways to market a "semester at sea." Accreditation expectations have increased accountability for program effectiveness. Some pedagogical studies have examined measurement issues for assurance of learning on program goals for study abroad programs (Rexeisen and Al-Khatib 2009)

Anecdotal reports on the effectiveness of study abroad abound, but there has been limited empirical research that has been conducted on the outcome of these programs. The limited research has typically focused on longer programs, such as semester long programs. One such study examined the increased intercultural proficiency of students in semester long study abroad programs (Clarke et al 2009). These studies have almost exclusively utilized measures of cultural sensitivity (Clarke et al 2009, Tuleja 2008). These studies support the anecdotal evidence that students who spend extended time abroad are generally statistically more cultural sensitive and aware than students who have not studied abroad. Unfortunately, the results from these studies leave some questions unanswered.

Previous research has indicated that students returning from long study abroad experiences are typically more sensitive than students who have not studied abroad. It is unclear, however, if students who want to study abroad are simply more open to differences in culture than student who do not want to study abroad. Are these differences a result of experience or self-selection?

Furthermore, despite the popularity of faculty-led summer study abroad programs, almost no research has focused on these types of programs. Are summer programs, taught by faculty from the student's home university effective? Are there differences in the outcomes of students who participate in faculty-led programs and those who participate in independent semester long programs?

This study compares three groups of students, students who have returned from a long study abroad experience, students who have returned from a faculty-led summer study

experience and students who do not want to study abroad. The results from this study provide insight into the effectiveness of faculty-led summer study abroad experiences. Additionally, this study offers a deeper understanding of the differences between students who chose to study abroad and those who do not. Administrative and curriculum implications are provided.

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GLOBAL BRANDS IN CENTRAL AND EASTERN EUROPE: A COMPARISON OF HUNGARIAN AND BULGARIAN CONSUMERS

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ABSTRACT

This paper uses 12 global brands to explore the differences between Hungarian and Bulgarian consumers in terms of their familiarity with, liking of, trust in and possible purchase of a global brand. Regression models were built for all 12 brands in both countries to test for significant differences between Hungarian and Bulgarian consumers. The 26 models presented indicate that for Hungarian consumers liking was the strongest determinant of purchase intention. In contrast, Bulgarian consumers stated that trust was a strong determinant in their global brand purchase decisions. Managerial implications of these findings are also discussed.

INTRODUCTION

The fall of the Berlin Wall in 1989 produced significant changes in the geo-political as well as the marketing landscape of Central and Eastern Europe (CEE). As is often noted, longstanding pent-up demand for Western goods characterized most CEE countries post-1989: "The economic opening of the region was followed by an influx of Western multinational corporations (MNCs), which flooded the markets with their international brands and products and introduced Western marketing methods" (Schuh & Holzmuller, 2003, p. 176). Coca Cola Corporation provides insight into the region's ongoing vitality; Coca Cola now refers to the countries of Central and Eastern Europe as "fast developing economies" rather than the more traditional "transitional economies" (Purg, 2009).

The research findings reported in this paper look at two countries in Central and Eastern Europe, Hungary and Bulgaria, through the lens of global brands. Hungary and Bulgaria were selected as countries of interest because they represent different stages of economic development. Manrai et al. (2001) describe the different rates at which countries developed free markets as "leading to a three-speed Eastern Europe" (p. 271). Countries in CEE can be categorized as either leading, following or lagging one another in terms of total GDP and market openness. In this three-speed Eastern Europe, Hungary is a leader, while Bulgaria is a laggard.

This research presented 12 global brands to consumers in Hungary and Bulgaria and asked them to evaluate each brand in terms of their familiarity with, their liking of, their trust in and possibility of purchase. Regression models were built for all 12 brands in both countries to test for significant differences between Hungarian and Bulgarian consumers. The 26 models presented in this paper indicate that there were some significant differences between Hungarian and Bulgarian consumers in terms of their liking and trust in global brands.

Global Brands

Recently, scholars have begun to conceptual global brands as having two, interrelated facets. Global brands can be defined from both a consumer as well as a supplier perspective. Roberts and Cayla (2009) note that "definitions of global brands are mostly supply side" (p. 350). They assert that a brand's globalness is defined in terms of number of markets served, size of markets served and the extent to which the brand shares consistent technical specifications across these markets. This parallels the traditional definition of a global brand is "the worldwide use of name, term, sign, symbol (visual and/or auditory), design or combination therefore intended to identify goods or services of one seller and to differentiate them from those of competitors" (Cateora & Graham, 2007 p. 360). As Roberts and Cayla (2009) also note, a consumer-centric view of global brands (that is, the process by which consumers categorize brands as "global") is still underdeveloped in the literature. Steenkamp, Batra and Alden (2003) are very clear that "a brand benefits from consumer perceptions that it is 'global'…only if consumers believe the brand is marketed in multiple countries and is generally recognized as global in these countries" (p. 54).

Rosenbloom and Haefner (2009) have also analyzed global brand definitions from both producer and consumer perspectives. Rosenbloom and Haefner's (2009) analysis highlights only one global brand definition that integrates both consumer and producer orientations: A global brand is defined as "the multi-market reach of products that are perceived as the same by both consumers and internal constituents" (Johansson and Ronkainen, 2005, p. 340). The approach used in this research follows Steenkamp, Batra and Alden's (2003) perceived brand globalness. If a survey respondent in Hungary or Bulgaria thought a brand was global, then it was.

Hierarchical Model

Marketing is replete with a number of hierarchical models. AIDA and Lavidge-Steiner Model (1961) acknowledge that consumer decision making is almost never a simplistic, autonomic stimulus-response (Kardes, 2002). Consumer information processing is often sequential, in which one, internal psychological process is a necessary precursor for the next higher order psychological process. The model proposed here and as outlined in Figure 1 follows a similar conceptualization.

Figure 1. Hierarchical Model of Familiarity-Liking-Trust-Purchase Intent
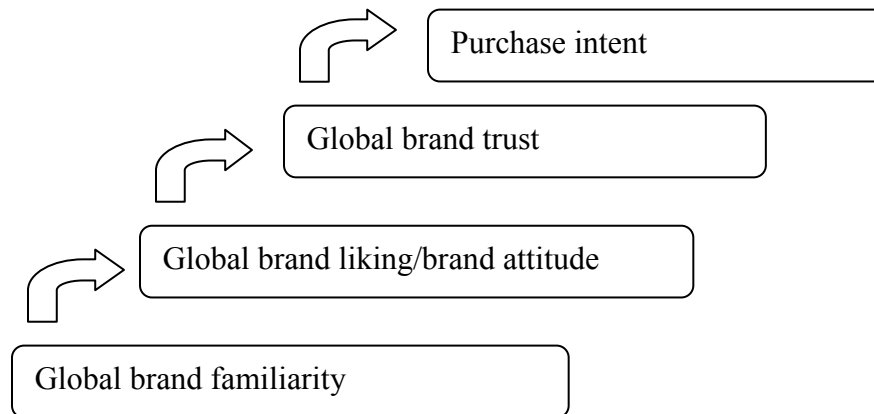
Brand familiarity. This model hypothesizes that global brand familiarity is the foundational activity. Consumers must have some understanding, recognition or knowledge of the brand a necessary but not sufficient antecedent to liking, trust and ultimate purchase. This hypothesis conforms to existing research. Heckler & Childers (1992), Kent & Allen (1994) and Low & Lamb (2000) have all found that consumers who are familiar with a brand have more elaborate, sophisticated brand schemas stored in memory than consumers who are unfamiliar with the brand. Research also has demonstrated that brand familiarity yields more favorable brand evaluation (Janiszewski, 1993; Holden & Vanhuele, 1999). Increased brand familiarity means that consumers will process advertising messages quicker and with less effort because they already "know things" about the brand (Chattopadhyay, 1998). "Brands with higher levels of familiarity generally enjoy higher levels of preference among customers" (Lee & Lee, 2007, p. 2).

Brand Liking. As de Houwer (2008) has recently said, "A core assumption in marketing research is that consumers tend to buy brands and products that they like" (p. 151). While intuitively attractive, brand liking is an underdeveloped area of market research. Few rigorous studies of the construct exist. Hence, definitional clarity is also limited. Boutie (1994) does, however, point the way with the following: Brand liking "seeks to build consumers' positive attitude toward a brand based on the belief that it cares about them (or addresses them) as individuals" (p. 4). In part, this research attempts to validate the role of brand liking and hence to confirm or disconfirm its importance in leading to global brand purchase intent.

Brand Trust. In contrast to brand liking, brand trust is a well-research marketing construct. Delgado-Ballester, Munuera-Aleman and Yague-Guillen (2003) define brand trust as "the confident expectations of the brand's reliability and intentions in situations entailing risk to the consumer" (p. 37). As such, brand trust is one, logical outcome of brand familiarity and brand liking. Both brand familiarity and brand liking seem necessary preconditions for trust. It seems unlikely that brand trust could be built if consumers were unfamiliar with or disliked the brand. Delgado-Ballester and Munuera-Aleman (2001) underline the central role of brand trust as a variable that generates customer commitment and purchase. Researchers have also linked brand

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trust with brand loyalty (Lau & Lee, 1999), increased market share and advertising efficiency (Chatterjee & Chaudhuri, 2005) as well as brand equity (Ambler, 1997).

Recently, Romaniuk and Bogomolova (2005) have studied whether brands varied in terms of trust. Their research sampled consumers living in the United Kingdom and Australia and controlled for brand size effects in the trust scores of 110 local brands in 13 markets. They found little variation in brand trust scores when controlling for market share. Romaniuk and Bogomolova (2005) conclude that "trust is more like a 'hygiene' factor in that all brands have to have a certain level of trust to be competitive in the market" p. 371). This finding makes sense given the market similarities of the United Kingdom and Australia. It is worth wondering, though, whether a similar convergence of brand trust exists in consumers from countries in substantially different stages of economic development, such as Hungary and Bulgaria. This research is, in part, an attempt to find out.

Purchase intent. Brand purchase intent is the highest construct in this model and supports the common marketing focus on sales. Extensive consumer research exists that confirms that asking consumers about their behavioral intentions is a stronger predictor of actual behavior than directly asking consumers whether they will or will not buy a product or service (Ajzen & Fishebin, 1980; Kardes, 2002). Rossiter and Percy (1997) define brand purchase intent as the "buyer's 'self-instruction' to purchase the brand, or take purchase-related action" (p. 126). This research hypothesizes that purchase intent for global brands is developed after consumers have accumulated information about the brand (i.e., they are familiar with the global brand), and after they have liking towards and trust in the global brand. Purchase intent, being the highest level construct, is one outcome predicated on the preceding processes.

RESEARCH OBJECTIVES AND METHODOLOGY

This research had two objectives: (1) To test the predictive power of the hierarchical model in terms of purchase intent (see Figure 1), and (2) To determine whether consumers in Hungary and Bulgaria, when presented with the same set of 12 global brands, differed in their familiarity with, liking of and trust in these global brands. The global brands chosen were: Adidas, Gucci, H & M, LG, Nivea, Nokia, Panasonic, Philips, Puma, Samsung, Sony and Vodafone. Brands were selected based on known availability in both countries. All 12 brands were chosen because of their known availability in both countries. Websites as well as personal information confirmed the presence of all brands. The research was conducted in Hungary and Bulgaria from the middle of 2008 through the beginning of 2009.

The questionnaire was straightforward. All 12 brands were presented to each respondent. Respondents were asked to rate each brand in terms of their familiarity with, liking of, trust in and likelihood of purchase if the respondent was able to do so. Seven point Likert scales were presented for all constructs. Thus, the scale for global brand familiarity ranged from "not at all familiar" to "very familiar" on a 7-point scale. Liking the global brand ranged from "like nothing about the brand" to "like everything about the brand" on a 7-point scale. Global brand trust was scaled "no trust at all" to "total trust." Finally, likelihood to purchase was a 7- point scale that ranged from "never purchase" to "always purchase" -- "if you were able." Basic demographic information (age, gender, highest level of education) was also collected. The questionnaire was

pre-tested and was found to be reliable. The questionnaire was electronically posted on an online survey website. This was done to facilitate both data collection and data analysis. Respondents, however, were recruited using local universities and personal relationships in both countries. Budapest and Sophia served as the locations for recruiting respondents. None of the respondents had a personal relation with the authors.

Table 1 presents the sample characteristics.

Table 1. Sample Characteristics				
Demographic	Bulgarian (%)	Frequency	Hungarian (%)	Frequency
Gender: Male	40.8	53	47.8	97
Female	59.2	77	52.2	106
Age: 16-20	28.5	37	15.3	31
21-25	30.0	39	44.3	90
26-30	16.9	22	16.3	33
31-35	12.3	16	8.4	17
36-45	9.2	12	7.4	15
Over 46	3.1	4	8.4	17
Education: High school/some college	41.9	49	71.0	132
Completed University	31.6	37	18.3	34
Graduate work	26.5	31	10.8	20

Note. Bulgarian (n=130) Hungarian (n=203)

The Bulgarian sample was almost 60% female, while the Hungarian sample had 52% female. The age distribution between the two groups had higher representation of 21-25 years olds from Hungary, while the sample of Bulgarian respondents had a higher representation of 16-20 year olds. However, if the first two age categories are combined (to make a composite 16-25 age cohort), the samples become quite similar. A much greater percentage of Bulgarian respondents had completed university (31.6%) compared to only 18.3% of the Hungarian respondents.

Global Brand Differences

The paper turns next to mean score comparisons between Bulgarian and Hungarian respondents on each construct in the hierarchical model: brand familiarity, brand liking, brand trust and brand purchase intent. Table 2 presents the striking difference between Bulgarian consumers and Hungarian consumers in terms of brand familiarity. The Bulgarian respondents indicated a greater familiarity with 11 of the 12 brands. There was no difference found between the groups for only one brand, H & M. Nokia was almost universally known by every Bulgarian

respondent (mean score = 6.74); and while Nokia was also the most familiar brand for Hungarian respondents, it was significantly less familiar to the Hungarian sample than for Bulgarians.

Table 2. Global Brand Familiarity			
	Means		
Brand	Bulgarians	Hungarians	Significance
Adidas	6.05	5.40	.00
Gucci	5.15	3.38	.00
H & M	3.68	3.75	.77
LG	5.54	4.73	.00
Nivea	6.13	5.23	.00
Nokia	6.74	5.59	.00
Panasonic	5.85	4.92	.00
Phillips	5.76	4.99	.00
Puma	5.76	4.99	.00
Samsung	6.04	5.25	.00
Sony	6.16	5.16	.00
Vodafone	4.99	4.73	.23

Note. A univariate ANOVA was used to assess the significance between means. Items were on a seven point scale with 1 being "not familiar at all" and 7 being "very familiar."

Bulgarian respondents indicated a greater liking for the following eight brands than did Hungarian respondents: Adidas, Gucci, LG, Motorola, Nokia, Panasonic, Phillips, Puma, and Sony (See Table 3). There were no differences in liking scores for four brands: H & M, Nivea, Samsung, and Sony.

Table 3. Global Brand Liking			
	Means		
Brand	Bulgarians	Hungarians	Significance
Adidas	5.83	5.29	.00
Gucci	5.23	3.99	.00
H & M	4.31	4.17	.55
LG	4.91	4.52	.03
Nivea	5.50	5.23	.13
Nokia	6.23	5.49	.00
Panasonic	5.52	4.73	.00
Phillips	5.28	4.89	.02
Puma	5.63	5.15	.00
Samsung	5.31	5.10	.22
Sony	5.79	5.21	.00
Vodafone	4.47	4.24	.31

Note. A univariate ANOVA was used to assess the significance between means. Items were on a seven point scale with 1 being "like nothing about the brand" and 7 being "like everything about the brand."

In terms of their level of global brand trust, this sample of Bulgarian consumers was more trusting of seven brands: Adidas, Gucci, LG, Nokia, Panasonic, Puma, and Sony (See Table 4). For five brands, there were no differences between the two groups: H & M, Nivea, Phillips, Samsung, and Vodafone.

Table 4. Global Brand Trust			
	Means		
Brand	Bulgarians	Hungarians	Significance
Adidas	6.10	5.57	.00
Gucci	5.45	4.61	.00
H & M	4.45	4.41	.87
LG	5.09	4.59	.00
Nivea	5.64	5.41	.17
Nokia	6.39	5.70	.00
Panasonic	5.56	5.07	.00
Phillips	5.39	5.14	.14
Puma	5.60	5.24	.03
Samsung	5.43	5.25	.30
Sony	5.89	5.43	.00
Vodaphone	4.70	4.45	.23

Note. A univariate ANOVA was used to assess the significance between means. Items were on a seven point scale with 1 being "no trust at all" and 7 being "total trust."

Lastly, in terms of likelihood of brand purchase, Bulgarian respondents were more likely to purchase nine brands: Adidas, Gucci, LG, Nokia, Panasonic, Phillips, Puma, Sony, and Vodafone (See Table 5). There were no differences between Bulgarian and Hungarian consumers for three brands: H & M, Nivea, and Samsung.

A comparison of Tables 3, 4 and 5 reveals a consistent pattern for both Hungarian and Bulgarian consumers in terms of the top three global brands that were most liked, most trusted and had the highest probability of purchase. These brands were Nokia, Adidas and Sony, respectively. Given the relatively young age of both samples and the fact that all three brands are lifestyle brands, this ranking makes sense. What is unknown, though, is to what degree, if any, the constructs of global brand familiarity, global brand liking and global brand trust influence purchase intent of these global brands. The paper turns to this broader issue next.

Table 5. Likelihood of Global Brand Purchase			
	Means		
Brand	Bulgarians	Hungarians	Significance
Adidas	5.96	5.27	.00
Gucci	5.47	4.31	.00
H & M	4.58	4.15	.06
LG	4.80	4.43	.04
Nivea	5.46	5.23	.17
Nokia	6.32	5.42	.00
Panasonic	5.26	4.78	.00
Phillips	5.27	4.87	.01
Puma	5.55	5.15	.02
Samsung	5.33	5.10	.18
Sony	5.84	5.22	.00
Vodafone	4.47	3.97	.03

Note. A univariate ANOVA was used to assess the significance between means. Items were on a seven point scale with 1 being "never purchase" and 7 being "always purchase."

Predictive Ability of the Hierarchical Model

Separate stepwise multiple regressions were run for Bulgarian and Hungarian respondents for the twelve brands that were used in the study (See Tables 6 and 7). The dependent variable was likelihood of purchase of the brand while the independent variables included: (1) age (constructed as dummy variable), (2) education (constructed as a dummy variable), (3) gender (constructed as a dummy variable), (4) familiarity with the brand, (5) degree of trust of the brand, and (6) degree of liking the brand. The dummy variable for gender was assigned two variables, male and female. The dummy variable for education was divided into three variables, high school/some college, completed University, and graduate work. For age there were six variables, 16- 20 years, 21 to 25 years, 26 to 30 years, 31 to 35 years, 36 to 45 years, and over 46 years.

For Bulgarian respondents, 'liking" was the most important variable for seven of the 12 brands (Gucci, H & M, Panasonic, Phillips, Samsung, and Vodafone) analyzed (See Table 6).

Trust was the most important predictor for five brands (Adidas, Nivea, Nokia, Puma, and Sony). Familiarity was a significant predictor for only two brands, H & M and Panasonic.

For the demographics, age was the only significant predictor of likelihood of purchase.

Those 36-45 years were less likely to purchase Adidas than those over 46 years

Those 36-45 years were more likely to purchase Phillips than those over 46 years

Those 36-45 years were more likely to purchase Puma than those over 46 years

Those 36-45 years were more likely to purchase Samsung than those over 46 years

Those 16-20 years were more likely to purchase Vodafone than those 46 years and older.

Table 6. Bulgarian Respondent Regressions (Familiarity, Trust, Liking, Importance, Age, Education, and Gender Regressed Against Likelihood to Buy)								
	Model Summary				Coefficients (Standardized Betas)			
Model/Brand	F	Significance	R	Adjusted R^2	Variable(s)	t	Significance	Weight
Adidas	49.8	.00	.769	.592	Trust Liking 36-45 years	5.25 3.9 2.0	.00 .00 .02	.415 .341 .127
Gucci	46.7	.00	.697	.475	Liking Trust	5.0 4.5	.00 .00	.422 .382
H & M	54.6	.00	.772	.585	Liking Familiarity	6.3 2.8	.00 .00	.587 .261
LG	73.6	.00	.764	.576	Liking Trust	6.1 4.2	.00 .00	.497 .346
Nivea	38.4	.00	.661	.426	Trust Liking	3.0 3.5	.00 .00	.386 .329
Nokia	40.7	.00	.674	.443	Trust Liking	4.0 2.9	.00 .00	.420 .310
Panasonic	24.4	.00	.647	.401	Liking Trust Familiarity	3.4 2.1 2.0	.00 .05 .03	.358 .225 .181
Phillips	33.0	.00	.702	.478	Liking Trust 36-45 years	3.8 3.9 2.1	.00 .03 .03	.368 .318 .154
Puma	64.3	.00	.760	.569	Trust 36-45 years	11.2 2.7	.00 .00	.762 .186
Samsung	68.9	.00	.818	.660	Trust Liking 36-45 years	5.7 5.1 2.5	.00 .00 .01	.457 .415 .147
Sony	40.8	.00	.665	.432	Trust Liking	4.0 2.1	.00 .03	.455 .249
Vodafone	32.3	.00	.709	.487	Liking Trust 16-20 years	4.0 3.2 2.7	.00 .00 .00	.415 .337 .200

For Hungarian respondents, liking was the most important predictor of likelihood of purchase for all 12 brands (See Table 6). Trust was the second most important predictor for eight of the brands (Adidas, LG, Nivea, Panasonic, Puma, Samsung, Sony, and Vodafone). Familiarity was important for only two brands, Gucci and Phillips.

Reviewing the demographics for the Hungarian group, the following was found:

Women and those more than 20 years old were more likely to buy H & M.

For Nivea, those who had completed university work were less likely to buy Nivea than those who had a master's degree.

For Nokia, those 26-30 years old were less likely to buy than those over 46 years. Men were also more likely to purchase Nokia.

Lastly for Puma, those with high school/some college were more likely to purchase Puma than those who had completed graduate work.

Table 7. Hungarian Respondent Regressions (Familiarity, Trust, Liking, Importance, Age, education, and Gender Regressed Against Likelihood to Buy)								
Model/Brand	Model Summary				Coefficients (Standardized Betas)			
	F	Sig.	R	Adjusted R^2	Variable(s)	t	Sig.	Weight
Adidas	79.2	.00	.684	.463	Liking	7.8	.00	.509
					Trust	3.9	.00	.256
Gucci	26.1	.00	.512	.252	Liking	4.8	.00	.384
					Familiarity	2.6	.00	.211
H & M	60.07	.00	.751	.555	Liking	12.1	.00	.694
					Male	-2.5	.00	-.149
					16-20 y.	-2.1	.03	-.119
LG	93.0	.00	.719	.511	Liking	8.0	.00	.543
					Trust	3.6	.00	.243
Nivea	53.1	.00	.696	.475	Liking	5.1	.00	.386
					Trust	4.9	.00	.380
					Completed University	-2.0	.04	-.113
Nokia	82.4	.00	.768	.583	Liking	14.9	.00	.733
					26-30 y.	-2.6	.00	-.131
					Male	1.9	.04	.097
Panasonic	76.4	.00	.687	.466	Liking	6.5	.00	.458
					Trust	4.4	.00	.306
Phillips	53.4	.00	.617	.373	Liking	8.2	.00	.557
					Familiarity	2.3	.01	.155
Puma	45.3	.00	.665	.432	Liking	6.9	.00	.501
					Trust	2.7	.00	.200
					H.Ss/some college	2.3	.00	.136
Samsung	71.5	.00	.674	.448	Liking	9.1	.00	.585
					Trust	2.4	.01	.157
Sony	104.2	.00	.739	.541	Liking	10.6	.00	.655
					Trust	2.1	.00	.135
Vodafone	118.6	.00	.766	.582	Liking	7.7	.00	.543
					Trust	3.9	.00	.280

CONCLUSIONS

Overall, this new hierarchical model does a relatively good job of predicting purchase intent for some global brands. The adjusted coefficient of determination for the Bulgarian sample ranged from .660 (Samsung) to .401 (Panasonic). Similarly, adjusted coefficient of determinations for the Hungarian sample ranged from .583 (Nokia) to .252 (Gucci). The Gucci model was marginal in terms of variance explained.

An examination of the adjusted coefficient of determinations also indicated that there was no overfitting of the models (Hair, Black, Babin, Anderson,& Tatham, 2006). Using the rule of thumb that R^2s should be greater than .25 to be considered having reasonable predictive power. All the models are reasonably robust.

Liking and trust were important predictors for both Bulgarian and Hungarian respondents. Familiarity with the brand was unimportant for both groups across with a few exceptions. To borrow from Romaniuk and Bogomolova (2005) quoted above, perhaps global brand familiarity operates as a hygiene factor. All global brands must attain a certain level of familiarity for active consideration; otherwise they fall out of consumers' evoked sets. Familiarity may function more simply. Rather than be a truly continuous variable, familiarity may operate dichotomously. Either a consumer is or is not familiar with the global brand.

For the Hungarians, liking was the most heavily weighted predictor for all 12 brands. The standardized coefficients ranged from .733 for Nokia to .386 for Nivea. All coefficients were significant at $p \leq .01$. In contrast for Bulgarian respondents, liking was the most important predictor for 6 brands while trust was the most important predictor for 6 brands. The 6 liking coefficients ranged from .587 for H & M to .358 for Panasonic. For trust the 6 coefficients ranged from .762 for Puma to .386 for Nivea. All standardized coefficients for liking and trust for the Bulgarian sample were significant at $p \leq .05$.

Thus trust played a more significant role for Bulgarians than for Hungarians. For Bulgarians, whose GDP per capita is $12,900 (*CIA World Factbook*, 2009) as compared to Hungarians whose GDP per capita is $19, 800 (*CIA World Factbook*, 2009), trust may be a more important precursor of purchase factor because limited incomes create a greater perceived risk that mistakes could cause major damage to the family budget. Recent trade figures indicate substantial increases in Chinese imports in Bulgaria (Messerling & Wang, 2008). It is reasonable to hypothesize that counterfeit and shoddily-made Chinese products make Bulgarians careful, cautious consumers. Thus trusting the global brand name provides a degree of security for the Bulgarian consumer. Overall, there are some significant differences between Bulgarian and Hungarian consumers regarding the relative influence of global brand familiarity, global brand liking and global brand trust in purchase intent. As Central and Eastern European countries continue to provide global corporations and their brands with market opportunities, further study of within Europe comparisons are needed.

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SUPPLY CHAIN MANAGEMENT EDUCATION: INDUSTRY-UNIVERSITY COLLABORATIONS

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ABSTRACT

The United States has a growing number of colleges and universities are entering into collaborative relationships with industry. These collaborative relationships have resulted in successful outcomes for fields like science, engineering, and technology. University-Industry collaborative relationships are relatively new in the U.S., but there is evidence that suggests that European companies have been participating in these kinds of relationships since the 1800s, primarily in medical and science projects. Domestic and international companies, corporations, businesses, foundations, have discovered the wealth of innovative, research and development potential in such relationships. Industry-university collaboration is a new world vehicle for accomplishing the competitive advantage.

INTRODUCTION

The rapid growth of the global economy has engaged business and industry in a race to keep pace with or surpass their competition. No longer is a company's size and business history of an indicator of future success. Access to advanced technologies and communication tools has contributed to the leveling of the competitive playing fields. Trade agreements with China and Mexico are indicative of how the face of the competitive business world has changed. Businesses and industries around the world are engaging in collaborative partnerships designed to improve business processes, share technologies, and impact the business bottom-line. Once known primarily as tourist destinations in countries like Costa Rica and Argentina, Taiwan and Viet Nam are collaborating with leading businesses and in some cases, becoming direct competitors for world known business and industry leaders in Europe and the United States.

At a fall 2009 round-table meeting with leaders from the shipping and transportation industries in Houston, Texas, the participants were asked what their businesses and industries will need in the way of education in order to be competitive in the global market. To a company, respondents voiced their concern for the need for supply chain management education. These Texas industry leaders are concerned about the shrinking talent pool. They expressed a need for employees with a functioning knowledge of supply chain and the skills necessary to deal with the world-wide, highly competitive global supply chain marketplace. Conversations like the one in Houston underscore the importance of focusing on workforce development. Educating and training human capital is an integral ingredient in being prepared to meet domestic and global competition head-on.

"Shifts in the nature of business organizations and the growing importance of knowledge- based work also favor strong non-routine cognitive skills, such as

abstract reasoning, problem-solving, communication, and collaboration. Within this context, education and training become a continuous process throughout the life course involving training and retraining that continues well past initial entry into the labor market" (Karoly, 2004).

The need for training and education continues to emerge as a major ingredient for development in a strong economy. In November 2009, the Asian Development Bank (ADB) announced the approval of a $60 million student and project loan plan to support secondary education programs in Viet Nam. The plan was created to "reflect changing needs of the labor market and efforts to keep its economy competitive and robust" (Staff, 2009). Following the United States Senate's approval of the Recovery Act, Senator Harkin of Iowa commented; "…it (the Recovery Act) is helping to ensure we have a good education system that is preparing our student for quality jobs and helping us stay competitive in the global economy" (Cyrul, 2009). Education and training are globally significant issue in the supply chain world economic environment.

Along with the need for growing need for supply chain management education is the need to identify affordable methods for delivering quality education to the workforce is the challenge. A strongly viable approach to answering this challenge is addressed by developing industry-university collaborations and partnerships.

In the same way business-to-business partnerships have increased in recent years, industry-university collaborations are gaining in popularity. Industry-university partnerships are established based on the ability to bridge the gap between real-world business expectations, significant resources and potential for a long-lasting relationship and the development of the skills and knowledge necessary to compete. The education and training provided in these partnerships can be general or it can be customized to meet industry needs. It can be located at the job-site, remote facilities, in cyberspace, or at the university. The combined strength of industry-university collaborations puts both in position to lead the world in their respective areas of expertise.

These relationships have a true significance to the future success of business in that they are utilized the existing strengths of the partners and produce a competitive end product. Industry can contribute the business infrastructure, applicable technology and equipment, machinery, materials, experience specific to their business, leadership, and their workforce. Universities close the gap with intellectual capacity, research experience, innovative-cutting edge technology education, product, and other fundamental supply chain process education information. In addition to access to faculty resources and university facilities, there is a wealth of talented students who are eager to take advantage of the opportunity add real world work experience to their résumés. University educated students symbolize the next generation of problem solvers, managers, and leaders and the catalyst for successful competitive businesses, so their education and training must be accessible and top-notch.

Industry-University Education Collaborations

Industry-university collaborations can take shape in different ways and may focus on

supply chain management education and skills training or business process and innovation research. Industry-university collaborations (partnerships) have been an active option research and development (R&D) landscape in the United States since shortly after World War II. Understanding that universities house many of the best and most innovative minds in the world the U.S. government began formally contracting university faculty to assist with field research. Variations on collaborative agreements are designed to match the skill sets of the academic institution with the needs of the industry. A survey of approximately 400 companies involved in collaborative research joint ventures identified and ranked the following as reasons to engage in alliances:

- Access to new research
- Development of new products
- Maintaining a relationship with the university
- Obtaining new patents
- Solving technical problems (Lee Yong, 1996).

Another cited benefit's of industry-university collaborative ventures was the potential of the relationship to provide new resource funding. These funds can be used to purchase lab equipment, research assistance, insight into research and the ability and where-with-all to gain research knowledge.

Created by Congress in 1950, the National Science Foundation (NSF) is a major supporter and funder of research collaborations. The NSF is an independent federal agency whose mission is to "promote the progress of science; to advance the national health, prosperity, and welfare' to secure the national defense" (NSF, 2009). Strategic outcome goals for the NSF are categorized in four groups: *Discovery, Learning, Research Infrastructure,* and *Stewardship*. NSF uses funds to encourage industry-university collaborations with programs like the Engineering Research Center (ERC) Program. ERC's are interdisciplinary centers located on university campuses throughout the United States. ERC partners industry with universities to encourage pursuit of strategic engineering, science, and technology advantages (ERC, 2009). In 2009, the United States Federal government appropriated a $410 billion Omnibus bill FY09 budget. The NSF received $6.49 billion of these funds. $5,183.10 million was allocated to research and related activities and $845.26 million went to education and human resources (NSF, 2009). This funding represents a substantial funding source for the university and provide a healthy incentive for industry to enter collaborative partnerships.

A successful collaborative relationship is characterized by free flowing exchange of ideas, resources, and personal (see Figure 1). The competitive nature of the global market has brought universities around the world into the forefront of collaborative partnerships. The exchange of information, the flow of data and resources lead to solutions. Collaborative partnerships grant industry investiture into the fresh innovative minds of students supported by faculty and staff, and all for a relatively minor financial investment.
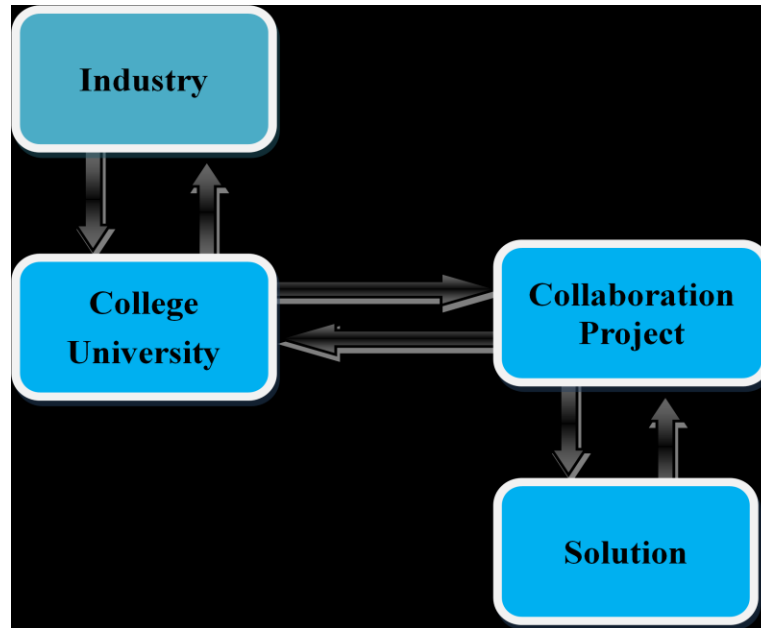
Figure 1: Flow of collaborative relationships

Universities are boundless resources for new innovations and research solutions. For example, at the *Intel Research Pittsburgh* lab on the campus of Carnegie Mellon University, industry lab group works along-side Carnegie Mellon students researching software prototypes. At Wichita State University (WSU) teams of students and faculty work with several aerospace companies in the *WSU Knowledge and learning in advance supply systems* (KLASS) program. KLASS offers customized supply chain related education and training for aerospace employees increasing the knowledge and advance their skills and enhancing their ability of be effective employees.

Finally, collaborating with industry is a creative approach to funding projects, advancing research, endowing students with the opportunity to acquire real-world experience, and into the universities to support research and students. Collaborative relationships are a win-win for everyone involved.

Modeling Collaborative Relationships

Research and funded projects are not the only collaborative relationships entered into by Industry-university partners. Accommodating the education and skills development needs of industry-workforce with degree completion, continuing education opportunities, and skills training is an important step in the direction of success. Customized, specialized education meets these needs of the business community and develops the skills of the workforce. Education and training are strong catalysts for competitive success. Identifying the ideal partner is vital for establishing a successful collaboration and delivering the right educational products and services. A 2005 survey of chief learning officers, listed the following five criteria attributed to a successful corporate (business, industry) and university partnership:
> 1. "Customization of learning, which may result in new accredited programs to fit industry needs

2. Innovation in designing, delivery and addition of new services for families of employees eligible for tuition assistance programs
3. Creating "hard" business metrics to justify continued support of tuition assistance programs
4. Flexibility in working with corporate partners with a focus on exploring of corporate training programs for possible college credit
5. The brand of the university and the quality and cost of the programs created for a corporate audience" (Meister, 2006).

Flexibility, creativity, customization, are hallmarks of a successful industry-university education partnership. Undergraduate and graduate degrees, on-site/after hour degree programs, certificate classes, extension education programs and weekend masters' degree programs are just a few of the possible offerings.

On-going education is one of the advantages of industry-university partnerships. In order to stay ahead of the competition, business leaders must be relentless in their search for new designs, new products, and improvement to existing products. Diligent efforts to educate the workforce to implement new processes and procedures and identify innovative solutions are important to staying ahead of the competition. Because education has such significance in the success equation, education related incentives are often a part of the benefits package available to company employees. Education benefits might include full or partical financial reimbursement, education release time and travel funding. Paying for; Bachlors, Masters, Masters of Business Administration (MBA), and Doctral (PhD) degrees are incentives for attracting the best and brightest employees. Non-degree and certificate programs are also inducements and motivators for the competitive business. Industry-university partnerships make good business sense as resources for delivering supply chain education in the workplace.

Partnerships can be a positive proposition for industry and universities. In the mid-1980's companies began moving away or at the very least, reducing the use of inhouse training and education departments. Traditional inhouse education and training is an expensive overhead expense however the there is an even greater cost associatied with not training. According to an article in Learnativity.com;

- Untrained users take up to six times longer to perform the same task.
- Training enhances employee retention. A Louis Harris and Associate Pool says that among employees who say their company offers poor or no training, 41% plan to leave within a year. Of those that say their company offers excellent training, only 12% say they plan to leave.
- Studies show that in-house training costs 73% more than outsourced training.
- A four-year study by the American Society of Training and Development shows that firms who invest $1500 per employee in training compared to those that spend $125, experience on average: 24% higher gross profit margins and 218% higher income per employee!
- Just a 2% increase in productivity has been shown to net a 100% return on investment is outsourced, instructor-lead training. (Conner, 2002)

Regardless of the proven value of well of maintaining well-educated employees, education and trainig were the first item cut from the budget. Turning to local academic

instituations was a simple soluciton to the problem. "Likewise, by working with regional-engaged universities, businesses are able to innovate more effectively, learn more quickly, and help produce better and more competitive products improving their competitive strength" (Arbo, P., 1999). Connecting with universities to deliver workforce education, training and skills development, is a win-win scenario for everyone.

In 1998, Dr. Tom Inch served as the Secretary General of the Royal Society of Chemist's (RSC). At a European Network for Chemistry (ENC) workshop Dr. Inch moderated a panel discussion concerning industry-university why some projects succeeded while others fail. Panel participants included Professor Fischili of Hoffmann-La Roche, pharmaceutical company headquartered in Basle, Switzerland, Dr. Reitz of BASF and Dr. te Nijenhuis from Gist Brocades (biotechnologies). Each of them shared a bit about the company's collaborations story and each had a different perspective to share. When asked why Hoffmann-La Roche considered collaborations, Professor Fischili's was the first to offer comments making the following information and observations about his company:

- In 1996/1997 Hoffmann-La Roche spent about 1.7 billion US$ in R&D monies of which approximately 70% was spend on development and the remaining 30% on research. 5-10% of the 'discovery' expenditure was spent outside the company (per company policy) however it was expected that this figure would grow in the future.
- Having assessed future activity in the pharmaceutical industry, Hoffmann-La Roche determined that there was a need to have 35-50 new projects per year to remain competitive.
- In order to respond to this growth activity they would need skilled individuals and/or they would have to outsource projects.
- Professor Fischili went on to discuss the role the university has played as a research partner for Hoffmann-La Roche and a bountiful resource for identifying individuals who can enter the workforce with existing knowledge and skills. Most importantly, the Hoffman-La Roche collaboration was successful because they were fully committed to making the program a success.

Dr. Reitz discussed the failure of BASF's industry focused collaborative program. The program at BASF because grossly over-subscribed to and woefully under supported by the company's management. BASF concluded that partners would not be willing to put forth the effort for a project that had 19 "failed" proposals. Failure to commit to the collaboration relationship doomed the program from the very start.

Dr. te Nijenhuis (Gist Brocades) approached the answer to the panel discussion from a different perspective. His concern was that there was a lack of research being conducted in the field of biotechnology research in universities. He was also talked extensively about the financial investment that would be necessary to stay support biotechnology research (ENC, 1998).

Both industry and academia have been changing how they do business and of approaching the relationship. There are benefits and issues associated with these collaborations, again, for both parties. Casey (2004) identifies the following as pressing issues:

- Increasing competition for grant and contract dollars by colleges, universities, hospitals and medical centers, and other entities seeking extramural funding.
- Regulatory compliance by colleges, universities, and hospitals and medical centers in a variety of areas (human subjects research, animal research and care, biosafety, conflict of interest, conflict of commitment, and misconduct in research.
- Financial cost accounting, compliance, and auditing.
- The relative decline of federal research and development (R&D) support coupled with the rise of corporate funding of R&D.
- Industry-university relationships, particularly with concern toward areas that are viewed as contentious (negotiation of research and intellectual property agreements) (Casey, 2004).

There are definite advantages associated with collaborations however there are distinct challenges. Infrastructure resources are necessary for collaborative success and well as a thorough grasp of supply chain management.

Successful universities-industry partners are more forthcoming in their willingness to share their collaborated accomplishments however, neither industry nor universities are interested in admitting that their collaboration was a failure so most related literature on partnership failures are anecdotal or anonymously reported. Problems with collaborations have symptoms like any other relationships that are going bad. According to Casey (2004), the most contentious issues are:

- Communication between universities and industry in the performing of particular projects, including their expectations and concerns.
- Long delays in completing contract negotiations for projects, which may also be a function of A., above, which may certainly lead to frustration and a loss of trust between parties.
- Negotiation of intellectual property and licensing issues, including issues of ownership, revenue streams, and licensing to third parties. In the experience of the author, negotiation of intellectual property and licensing provisions in research agreements or intellectual property agreements is the primary reason for the delays in completing contract negotiation, outlined in B., above.
- Other legal provisions bearing on the research project or overall collaboration, including liability/indemnification, confidentiality, publication, and international students as a result of changes after September 11, 2001.

In the article, *Living studies in Industry-university negotiations* by James Casey*, poor communications is largely responsible for author states the following:

"This poor up-front communication of intent was compounded by missing or absent communication during the course of the project. When the university researcher structured the project as a time-unlimited exploratory piece of research for an inexperienced student, the project was doomed to failure with regard to the deliverables expectations of the corporate partner. At the same time, when the corporate partner set deadlines that were incompatible with the academic calendar, the project was doomed to failure with regard to educational expectations of the university partner. In this case, there was poor communication

of intent, expectations, and progress." (Casey, 2004)

When communication on a project team fails, there is an increased probability that the project will also fail. Communicating across organization lines is difficult regardless of the relationship and becomes progressively more difficult as the chain of participants grows.

Even with the difficulties, there are benefits to collaborations out-weigh the problems. The following is a list of benefits that emerged from the ENC workshop discussion (ENC, 1998):

- Real discovery had been made from such collaborations in the past
- Should the focus now be on training of PhD students to do high quality research, or was the research itself very important; was there time in three years for substantial "real" research?
- The management of intellectual property rights required careful management to avoid problems.
- For many chemical companies, the out-sourcing of fundamental research in some areas was becoming the norm…could such research be done by PhD students under training, or was there a strong need for higher quality research organizations within universities.
  Not all of the benefits from collaborations were immediate and tangible.

We should recognize that just as there was no unique form of a university, there could be no unique structure for university research. It was becoming clear however, that not all universities could achieve excellence in all of the forms of research collaboration required by tomorrow's chemical and pharmaceutical companies. (ENC, 1998)

Though the audience addressed in this article is the chemical and pharmaceutical industries, the issues that they raised are no less applicable to manufacturing and distribution supply chains. Finding the right collaborative fit is a key element to achieving any successful relationship. Looking to the partner to customize the supply chain education and building a strong and trusting relationship bridge gap between education and success and propels an effective supply chain past the competition.

Successful collaborations need to be based on a commitment to a mutual set of goals and objectives and the resourses; fiscial, fianancial and human capital, need to be desginated to the project. Industry-university collaboratations require a great deal of coordination and a full commitment from everyone invovled.

New Industry-University Collaboration Paradigms

Universities around the world are changing their approach to research and their involvement with real-world problem solving. Business and research centers are the new paradigm for research and business discovery collaborations. Business and research centers are incubation hubs for creative problem solving, new innovations, skills development and a place to build new collaborative relationships. Purdue University's Discovery Park is an example of a

business and research center. "… $400 million research and learning center complex of 11 dynamic centers, where more than 1,000 faculty members and 3,000 students are using an interdisciplinary approach to tackle the grand challenges of today, whether that is curing cancer or employing technological discoveries to fuel a competitive edge for Indiana manufacturers" (Staff, 2008). At Discovery Park faculty, students and industry partners like Eli Lilly work together finding new technologies, advancing manufacturing and engineering and exploring science. Each of the centers at Discovery Park works in interdisciplinary partnerships and in collaborative relationships with members of the health science fields, manufacturing and businesses. The centers at Purdue's Discovery Park include:

- Bindley Bioscience Center
- Brick Nanotechnology Center
- Burton D. Morgan Center for Entrepreneurship
- Cyber Center
- Discovery Learning Center
- e-Enterprise Center
- Center for Advanced Manufacturing
- Energy Center
- Center for the Environment
- Oncological Sciences Center
- Regenstrief Center – applying engineering and systems management can science principal to health-care problems

Conducting medical research, finding cures for catastrophic diseases, improving manufacturing processes and supporting entrepreneurs are all the examples of the collaborative relationships that come from a center like that at Purdue.

Other examples of university research center include: the Southern Connecticut State University Research Center of Computing and Society; University of Michigan's Automotive Research Center; University of California, Berkeley's Earthquake Engineering Research Center (EERC); and the University of Basel in Switzerland who has the Swiss Nano-science Institute at Basel. Often these research centers have a direct affiliation with the university but operate independently raising the majority of their operation funds through contracts and agreements with industry partners.

GOALI (Grant Opportunities for Academic Liaison with Industry) is a 1989 outgrowth initiative of the NSF's Division of Design, Manufacture, and Industrial Innovation (DMII). DMII exists to facilitate manufacturing and supply chain management education needs within industrial settings. "This initiative, known as the Engineering Faculty Internship Program, required both an industrial stay for the academic principal investigator (PI) and a financial commitment from the industrial partner" (Martin-Vega, 2002). For this mutual commitment by the partners, GOALI provides matching funds (up to $25,000) for the project. GOALI awards have facilitated partnerships between University of Texas-Austin and Schlumberger, Iowa State University and Rockwell, Purdue University and Intel, Lehigh University and Air Products, and more. Funding from organization like NSF and GOALI sweeten the pot and provide added incentives for the participants.

SUMMARY

Collaborative industry-university relationships are an additional platform for increasing

the competitive position of all concerned parties. Collaborative partnerships between fully engaged and fully involved participants often realized unforeseen results and advantages. Arbo (1999) noted the advantages such as the positive impact on the academic institutions enrollment numbers, an added visibility and notoriety for the university as a learning and research center, and the financial contributions and commitments from alumni and federal and local government agencies, and businesses increase. Enhanced reputations, innovative concepts and ideas, and identification of the next generation of employees, are all outcomes of entering industry-university collaborative relationship. These are relationships are often the catalysts for generating winning scenario. As a reflection of the successful relationships, the number of collaboratives are on the rise. The rise in populatiry comes as no surprise to supporters of industry-university collaboratives, who see these relatinships as fruitful ways to associated with winning programs.

Industry specific supply chain education is an important component in moving companies in the direction of establishing a competitive advantage. Formulating a collaborative team of industry and academic personnel to attack and solve problems and identify creative and innovative solutions is a step forward towards a positive future. Communicating, sharing and working as partners in a collaborative effort are central elements for education partnerships. When all of these elements are in place the result is most often a win-win for industry and the university and the establishment of a lasting relationship.

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ACTIVITY BASED COSTING FOR DISTRIBUTORS

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ABSTRACT

Exploring more in to the possibilities of Activity Based Costing (ABC), this study tries to focus into applying ABC for Distributors. We provide details on developing an activity based cost flow diagram. We also show how Activity Based Costing can be applied to specifically to distributors. Further to optimize the ABC modeling in distribution the integration of mixed integer programming is introduced. Paper also throws light into some of the shortcomings of the ABC and also into comparison with a competing methodology called Theory of Constraints (TOC).

INTRODUCTION

"A penny earned is a penny saved". With the economic down turn hitting hard on the business world, the number one priority of all companies is to cut expenses and to improve all possible profit margins. Activity based costing (ABC) is a method that measures cost of a product/service, based on the activities performed to produce the product/service. The fundamental assumption is that activities drive the costs, which are driven by the product or customer. Activity based costing has gained a large momentum lately and the business world has seen the widespread usage of the same. According to Innes and Mitchell[1997], when 70% of the accountants and 45% of the managers working for the larger firms are familiar with ABC, only 36% of the accountants and 19% of the managers working for smaller firms indicated familiarity with ABC. There is thus a gigantic scope for considerable growth in adoption of ABC in a variety of other areas and sub-areas of management, accounting, finance, etc. Overhead cost allocation errors could be very much reduced or even eliminated when the ABC is correctly implemented in any organization.

ACTIVITY BASED COSTING VS. TRADITIONAL COSTING

Activity based costing (ABC) assigns manufacturing overhead costs to products in a more logical manner than the traditional approach of simply allocating costs on the basis of machine hours. Activity based costing first assigns costs to the activities that are the real cause of the overhead. It then assigns the cost of those activities only to the products that are actually demanding the activities. In traditional costing methods, the cost allocation does not take into consideration the overhead activities, but a price is calculated based on the number of units ordered. By doing this, a company will not be able to designate correct expenses to its product/orders. This might result in a miscalculation of the price which leads either to claiming more charge for services/products-making oneself inferior with competitors when bidding for contracts or to claiming less charge for services/products-putting oneself in the jeopardy of less profit or loss.

LOGIC OF ABC

Activity Based Costing (ABC) is a simple concept that is used to develop the accurate and relevant cost information needed to support business decisions of all types. This concept links costs with the activities that make them necessary and the accumulated cost of activities with the products or services that make them obligatory. Thus the organizations attract more profitable contracts, make better business decisions, focus on areas with bigger return, and use the capital effectively. The very concept of ABC, as defined by Argyris and Kaplan[1994] at the nut and bolt stage is that, Jobs, Products, Services in an organization require it to perform activities, and those activities incur costs. Those costs that cannot be directly attributable to a job, product or service are associated with the activities that make them necessary. Each activity's accumulated cost is then passed to jobs, services and products.

DESIGNING THE ACTIVITY BASED COST FLOW

The easiest way to visualize an activity based cost flow is to walk through a series of steps that result in the formation model as suggested by Argyris and Kaplan[1994]. As a basic tool let's discuss the various costs related activities which can be drilled down from the main cost function which are:

1. *Throughput or Direct Costs*- Costs that are directly attributable to a job and therefore not subject to ABC cause and effect analysis.
2. *Service and Operation Support Activities*-These activities do not exist directly on an organization's cost objectives. They exist primarily to support other activities
3. *Throughput or Material Support Activities*- These activities exist to ensure that the appropriate throughput or direct items are available when needed for the organization. They can be divided into two categories: *those that ensure the appropriate items arrive and are paid for* and *those that occur between the times, the items arrive and the time they are consumed.*
4. *Market or Customer Support Activities*- Not all markets and customers require same amount of support. For instance a market where half of a company's sales may require three times more marketing than the rest 50% of the market in which its other items are positioned. These are caused by: Standard Operating Procedures, Government contracting laws, Compliance with regulations, Maintenance of specific records.
5. *Product or Product Line Support Activities*- Just like markets and customers, products and product lines may require different levels of support too.
6. *Value- Adding or Direct Activities*- Historically non throughput or direct costs are charged to cost objectives through value adding or direct activities.
7. *Event or Transaction Activities*- The occurrence of certain events or transactions sets off "chain of admin activities" that incurs costs.
8. *General and Administrative Activities*- After these activities, there will still remain certain costs and activities that exist for the general management and admin of the company like Strategic planning, Certain R & D efforts , Closing the books, Preparing annual budgets, Dealing with the board, investors, bank etc.These fall under the last category.

Cost Flow Down Step 1: Assigning Cost to Activities

All costs are assigned to either the cost objective (through direct or throughput costs) or the appropriate activity center. After the first step costs can be directly attributed to cost objectives and total costs for various service and support activities can be ascertained. But the full cost of each activity center is not known.

Cost Flow Down Step 2: Assigning Costs among Activities

In this step, the cost of service and operations support activity centers are distributed to the other activity centers that made them necessary. The distributions are made using a relevant statistical base (e.g. square footage, operating hours, headcounts etc.) or an analysis of the activities performed by the service or operations support activities.
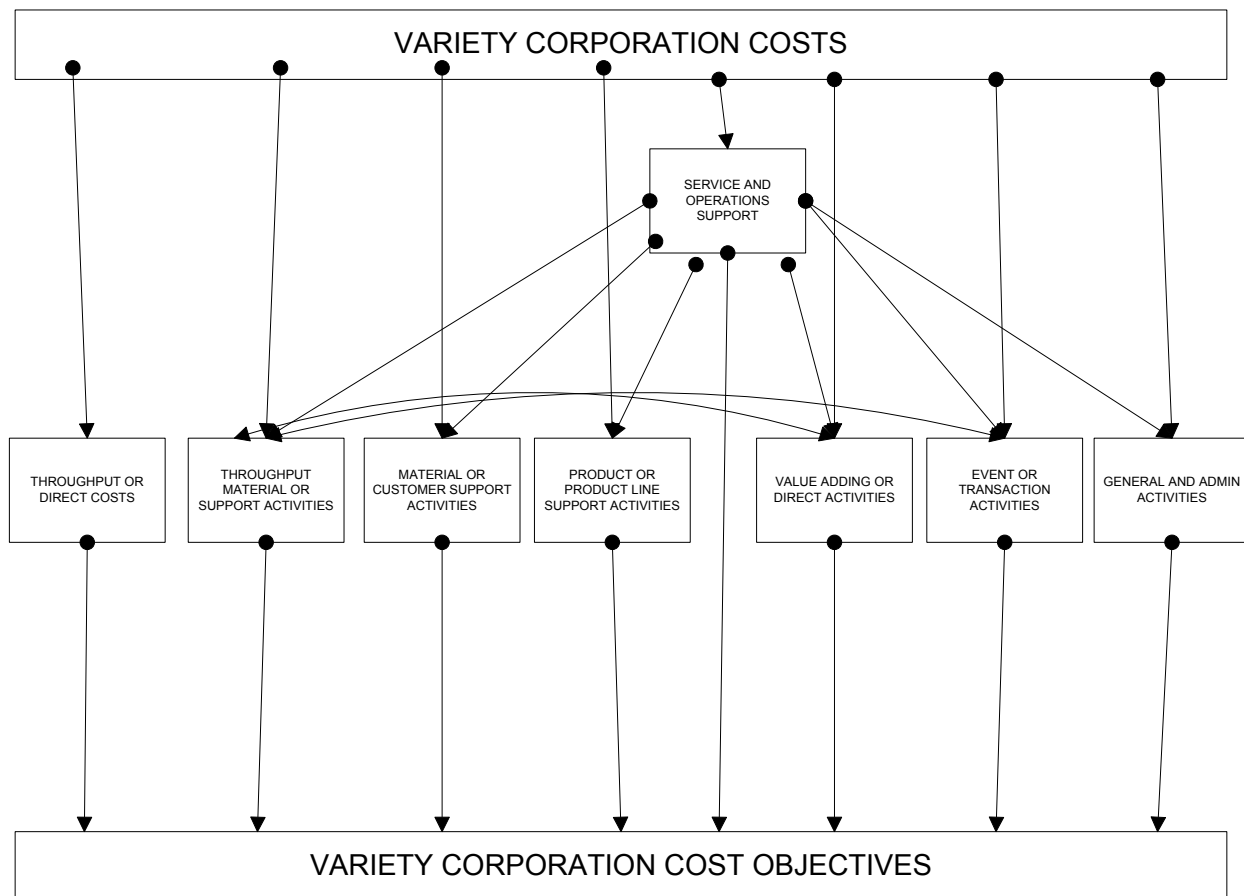
Figure 1 A completed activity based cost flow diagram

Cost Flow Down Step 3: Assigning Activity Costs to Jobs/Products

An appropriate statistical base must be identified to associate the accumulated cost of

each activity center to the cost objectives that made the activities included in the activity center necessary. Once the basis is determined, a rate can be established to attach the activity center costs to individual cost objectives.

Cost Flow Down Step 4: Completion

All we have done is plumbing till this point. A cost flow diagram is shown in the **figure 1**.This fully absorbed cost information can be used by the company to make better informed decisions and become more successful. To reap these effects the company must be able to compute accumulated costs, not just distribute it. This is done by taking the cost flow down and reversing the flow.

APPLYING ABC TO PRICING FOR DISTRIBUTION

As we know, basic principle of activity based costing is that, product manufacture induce activities, activities in turn consume resources and induce cost (Gupta and Galloway, 2003). The corresponding idea in the distribution is that distribution service contracts induce distribution activities and distribution activities require resources and this in turn induce distribution service costs.

This could easily be explained in the light of a Logistics enterprise. Three concepts are introduced in a cost forming process. 1) Direct cost 2) Overhead cost and 3) Logistic cost. (Gupta and Galloway, 2003)

The cost that can be traced directly to the cost contracts is called direct cost. It comprises of direct material, direct manpower and dedicated cost (Lingyun and Wenke, 2008). Dedicated cost can not only be traced to one specific logistic contract but it can also be paid to other enterprise or organization directly. Consigned logistics cost, compensation of breach of faith, insurance cost, checkout cost etc are also part of the dedicated costs. When it comes to tracking the overhead cost, the process in not that simple and obvious as it cannot be traced to the object cost directly. But sticking to the Activity based cost modeling help to determine the accurate price of a contract according to its target profit margin as one can easily review the cost of any contract according to its logistics enterprises and activities.

PRICING MODELS FOR DISTRIBUTION BASED ON ABC

What contributes to the total cost of distribution contracts? (Lingyun and Wenke, 2008). The total cost of logistics for a contract say k, namely T_k is-

$$T_k = M_k + L_k + Z_k + C_k.$$

where,

M_k=Component of direct material cost under direct costs of logistics contract k.
L_k=Direct manpower cost under direct costs of logistics contract k.
Z_k=Dedicated cost of contract k.

C_k=Total overhead cost of logistics contract k.

Total price of logistics contract $P_k = T_k (1+\delta) = (1+\delta) (M_k+L_k+Z_k+C_k)$

where,

P_k =price of undertaking logistic contract k.
δ = Target profit margin of logistics expertise.

When the logistics enterprise runs for a business decision regarding the pricing [Xu *et al.*, 2006],three factors must be kept in the mind: Clients, Competitors, Cost. Based on the value of the P_k and T_k the pricing range can be fixed. T_k act as the lower level of the contract called the Price floor of the contract k, P_k act as the ceiling price of the contract k. The value of the P_k depends on δ which in turn depends on the local market and the competitions. So when defining the value of price range under normal market conditions the following equation must be satisfied.

$P_k \leq P_{actual\ price} \leq T_k$

A case study described by Lingyun and Wenke (2008) showcases the various considerations for a small logistics provider when bidding for a logistics distribution contract. Taking into concern all the major logistics activities like the order form disposing, dispatching, warehousing, distributing administrating problem solving and serving logistics information management system. Once the activities are clearly defined, the activity driver, activity driver amount, activity driver rates of each or the aforementioned activities are obtained. With these gathered data, the price floor and the ceiling price of the contract is fixed. This gives us the room to play our bid for contracts in the most optimal way.

INTEGRATING ABC AND MIP FOR BETTER SUPPLY CHAIN MANAGEMENT

The significance of Activity based costing in taking business decisions is very much crucial from the previous sections discussed in this paper. So the very next step is to optimize the ABC for more efficient utilization of the resources, better estimation of the profit of each fulfilled order, higher customer loyalty, fewer missed orders and higher overall profit. According to Amir *et al.*[2008], combination of *Mixed integer programming* (MIP) with ABC will yield more profitable and reliable order selection. This makes the Available-to-promise concept (ATP), generating more productive results. ATP is a very important concept in supply chain (Amir *et al., 2008)*which provides a structure for decision makers to respond to the customer requirements based on actual or potential demands taking into consideration the resources in a company. Explaining the concept of integration of MIP and ABC in a order management problem model is discussed in Amir *et al.*[2008]. Here the entire process is divided into different production activities. According to   Cooper and Kaplan[1991], overhead costs can be assigned to four specific cost pools; Unit-level activities (machining time, material, direct labor, etc.) costs that vary directly with the number of units produced, Batch-level activities (planning and tactical management, material handling, setup, etc.) costs which are invoked whenever a batch is processed, Product-level activities (process engineering, design, etc.) costs which come into play

whenever a particular product is manufactured, Facility sustaining activities costs such as rent, utilities, maintenance, and facility management. The objective of every modeling approach in the order management problem is to maximize the profit.

Profit= (Net Revenue - Production Resources Costs - Inventory Costs)

And the various factors that come into play as constraints are Order commitment constraints, Inventory constraints, Production recourses constraints.

TOC VS. ABC

According to Kirche *et al.* [2005], TOC(Theory of constraints) is a theory for optimizing the short-term product mix by explicitly considering bottleneck resources, whereas ABC methodology can isolate the cost of unused capacity and identify bottlenecks through capacity variance analysis. This is accomplished by careful analysis of how much capacity is committed and used over a period for an anticipated product mix (Cooper and Kaplan, 1991). TOC and ABC based methodologies emerged independently. In manufacturing environments where direct manufacturing costs constitute a relatively small percentage of the total manufacturing cost, it would be beneficial to consider an Activity-Based Costing approach. On the other hand, in environments where direct costs are large, a Theory of Constraints-based approach would suffice. When introducing MIP to TOC and ABC the change is only in the objective function , the constraints remain the same (Kirche *et al.* ,2005).

SHORTCOMINGS OF ABC

The traditional ABC model has been difficult for many organizations to implement because of the high costs incurred to interview and survey people for the initial ABC model, the use of subjective and costly-to-validate time allocations, and the difficulty of maintaining and updating the model as (i) processes and resource spending change, (ii) new activities are added, and (iii) increases occur in the diversity and complexity of individual orders, channels and customers. The accuracy of the cost driver rates when they are derived from individuals' subjective estimates of their past or future behavior has also been called into question. Also traditional ABC models are difficult to scale. Adding new activities to the model, such as to introduce heterogeneity within an activity requires re-estimating the amount of cost that should be assigned to the new activity. For example, consider the complexity in the activity "ship order to customer." Rather than assuming a constant cost per order shipped, a company may wish to recognize the cost differences when an order is shipped in a full truck, in a less than truckload (LTL) shipment, using overnight express, or by a commercial carrier. In addition, the shipping order may be entered either manually or electronically, and it may require either a standard or an expedited transaction. To allow for the significant variation in resources required by the different shipping arrangements, new activities must be added to the model, thereby expanding its complexity.

CONCLUSION

The significance of ABC cannot be overlooked in today's highly competitive Business

world. From Statistics, it can be learned that a huge majority of the industries are yet to get familiarized with this concept. The price range that falls between the price floor and the ceiling price will help the Distributor to take proficient business decisions. This study also helped us to understand how important, ABC is for the distributors and also how this costing model could be optimized for the getting the maximum profits.

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A SIMULATION STUDY OF WAITING TIME AT THE LAND PORTS ALONG TEXAS-MEXICO BORDER

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ABSTRACT

The paper provides an analysis on the traffic distribution, vehicle waiting times and the costs associated with waiting along the Texas- Mexico border. The system is modeled with data from the Bureau of Transportation Statistics (BTS) on the truck traffic (2007) flowing northbound [4]. The waiting times at the international border is not the same for each port of entry, this is due to the uneven traffic distribution along the border. There are 5 major ports along this border and Laredo is the busiest amongst them with around 60% of the total traffic flowing through Laredo. This makes the port of Laredo the most congested port and it accounts for nearly 97% of the total waiting time for the trucks northbound in the region. This paper analyses the changes in the border waiting times and the costs for waiting, with variations in traffic distribution.

INTRODUCTION

Mexico, the NAFTA partner of the U.S. is one of its major trading partners and in terms of trade with the U.S. it is currently ranked third behind Canada and China. The US imports constitute 60% of the total trade between the nations and Mexico accounts for the rest of the imports, roughly an even split between the two trading partners. Part of the goods from China bound to the U.S. is shipped to Mexico and then by road/rail they reach the U.S. Out of this, three fourth of the goods reach the US border by trucks. Almost 65% of this trade takes place via the land routes and since 2003, the number of commercial containers passing through the US-Mexico border has increased by almost 20% as shown below in Fig. 1. The amount of truck tonnage flowing through Texas is expected to increase from 1.2 billion in 1998 to 2.4 billion in 2020.
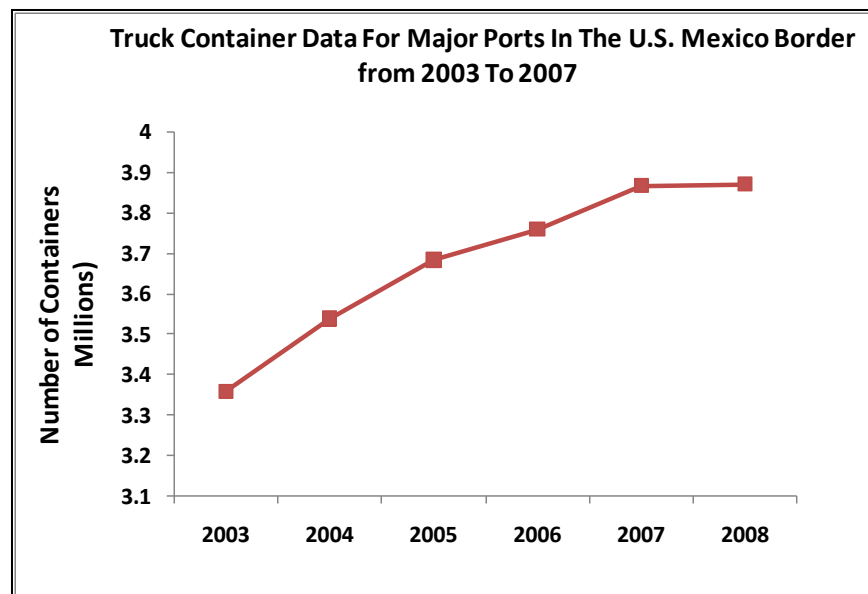
Fig. 1: Northbound Container Traffic Data

Texas shares 1254 miles of international border with Mexico and there are 23 vehicular international bridges that play a major role in the growth of trade between the countries [8]. Texas has more number of border crossing ports than any other state in the U.S. [1]. The 5 major border ports on either side of the international border and they are highlighted below in Fig. 2 (i) Del Rio - Cd Acuna (ii) Eagle Pass - Piedras Negras (iii) Laredo - Nuevo Laredo (iv) Hidalgo - Reynosa and (v) Brownsville – Matamoros.
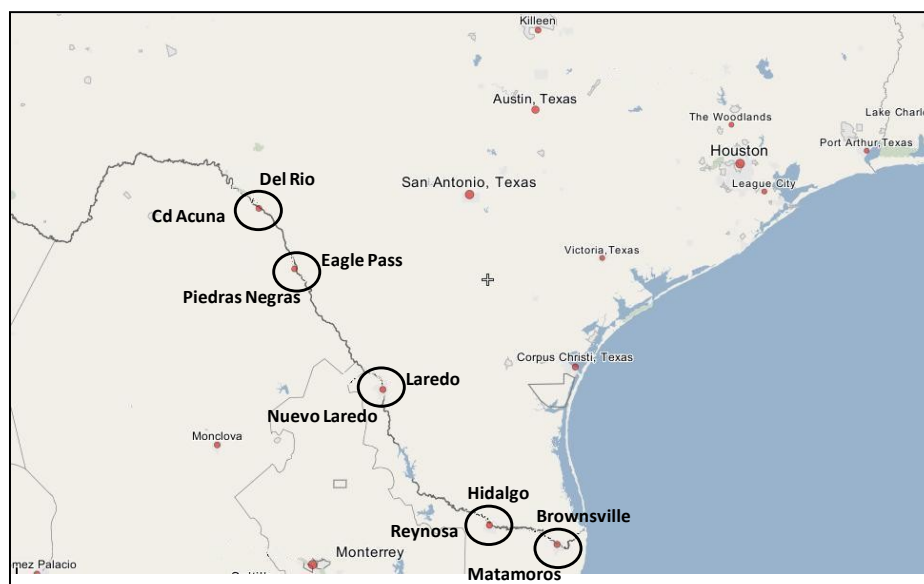
Fig. 2: Major port of entries at Texas Mexico border

The northbound flow of goods through these border ports is not evenly distributed, around 80% of the traffic flows through 5 border ports. The port of entry at Laredo alone accounts for more than one-third of the goods traffic that passes through the Texas - Mexico

trade corridor. An increase in the service time at the Laredo port by 1 minute may result in the queuing up of trucks and the length of the queue would be as long as the distance between Laredo and Washington D.C. [9]. The traffic distribution along the Texas Mexico border is shown below in the Fig. 3 below.
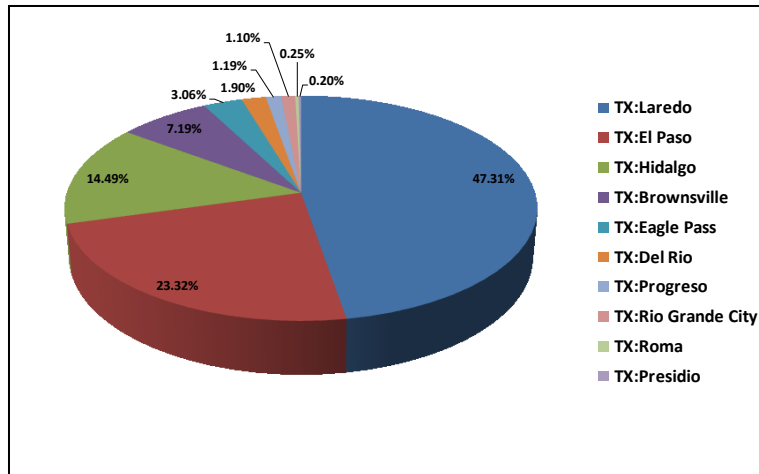
Fig. 3: Northbound Traffic Distribution

With growing increase of trade by land, the number of trucks entering the international border ports has gone up multiple folds. Everyday large numbers of these 18 wheeler trucks queue up, waiting to cross the international border. The long waiting times the trucks spend at the border has turned out to be a nightmare to the growing trade between the two countries. This ultimately adds to the total cost of products affecting the various stake holders in the supply chain right from the manufacturers till the end customer. The paper provides an analysis on flow of traffic for goods originating in Monterrey, Mexico to San Antonio, Texas. The study can also be used to analyze the impact of possibility of addition of resources at the border ports to reduce congestion. A sensitivity analysis is performed on the effect of border waiting times and waiting costs for variations in traffic distribution. One such work has been done by Theodore & Fred (1994) by providing a basis for fully automated motorist information system for delay times in the U.S. Canada border, based on the information the motorist could choose alternate routes or delay the trip [2].

BORDER CROSSING PROCESS

The process of importing goods from Mexico into the U.S. involves a complicated procedure [3] involving various stakeholders and document preparation prior to the arrivals of the trucks at the border. A schematic diagram below in Fig. 4 portrays an overall picture on the process of border crossing. Trucks from Mexico arrive at the international border and they are served by the inspection booths based on first come first serve basis.
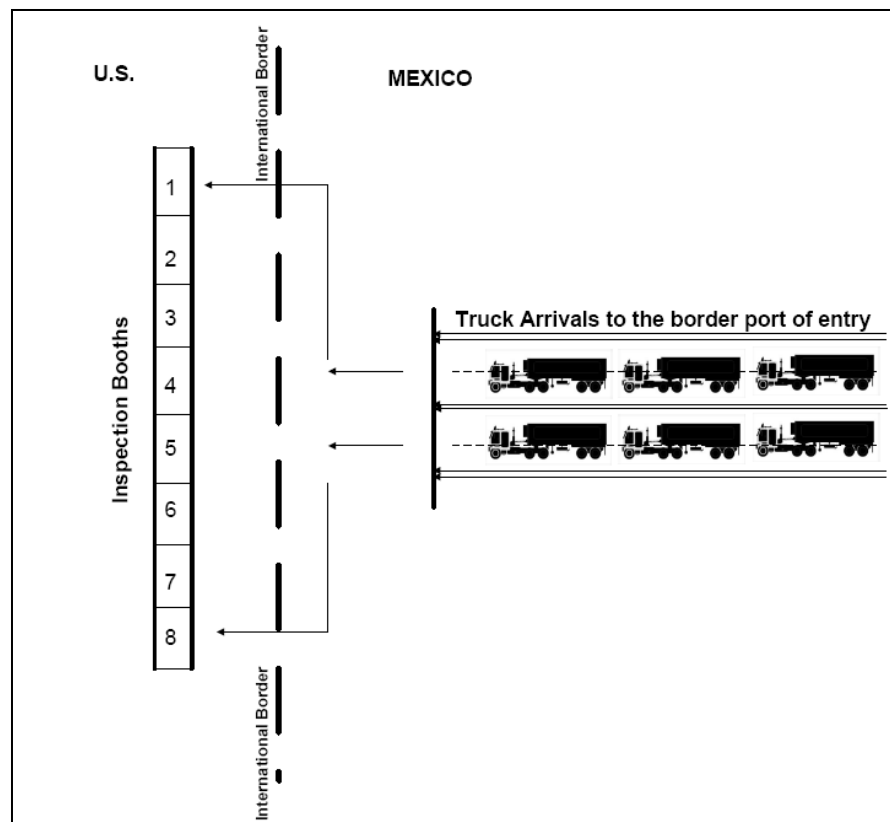
Fig. 4: Border crossing

Even before the goods reach the border the customs broker prepares the necessary documentation which includes the details about the product shipped, invoice documents and truck driver details. There are some restrictions on trucks that can enter the U.S., only authorized vehicles are allowed to cross the border into the U.S. The trucks originating in Mexico ship up to the border from where the drayage or authorized truck takes the goods across the border. A detailed explanation on the process of border crossing [3] is depicted in the flow chart below Fig 5.

ANALYSIS

The three major Mexican cities that export goods by truck to the US are Mexico City, Guadualajara and Monterrey which are from the State of Mexico, Jalisco and Nuevo Leon. The cities are highlighted below in Fig. 6.

Fig. 5: Border Crossing Procedure
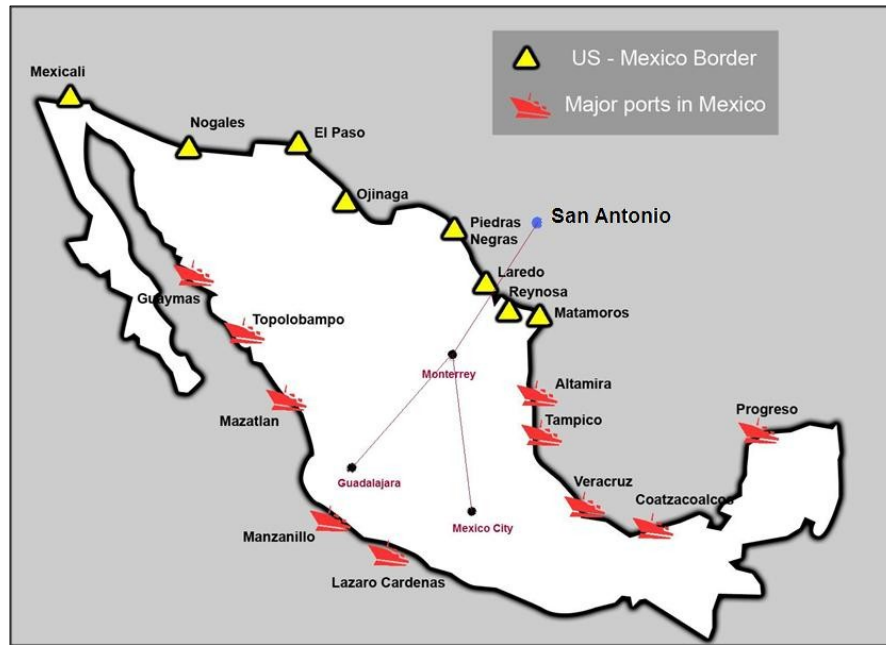
Fig. 6: Top Exporting Cities to U.S.

ASSUMPTIONS

For the purpose of analysis certain assumptions have been made before the buildup of the actual model. It is considered that all the goods from Mexico City and Guadalajara pass through Monterrey and finally they reach the US. The destination considered in this model is San Antonio, Texas. Once the goods reach San Antonio they can be easily shipped to final destinations across the U.S. The average value of each truck load is the same. The distance and time it takes for good to reach San Antonio from Monterrey through the various border ports is given in the Table 1 below [6].

From Monterrey, Mexico to San Antonio, Texas through different border ports				
Laredo	Brownsville	Del Rio	Eagle Pass	Hidalgo
Travel Time (in hours) to reach San Antonio				
4.41	7.26	7.85	6.82	6.23

Table 1: Travelling time from Monterrey to San Antonio

The annual data on total number of trucks passing through each of the port of entries was obtained from the BTS (Bureau of Transportation Statistics) [4]. The data for 2007 has been used for analysis as 2007 is the year of peak trade between the 2 countries. The present hours of operation and the number of lanes at each port of entry were obtained from the CBP (Customs & Border Protection) website [5]. This data is used to find the effective working hours at each of the border ports shown in Table 2.

	Laredo	Brownsville	Del Rio	Eagle Pass	Hidalgo
Number of Lanes	16	8	2	2	6
Operating Hours/Day	16	18	24	24	18
Effective Working Hours	256	144	48	48	108
Total Trucks in 2007	1,563,836	239,023	63,460	100,227	486,756

Table 2: Effective working hours

The border ports are assumed to have 300 working days in a calendar year and the time taken to process at each inspection booth is same across all the ports and it is assumed to be 5 minutes.

WAITING TIMES CALCULATION

A queuing model is build with Poisson arrival process and time between arrivals is modeled to be exponentially distributed. The average waiting time at the Laredo border crossing is around 3 hours, the calculations for the average waiting times for each border port is based on the waiting time at Laredo. With the available data on the number of trucks passing through each port, the waiting time at each border port is calculated. Then the total waiting times at the border ports is determined by multiplying the respective waiting times with the total number of trucks passing through each of those border ports.

SENSITIVITY ANALYSIS

The total waiting time at Laredo is around 4.7 million hours which constitutes to 97% of the total waiting times across all these border ports. To ease out the high waiting time concentration in Laredo, a study is made on the effect of diverting traffic from Laredo to the other border ports. A percentage of traffic flowing through Laredo is diverted to other major ports; the new volume of trucks passing through each major port of entry is given below in Table 3.

	Number of Trucks				
Case	Laredo	Brownsville	Del Rio	Eagle Pass	Hidalgo
Current	1563836	239023	63460	100227	486756
5%	1485644	258571	83008	119775	506304
10%	1407452	278119	102556	139323	525852
20%	1251069	317215	141652	178419	564948
Balanced	1039810	584893	194964	194964	438670

Table 3: Traffic Distribution

When 5% of the total trucks that pass through Laredo are transferred equally to the other

ports, the total waiting time reduces by 74.4%. This process of distribution of traffic from Laredo to other ports is carried out with 10% and 20% which has an effect of reducing the overall waiting time by 84% and 89% respectively. A case with balanced traffic is devised by finding the average number of trucks across these major ports and multiplying them with the effective working hours at each of these ports. This reduces the overall waiting time by 93%. The results of the analysis are tabulated below in Table 4.

	Waiting time at the border				
Case	Laredo	Brownsville	Del Rio	Eagle Pass	Hidalgo
Current	3.000	0.066	0.061	0.073	0.176
5%	0.740	0.068	0.067	0.081	0.197
10%	0.422	0.070	0.074	0.091	0.224
20%	0.227	0.075	0.092	0.120	0.307
Balanced	0.140	0.140	0.140	0.140	0.140

Table 4: Waiting times in hours

CALCULATION ON COSTS

The cost of transporting goods from Monterrey to San Antonio through the border port of entries has three cost components a) Cost of waiting at the border b) In Transit inventory holding cost and c) Total transportation cost.

Cost of waiting at the border

The waiting times at each port of entry is calculated as explained in the previous section and the data for the number of trucks is also available. The product of waiting time and number of trucks is multiplied with waiting cost per hour which is calculated to be $27.92. The waiting times for the 5 different scenarios are calculated and it is represented in the Fig. 7 below.
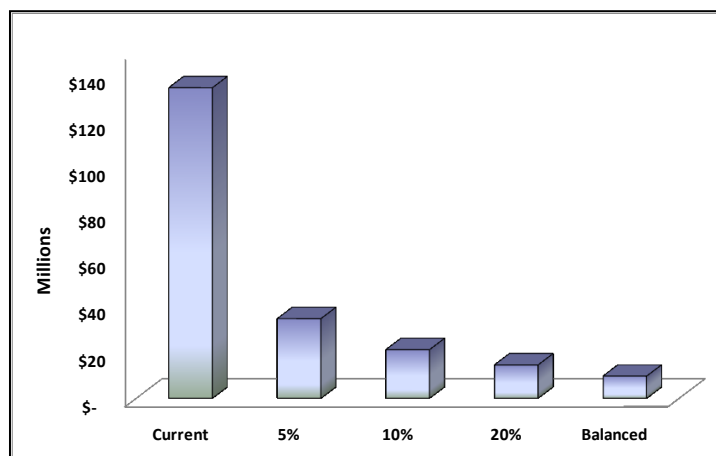
Fig. 7: Cost of Waiting

In Transit inventory holding cost

The goods waiting at the border has an in transit inventory cost attached to it. The value of goods transported through each of the border ports was obtained through the Texas Center TAMIU (Texas A&M International University) website [7]. 30 % of the total value of goods is considered to be in inventory and it is multiplied with the waiting time to obtain the in transit inventory holding cost. The value for all the 5 scenarios are obtained and plotted as shown below in Fig 8.
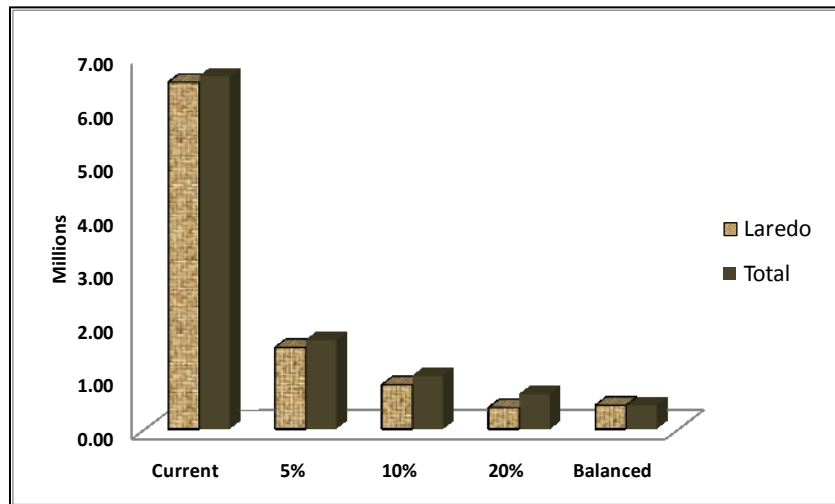
Fig. 8: In-Transit Holding Cost

Total transportation cost

Finally the total transportation cost to ship the goods from Monterrey to San Antonio through the various border ports is calculated. A matrix with the travelling time to reach San Antonio from Monterrey through various ports of entries is generated. The total number of trucks passing is multiplied with the time taken and then by the waiting cost per hour. Then the in transit inventory holding cost is added to obtain the transportation cost. The values for the 5 scenarios are plotted in Fig. 9 below.
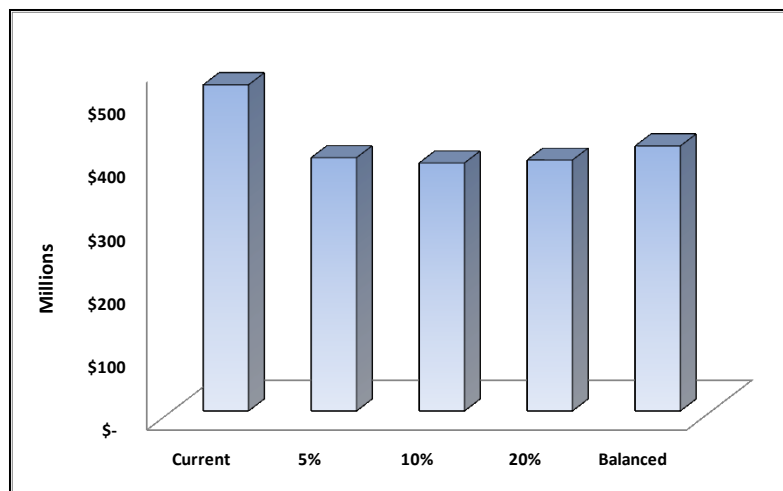
Fig. 9: Total Cost of transportation

CONCLUSION

An in-depth analysis was carried out on the cost components of goods shipment between Monterrey, Mexico and San Antonio, Texas. This study depicts the present operating condition of the major port of entries in the US Mexico border and the waiting times associated with each port of entry. The border port of Laredo with its strategic advantages is the busiest border port along the Texas Mexico border. A small portion of the traffic when diverted results in a significant reduction in the overall cost of transportation of goods.

This paper presents a queuing model and portrays the effect of traffic diversion at the busy Laredo port. To further analyze the effect of traffic distribution an initial model is created in ARENA to simulate the traffic at the port of entry in Laredo. The truck arrival at the border ports follows an increasing trend from around 8a.m. until around 2p.m. where it peaks. Then slowly the truck arrivals begin to come down late in the afternoon around 4p.m. as shown in the Fig. 10 below.
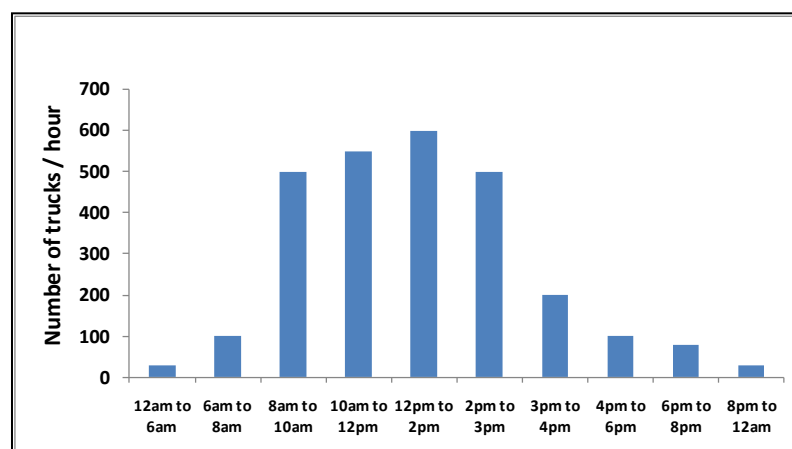
Fig. 10: Truck arrivals per hour at Laredo

The waiting time for each truck is calculated by simulating the truck arrivals for 1 day at

Laredo, each day around 5000 trucks arrive at the port. The average waiting time for trucks is found to be 119.88 minutes (2 hours), the truck waiting times are plotted in the Fig. 11 below.
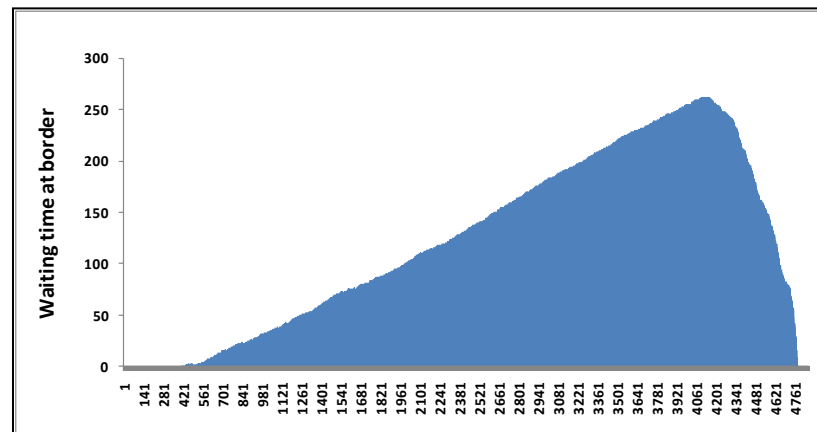
Fig. 11: Truck waiting times

As seen in figure 11 the waiting times at Laredo border are higher later in the afternoon. In this case, the waiting time of the truck at one point peaks to 262.84 minutes (4.38 hours). This further explains the need for traffic distribution at Texas Mexico border. Our next step is to develop the full model with actual rate of truck arrivals at the border and analyze the effect of distributing the peak traffic across the different ports in the Texas Mexico border.

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RELATIONSHIP MARKETING IN HEALTH ORGANIZATIONS AND ITS EFFECT ON CUSTOMER LOYALTY

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ABSTRACT

This study was carried out to determine the role of relationship marketing in health organizations with regard to providing customer loyalty and to evaluate the views of patients related to relationship marketing activities. In this study, a questionnaire was applied to 371 patients in Kadıköy Universal Hospital, which is a private hospital in Istanbul. As a result of the correlation analysis between the satisfaction level from hospital and customer loyalty, it was seen that there is a medium level positive relation between customer satisfaction and customer loyalty. The important implications of this study can be stated as follows: keeping existing patient is significant as much as gaining new patient, the variables being effective for providing customer loyalty can show difference from one patient to another, the image of health organization is significant for providing customer loyalty, and customer loyalty can be acquired by making continuous communication with patients.

INTRODUCTION

The long term and permanent relationships with customers based on relationship marketing activities have become a significant competition instrument in today's world. Concerning gaining advantage for organizations against their rivals also shows the importance of customer loyalty to be earned in this way. Customers become less sensible to price changes by means of customer loyalty, remain insensible to competition instruments of rival organizations, purchase more frequently and quality, and behave more tolerant against a problem they encounter and do not launch to look for another business immediately. These behaviors exhibited by customer loyalty assist business to obtain important advantages in long term and to gain a privileged position against their rivals by providing a competitive advantage. Therefore, relationship marketing confronts us as a main factor to provide customer loyalty, to protect and increase market share for business, and to obtain long term competition advantage.

THE CONCEPT OF RELATIONSHIP MARKETING

Although the concept of relationship marketing is a subject rising at marketing theories and applications in recent years and grabbing interest at the same time, it is a concept dating back to commercial life in terms of the main idea it is based on (Cicek, 2002). Relationship marketing today appears an understanding brought in place of the conventional marketing understanding that subject to criticisms because of being focused on short term sale and for the reason of

ignoring long term business- customer relationship. The new understanding brought by the concept of relationship marketing to marketing theory and practice is related to keeping existing customers and setting up long term relations in place of looking for new customer continuously.

Though there is no full consensus on the definition of marketing relationship in literature, the definitions have some common characteristics. Relationship marketing is defined in various manners by authors. The concept of relationship marketing was firstly defined in 1983 by Berry (1991) as formation, protection and increase of customer relationships in business. Grönnroos has made the following definition by developing Berry's definition; "Relationship marketing are the efforts to set up long term relationships with customers to achieve objectives, to keep and increase the relationships" (Grönroos,1996). Cram (1994,19) has defined relationship marketing as the application of personal information emerged as a result of communication made with customers to develop permanent and long term relationships to be useful for both parties to the production and design of goods and service.

THE CONCEPT OF CUSTOMER LOYALTY

One of the primary objectives of marketing is to form and develop customer loyalty concerning goods or services. A wide consensus is present that customer satisfaction is a key that determines customer loyalty level.

Loyalty emerges as the behavior of purchasing goods or service again in the future, renewing agreement, displaying sincerity, feeling belonging or not preferring a business, product or service. (Selvi (b), 2007).The "loyalty" word is defined as showing affection, respect and affinity, being dependence and loyalty to someone in the vocabulary of Turkish Language Institute (www.tdk.gov.tr, access:17/05/2008).

Customer loyalty is also defined in various ways. The general definitions emphasize on the effect of the relationships of business with their customers or the behaviors of customer. Odabası (2004) has described customer loyalty as tendency, desire and action of preference for the same business with usual frequency to find solution to its similar needs or purchasing the same brand when customer has a preference right. Another customer loyalty definition is that purchasing the goods and services preferred continuously in spite of marketing efforts to change customer preferences and to make itself determinative on becoming the customer of these goods and services (Oliver,1999).

Griffin (1997) has defined dependent customer as a person who makes shopping from the same workplace regularly, purchases many products or services from same workplace, recommends the store to other customers, and shows his liability to company in spite of all attractiveness of competition.

In summary, customer loyalty can be defined as a willingness to take various services from the same organization regularly and to recommend that organization to other costumers.

THE RELATION BETWEEN RELATIONSHIP MARKETING AND CUSTOMER LOYALTY IN HEALTH ORGANIZATIONS

Providing only customer satisfaction by business remains insufficient for today's business environment. Therefore, the application of the strategies to keep customers at business after acquiring them and to look for ways to develop long term relationships with customers absolutely after setting up marketing relation and providing customer loyalty has become a necessity (Barutcu, 2002).

However, the objectives of many businesses in marketing activities have focused on making the first sale by reaching to potential customers. Relationship marketing has gained importance as the strategy of keeping customers due to increasing competition and variable market conditions today. One of the main objectives of relationship marketing is to keep customer and make them supporter and advocate customer of the services offered by business by turning these customers to dependent customers (Selvi (a), 2007). Not imitating easily of the relationships established during relationship marketing by rival business shows the importance of relationship marketing in terms of providing customer loyalty.

When marketing literature is examined, there are many studies showing that relationship marketing in service sector has great importance on providing customer loyalty.

Ravald and Grönroos (1996) point out that the most significant opinion in relationship marketing is to form customer loyalty via long term relationships enabling stable and mutual profit. However, Hsieh et al. (2005) also indicate that relationship marketing has had importance ever increasing in terms of business as dependent customers are the customers bringing more profit in long term and relationship marketing is a significant way to gain dependent customers.

Odabası (2004) has also supported the opinions above stating that relationship marketing is an essential strategy as it pays attention to the subjects of customer loyalty; purchasing more quality and frequently of customer; increasing customer value lifetime and taking costs under control.

Fewer customers are lost as a result of long relations provided by customer loyalty, customer portfolio increases in this way and marketing and operating costs decrease. (Selvi (a),2007). As it can be seen from this, the investments made about relationship marketing and customer loyalty gain importance.

According to research carried out, it has been determined that business has had the possibility of increasing their incomes at 85% level approximately as a result of 5% increase in customer loyalty rate. (Reichheld, 1994). In addition, it will be suitable to give place the views of Reichheld and Sasser (1990) on the benefits provided by customer loyalty via long term relations.

- The cost of gaining new customer is 5 times higher than the satisfaction and keeping of existing customers
- A company not becoming sufficient at customer relations can lose its customer at 10% level each year.

- 5% decrease in customer loss increases business profit between 25% and 85% according to service area.
- The profit provided by dependent customer increases during the life of customer.

Therefore, the business intending to be successful in challenging competition conditions of today has to comprehend the necessity of making positive communication with customers and the customer satisfaction.

Colgate and Danaher (2000) have searched the impact of successful implementation of marketing relationship strategies on customer satisfaction and loyalty in a study they have carried out. It has been concluded in this study that when relationship marketing strategy is applied properly, it increases customer satisfaction and loyalty, in case of its poor application, business will be unsuccessful in its targets and customer's view to business will be affected negatively. Thus, in order to be successful before application marketing relationship, it should be owned the resource required and particularly the support of top administration.

Another study was conducted by Cohen (1988) searching customer loyalty and its reasons in insurance sector. According to this research, it has been determined that the main variables affecting customer loyalty and loyalty level among the persons having different professions are different. While demographic and geographic properties take place among the variables affecting customer loyalty, it has been detected that the satisfaction levels and the inclination of reliabilities of the customers having dissimilar education levels are different. In the same research, it was concluded that the main factors affecting customer loyalty among the persons in different profession groups are not the same and so the loyalty causes these persons to show difference.

As can be seen from this research, assuring customer loyalty and the loyalty levels among people can show difference according to many factors. Therefore it is understood that setting up long term, peculiar to person and close relationships with each customer group is efficient for providing customer loyalty.

The role of relationship marketing on providing customer loyalty has also been searched in the bank business in general requiring face to face and close relationship. According to the study conducted by Barutcu (2002), providing quality service by banks influences the loyalty of customers to bank. Customers have explained that their loyalty to bank has been affected positively from the feeling that bank has focused on meeting their needs rather than gaining profit and from being remembered by bank in special days such as birth, marriage anniversary, etc..In the same research, it was revealed that offering good service by bank, customer satisfaction from the bank they work with, wanting to work with the bank they know and recognize to diminish its risks, fast solution of problems encountered by customer service department of bank, positive image owned by bank, continous communication of banks with its customers, adressing with its name to customers by personnel, behaving cute and helpful, being member of customer clubs established by bank, giving gifts to customers by bank, not taking cost or commission or taking low price have high impact on the loyalty of customer to bank.

Customers have sorted their loyalty by the order of importance as confidence to bank.

These are listed as high service quality, cheap transaction costs, sutaible credit and interest rates compared to other banks, interest and communication exhibited by bank employees and customer representatives, the sensitivity shown to solve problmes, being a bank accustomed and worked for long years (known even by security officer), feeling close itself to bank, having positive image, the success of bank in the recent past, providing advantageous services against another banks, accessibility and giving consultancy service at every hour of day, desire of keeping away from risks, regular information, giving value to human by bank. In order to apply customer loyalty, the programs in line with these criteria should be prepared and applied precisely.
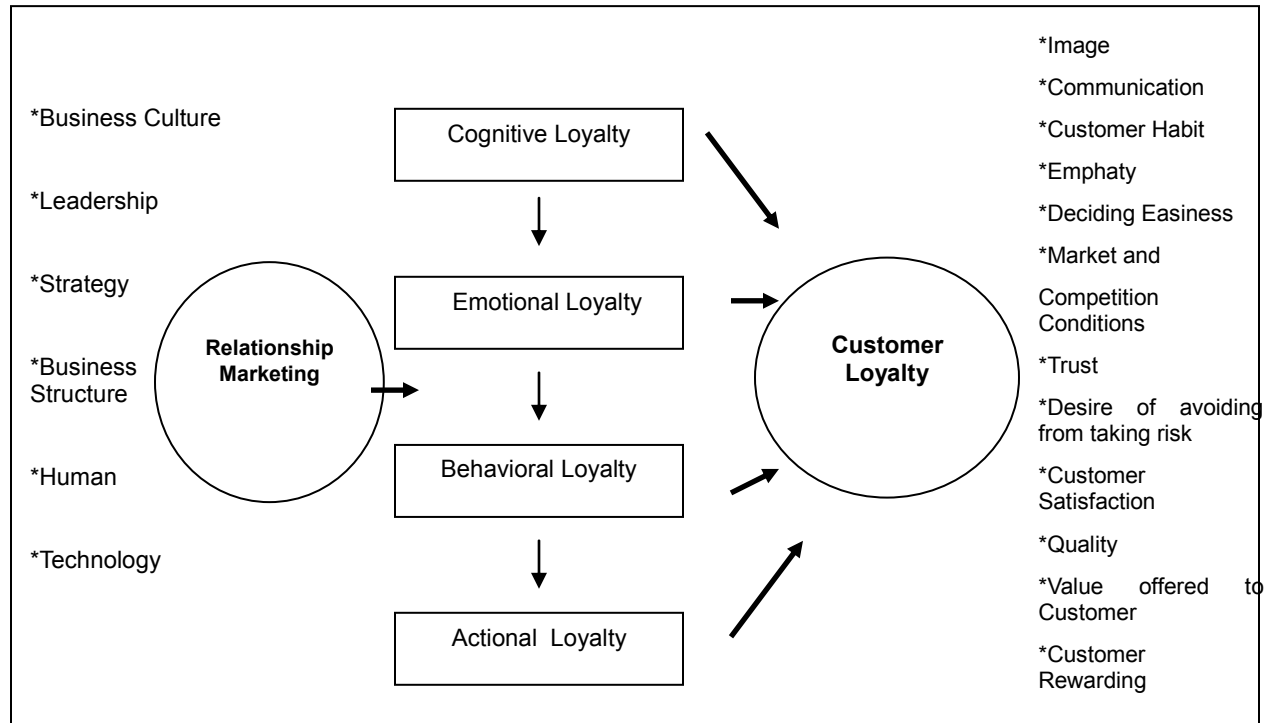
Figure-1: Formation Model of Customer Loyalty

The main objective of relationship marketing is to provide customer loyalty by forming long term and interactive relationships between business and customers. (Selvi (a), 2007). While customer loyalty is provided, people pass from cognitive loyalty, emotional loyalty, behavioral loyalty and actional loyalty stages being characteristics peculiar to themselves. The customer reaching to each of these four levels are accepted as a dependent customer. While it is passed from one to another customer loyalty stages, customer has to be satisfied with the service or goods provided by business. Otherwise, customers do not pass to next loyalty stage.

OBJECTIVE OF STUDY

With fast increase of the number of private hospitals in health services sector in Turkey, the quality of service presented in hospitals has increased to take more share from market, and customer satisfaction has gained importance at the top level to set up long term relationships with customers. The main objective of this study is to reveal the importance of relationship

marketing on feeling trust to hospital by patients seeking care from Kadıköy Universal Hospital.

DATA COLLECTION

This study was conducted with the aim of determining the role of relationship marketing for providing customer loyalty and evaluating opinions of patients to relationship marketing activities as a heuristic research. The most widely used data collection tool in heuristic research is a questionnaire. Therefore, a questionnaire was used as the data collection tool in this study. Within this scope, questionnaire questions were formed by taking the subjects and similar studies in literature and the opinions of experts into consideration. Questionnaire form is composed of total 16 main questions including the questions of dual, pentad, multiple choice and ranking order of importance.

METHODOLOGY AND LIMITATIONS OF STUDY

Various analysis techniques were used for data analysis. Frequency distributions, arithmetic mean, cross tables, chi square tests were run. Arithmetic mean interval was calculated by dividing into three sections in pentad likert scaled questions for the analysis of data. The arithmetic mean values were separated as follows: 1,00-2,33 as low, 2,34-3,66 as medium 3,67-5,00 as high.

The scope of the study was limited to Kadıköy Universal Hospital affiliated to German Universal Hospital. Questionnaire was implemented among outpatients of the polyclinics of eye, ear nose and throat, cardiology, general surgery, internal disease, urology, dermatology, gynecology, neurology and urological disorders on the basis of voluntariness. The questionnaire was applied to 371 patients.

Sample size has been determined as follows.

The total number of patients visiting Kadıköy Universal Hospital in a year is 10,838. Accordingly, the sample size has been determined using the formula below. Yazıcıoglu ve Erdoğan (2004).

$$ n \text{ (Sample Size)} = \frac{N \cdot t2 \cdot p \cdot q}{d2 \cdot (N-1) + t2 \cdot p \cdot q} $$

N: Number of individuals in the population
n: Number of individuals in the sample
p: The probability of the event happening
q: The probability of the event not happening
t: Studentized t statistic
d: Sampling error

$$n \text{ (Sample Size)} = \frac{10.838 \times (1.96)2 \times (0.5 \times 0.5)}{(0.05)2 \times (10.838\text{-}1) + (1.96)2 \times (0.5 \times 0.5)}$$

n (Sample Size) = 371

HYPOTHESIS OF STUDY

"Being satisfied with the services offered by hospital related to relationship marketing affects customer loyalty" comprises the hypothesis of study.

FINDINGS AND DISCUSSION

It was seen that the majority of the participants was under the age of 40 (63,8%). 49,6% were male patients and 50,4% were female patients. It was seen a occasional equity between the numbers of male and female patients. It was seen that nearly half of the participants has a university degree (46,6%). Concerning the income levels, it was seen that 7% of the participants took wage above 2000 dollar monthly. It can be said that the great majority of participants had medium level income.

Table- 1: Main Characteristics of Participants

AGE GROUPS	NUMBER	%
20 and below	47	12,6
21 – 30	115	30,9
31 – 40	75	20,3
41 – 50	57	15,4
50 and above	77	20,8
TOTAL	**371**	**100,0**
GENDER	**NUMBER**	**%**
Male	184	49,6
Female	187	50,4
TOTAL	**371**	**100,0**
EDUCATION LEVEL	**NUMBER**	**%**
Primary education	60	16,2
High school	138	37,2
Associate degree	33	8,9
Graduate	129	34,8
Post graduate / Doctorate	11	2,9
TOTAL	**371**	**100,0**
INCOME LEVEL /	**NUMBER**	**%**
750 TL and below	87	23,5
751 TL – 1.500 TL	151	40,7
1.501 TL – 2.250 TL	74	17,3
2.251 TL – 3.000 TL	33	8,9
3.001 TL and above	26	7,0
TOTAL	**371**	**100,0**
PROFESSION GROUPS	**NUMBER**	**%**
Public Sector	28	7,6
Private Sector	157	42,4
Retired	61	16,4
Housewife	58	15,6
Student	61	16,4
Other	6	1,6
TOTAL	**371**	**100,0**
HEALTH COVERAGE	**NUMBER**	**%**
SSI (Social Security	332	89,5
Special Health Insurance	11	2,9
Special Health Insurance +	20	5,4
Other	8	2,2
TOTAL	**371**	**100,0**

When the socio-economic status of the hospital and its surrounding is taken into

consideration, people having medium income levels reside in the region and there is a university nearby. Therefore, it draws attention to that the resident of the region are people having income at 750 TL or below at 23,5% level and its great majority are university students.

42.4% of the participants were composed of the ones working in private sector. 16.4 % of them were retired persons and students and 15,6% were housewifes. The ones working in public and other profession groups represent smaller ratio.

The great majority of the patients participating (% 89.5) to the questionnaire consists of people affiliated to (Social Security Institute) SSI. 2,9% of the participants remaining out of these have private health insurance and 5,4% have both private health insurance and SSI. The others (2,2%) had no health coverage.

As Kadıköy Universal Hospital that is a SSI contracted hospital do not demand any extra prices from its patients out of the rate determined by the SSI agreement, the patients with SSI have preferred this hospital.

FINDINGS RELATED TO EVALUATION OF PATIENTS ON HOSPITAL WHICH QUESTIONNAIRE WAS APPLIED

The answers given to the questions asked to determine satisfaction or dissatisfaction of the patients are shown in Table 2.

Table-2: Attendance Levels of Patients to the Definitions Given for Evaluation of Hospital that Questionnaire is applied

EVALUATION CRTERIA	Excellent		Good		Medium		Insufficient		Very insufficient		Total		Aver age.	Level*
	S	%	S	%	S	%	S	%	S	%	S	%		
Sincerity, intimate and helpful behavior of employees	175	**47,1**	180	**48,5**	14	**3,8**	2	**0,6**	0	-	371	**100**	4,42	High
Giving the feeling of confidence	149	**40,2**	191	**51,5**	30	**8,0**	1	**0,2**	0	-	371	**100**	4,31	High
Transaction speed	94	**25,3**	187	**50,4**	83	**22,4**	7	**1,9**	0	-	371	**100**	3,99	High
Easiness of giving information	124	**33,5**	175	**47,3**	70	**19,0**	1	**0,2**	0	-	371	**100**	4,14	High
Quality of provided services	145	**39,1**	171	**46,1**	50	**13,5**	5	**1,3**	0	-	371	**100**	4,22	High
Diversity of provided services	139	**37,5**	174	**46,9**	50	**13,5**	8	**2,1**	0	-	371	**100**	4,19	High
Adequacy of physical possibilities (cleaning, parking area, waiting hall, etc.)	80	**21,6**	143	**38,5**	112	**30,2**	31	**8,4**	5	**1,3**	371	**100**	3,70	High
Use of devices with high technology	148	**39,9**	164	**44,2**	53	**14,2**	4	**1,1**	2	**0,6**	371	**100**	4,21	High

Average: 1,0 – 2,33 Low / 2,34 – 3,66 Medium / 3,67 – 5,0 High

As can be seen from Table 2, the great parts of the patients have been pleased with the services of hospital. According to Table 2, of the participants, 47,1% from sincerity of employees, 40,2% from giving the feeling of confidence, 25,3% from transaction speed, 33,5% from easiness of giving information, 39,1% from quality of services offered, 37,5% from diversity of services presented, 21.6% from adequacy of physical possibilities and 39,9% from use of devices with high technology have stated their satisfaction.

EVALUATION OF EXPRESSIONS ASSOCIATED WITH CUSTOMER LOYALTY

The distribution of the answers given to the question whether they take service from hospital more than one is seen in Table 3. As can be seen from Table 3, 65,2% of the patients participating to the research took service from hospital more than one and 34,8% from one hospital.

Table- 0: Distribution of Patients Taking Service from multiple Hospitals

DO YOU TAKE SERVICE FROM MULTIPLE HOSPITALS?	NUMBER	%
Yes	242	65,2
No	129	34,8
TOTAL	371	100,0

Although great majority of patients were pleased with the service given at the hospital, they have continued taking service from multiple health organizations. According to these data, it was revealed that taking service from one health organization was not sufficient for patients. As 65% of patients have taken service from multiple hospitals, it can be said that customer loyalty has not developed on the patients of this hospital. This situation shows that in order to provide customer loyalty, different marketing strategies out of customer satisfaction are needed.

The replies taken from the question, why patients taking service from multiple health organizations want to take service from health organizations more than one, are shown in Table 4.

Table- 4: Reasons for Patients taking Service from Multiple Hospitals

REASONS OF TAKING SERVICE FROM MULTIPLE HOSPITALS	NUMBER*	%**
Different presentation of same services	127	52,5
Having agreements with different hospitals of the institution it works with	46	19,0
My health coverage enables to take service from different hospitals	135	55,8
Need of taking faster service and long waiting time at hospitals	21	8,7
Closeness to my house/workplace (accessibility)	106	43,8
The need of looking for the hospital having devices with high technology	76	31,4
Inadequacy of complete physical opportunities in one hospital	41	16,9
Desire of feeling safe itself and not trusting to one hospital	24	10,0
Having the habit of taking service from multiple hospitals	21	8,7
Employees behaving more intimately and helpful	17	7,0
Expertise of the hospitals at the branch which I will take service compared to other hospitals	137	56,6
Other	7	2,9

* Multiple questions have been marked according to question format.
** It is evaluated according to 242 people taking service from multiple hospitals.

56,6% of the patients using multiple hospital have stated that they use different hospitals as the hospitals are more expert at the branch which they will take service. 55,8% of the patients taking service from multiple hospitals have said that their health coverage allows to take service from different hospitals. The great part of the patients coming to hospital is composed of the people having SSI health coverage at 89,5 level as can be seen from table-4 as well. As SSI has agreements with the other private hospitals located in the region, it plays a big role in patients to go to other hospitals. They have explained that other hospitals have met their needs at different branches and therefore they have used other hospitals too. 52,5% of the patients have stated they have gone to different hospitals in spite of the existence of the same services in this hospital. This requires the questioning of the services offered. Patients also prefer other hospitals as their expertise level on the basis of various branches and service quality are better

It has been asked to the patients to what extent they participate into the expressions

related to providing customer loyalty and the responses are shown in Table 5.

Table-5: Participation Levels to the Expressions on Customer Loyalty

EVALUATION CRITERIA	Excellent		Good		Medium		Insufficient		Very insufficient		Total		Avr.*	Level*
	S	%	S	%	S	%	S	%	S	%	S	%		
High service quality makes that person dependent to that institution.	225	60,5	136	36,5	10	2,7	0	0	1	0,3	371	100	4,57	High
If the services offered meets need of patient completely, patient feels loyalty to that hospital without giving importance to prices	64	17,3	125	33,7	135	36,3	45	12,1	2	0,6	371	100	3,54	Medium
Remembering of important days such as birth, marriage, etc. by hospital and privileges specific to people in such days makes patient continuous customer of that hospital.	115	31	138	37,2	71	19,1	36	9,7	11	3	371	100	3,83	High
People pleased with that hospital recommend that hospital to other people.	224	60,3	128	34,5	18	4,9	1	0,3	0	0	371	100	4,54	High
Though the prices of the hospital that we go continuously is a bit higher than other hospitals, a person feeling loyalty do not prefer other hospitals.	52	14,0	124	33,4	135	36,4	58	15,6	2	0,6	371	100	3,44	Medium
Hospitals should give importance to approach to patient of personnel and communication with patient at the same time while increasing service quality	204	55,0	149	40,1	15	4,1	3	0,08	0	0	371	100	4,49	High
Patients prefer to work with the hospital they know/recognize to provide feeling of trust and diminish risks.	156	42,0	133	35,9	73	19,7	8	2,1	1	0,3	371	100	4,17	High

Average: 1,0 – 2,33 Low / 2,34 – 3,66 medium / 3,67 – 5,0 High

It was seen that patients have participated at medium ratios to the expressions of "If the services offered meets need of patient completely, patient feels loyalty to that hospital without giving importance to prices" and "Though the prices of the hospital that we go continuously is a bit higher than other hospitals, a person feeling loyalty do not prefer other hospitals" and at higher rates for other expressions. According to these results, it can be said the patients show loyalty to the hospital in the question.

EVALUATION OF THE FACTORS AFFECTING FEELING A POSITIVE ATTITUDE AND/OR LOYALTY TO HOSPITAL

The answers asked to the question, what affects having a positive attitude about hospital and/or feeling loyalty to hospital for patients participating to the research are given in Table 6.

Table-6: Service Marketing Factors Affecting Feeling Loyalty

EVALUATION CRITERIA	Affects completely		Affects		Affects partially		Do not affect		Never affect		Total		Avr.*	Level*
	S	%	S	%	S	%	S	%	S	%	S	%		
Good service given by hospital	265	71,4	99	26,7	5	1,3	1	0,3	1	0,3	371	100	4,68	High
Finding fast solution to the problem encountered about personnel by hospital administration	213	57,4	136	36,6	20	5,4	1	0,3	1	0,3	371	100	4,50	High
Providing free or low cost possibilities or gettin gifts by the hospital that are gone continuously	175	47,2	148	39,9	35	9,4	10	2,7	3	0,8	371	100	4,29	High
Habit to hospital	110	29,6	116	31,3	122	32,9	20	5,4	3	0,8	371	100	3,83	High
The risk of taking service from different hospitals	103	27,7	100	27,0	106	28,6	56	15,1	6	1,6	371	100	3,64	Medium
Offering service specific to person which is not presented by other hospitals	178	48,0	133	35,8	54	14,6	6	1,6	0	0	371	100	4,30	High
Continuous communication of hospital with patient, giving the feeling that its close to patient not only at disease but every time	142	38,2	144	38,8	67	18,1	16	4,3	2	0,5	371	100	4,09	High
High image and reliability of hospital	170	45,9	156	42,0	38	10,2	6	1,6	1	0,3	371	100	4,31	High
Remembering of important days such as birth, marriage anniversaries, etc. by hospital and making privileges specific to person	120	32,3	140	37,7	70	18,9	34	9,1	7	1,9	371	100	3,89	High
Addressing of hospital personnel with your name, their kind and helpful behavior	187	50,4	134	36,2	37	10,0	9	2,4	4	1	371	100	4,32	High

According to Table 6, it was revealed that the most significant factor affecting customer loyalty and providing their positive attitude is good service given by the hospital. However, it was also seen that all other factors were also efficient for providing customer loyalty. But it was observed that the importance level of the choice on the risk of taking service from different hospital was low compared to other factors.

With the purpose of evaluating marketing relationship activities on providing customer loyalty, impact levels have been searched by evaluating criteria including providing free or low cost possibilities or giving gifts by the hospital that are gone continuously, offering service specific to person, being in continuous communication of hospital, getting feeling its closeness to patient not only at patient but also every time, remembering of important days such as birth, marriage, etc. anniversaries by hospital or making privileges specific to person, addressing with your name, kind and helpful behaving by hospital personnel. According to this, it has been concluded that all criteria has high importance level in the averages close to each other about providing customer loyalty.

Table-7: The relationship Between Satisfaction Degree from Hospital and Customer Loyalty according to Pearson Correlation Analysis

VARIABLES	Satisfaction Levels of Patients
Participation Degree to Customer Loyalty	0,47 (r)

When the effect of satisfaction degree of patients from hospital on customer loyalty is measured by pearson correlation analysis among total scores of variables, a positive correlation has been found statistically.

Detailed explanations of correlation coefficients determined by Cohen (1988) are shown below in Table 8.

Table- 8: Value of Correlation Coefficient

Correlation	Negative	Positive
Low	-0,29 -0,10	0,10- 0,29
Medium	-0,49 -0,30	0,30 - 0,49
High	-0,50 -1,00	0,50 - 1,00

According to Table 8, medium level of correlation value shows there is no effficent relation between them. According to this, it has been concluded that although the effect of satisfaction levels of patients from hospital on customer loyalty is positive statistically, it is not at the enough level to affect patients very much.

DISCUSSION

Marketing activities in all sectors particularly service sector have been extensively changed and developed. Health services sector has also tried to adapt to this change by forming various marketing activities and marketing strategies within this extensive change.

As in the marketing activities in other sectors also in service marketing, competition tools (technology, quality service, customer satisfaction, distribution, promotion, etc.) and depending

on these purchasing models of customers change very rapidly as well. The main reason is that nearly all businesses have similar characteristics such as similar technology and quality standard with regard to the production and presentation of quality service today. These reasons have also addressed the requirement of finding other competition tools except for quality, technology, customer satisfaction. At the same time, businesses should analyze their primary superiorities properly and develop these superiorities in order to continue their existence in market and provide competition advantage. Beyond this, they should create differences not to be imitated by their rivals. With the strategies of relationship marketing and customer loyalty emerging as a significant competition tool in this stage, businesses should be a head for the relationship oriented marketing from conventional marketing and for customer loyalty from customer satisfaction.

Providing customer loyalty with relationship marketing strategies by businesses and positive communication established with their customers, has given the characteristics of being long term, sustainable and significant competition advantage to customer loyalty. In addition, it has been concluded in research that providing customer satisfaction is not sufficient for customers coming again for business and keeping existing customers is both cheaper and more affordable than gaining new customers. Therefore, it has been necessary to apply strategies to keep customers in business after gaining and certainly looking for the ways of developing positive communication with their customers and providing customer loyalty for business.

In order to create dependent patients, hospitals should not only predict what they want but also ask what they request and what they care clearly and directly. If this is not carried out, extra resource will be spent unnecessarily on the improvement of the subjects which are not cared by patients. The complaints made by patients on the services create significant opportunities for the improvements to be realized as well. As a result of knowing the problem and providing rapid and efficient solution by following up them closely with the patient, the patient will mention about the interest and mention about it to people he knows and will become a dependent patient.

Highness of service quality is among the most important factors influencing the loyalty of patient to that institution. Hospitals can also reach to the conclusion that they should give importance to the approach of their personnel to patients and communication on one hand while increasing their service quality on the other hand in order to provide customer loyalty. It has been revealed that patients feeling themselves private or getting them feel private by hospital employees are efficient for being a dependent customer to hospital. Furthermore, the most of the patients participating to the questionnaire have implied that if they are pleased with the services offered by hospital, they will recommend the hospital to other people too. This type of behaviors of the patients allows making advertisement of hospital in the most efficient way and freely and exhibiting of loyalty feelings to the hospital of the people in different way. It is possible to mention that most of the patients participating to the research prefer going to the hospital they know, recognize in order to minimize risks and provide feeling of trust.

It is seen that the factors having high impact on loyalty to provide and/or increase loyalty of patients to hospital are;
- High-qualified service and providing good service,

- Finding fast solutions to the problems that patients encounter,
- Making the patients feel that you are with them not only at disease but also every time,
- Remembrance of special days such as birth, marriage, etc. anniversaries and making privileges specific to person,
- Providing their satisfaction with hospital,
- Giving importance not only to increasing service quality but also to the communication of employees with patients and addressing to patients with their names,
- Image highness of hospital,
- Providing feeling of trust to the hospital.

Another significant result obtained from the study is that it was seen that there was a medium level correlation between their satisfaction levels from hospital and customer loyalty. It should be taken into account that patient satisfaction is efficient for customer loyalty and exists as another factor affecting customer loyalty.

In conclusion, the recommendations to be useful for health organizations can be given as follows;

- Hospitals should know that keeping existing patients is significant as much as gaining new ones and should not forget that existing patients of business comprise potential customer group of other rival hospitals.
- The variables being efficient in providing customer loyalty differ from one patient to another depending on age, gender education level, income level, and profession group and health coverage. Therefore, when relationship marketing strategies are applied for the formation of customer loyalty, special marketing strategies should be implemented in accordance with these properties of patients.
- The costs made for providing customer loyalty with respect to relationship marketing should never be considered as unnecessary expenditure.
- If hospitals want to be preferred by patients, they should be careful on giving trust to patients, try to provide their employees being kind and helpful in their relations with patients and easy way of payment (installment, visa card, discount, etc.) should be presented.
- It should be known that success cannot be expected from variables by themselves being effective for providing customer loyalty such as image of health organization, communication with patients, empathy established with patients, market and competition conditions of health sector, customer satisfaction and quality, value offered to customer and rewarding customers. These should be considered and implemented as a whole when necessary.

The other factors to be effective on customer loyalty should be searched.

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A DESCRIPTIVE MODEL OF IMMIGRANT ENTREPRENEURSHIP: INITIAL FINDINGS

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EXTENDED ABSTRACT

Over the past ten years, new immigrants to the United States have tended to settle in small and middle-sized cities in inland areas rather than the usual port-of-entry large cities in which immigrants settled in the past. This change is largely due to policy changes in government and private programs related to the settlement of refugees, as well as to individual migrants' personal choices. These new immigration patterns are transforming United States cities as the changing ethnic compositions of neighborhoods lead to new ethnic businesses, influence regional tastes and behaviors, and create new competition and supply chain patterns. Meanwhile, traditional businesses hire newcomers with work ethics based on different cultures, and social service providers scramble to support a widening variety of cultures and languages (Kloosterman et al 2000, 1999). Because it has been found that immigrants tend to have higher self-employment rates than natives in most countries (Lofstrom 2002), the new migration patterns have generated a need to better understand the entrepreneurial business patterns of immigrants and the effects of immigrant-entrepreneurship on assimilation and acculturation In addition, the flow of foreign students to American universities produced a number of highly educated and motivated graduates who chose to stay in the U.S. and found businesses of various types.

Despite the apparent flow of immigrants and new businesses, however, information on the patterns of settlement, organization, industries, customers, social and governmental issues, etc. is rather sparse. One reason for that is the lack of usable public data and other are the many difficulties involved in gaining relevant information. This paper reports on the research design and collection of such data in one metropolitan area. Part of this report is to admit into the academic research discussion the problems of obtaining data when trying to go beyond convenience samples, government program participants, or qualitative interviews in researching entrepreneurship generally and immigrant entrepreneurship in particular.

The current report focuses on identifying potential social, cultural, and situational factors that may influence migrants' opportunities and propensity to open new businesses in their new communities. Drawing these from Johnson, Munoz and Alon (2007), we recognize that in addition to these three broad types of factors, one would be expected to include psychological factors such as personal motivation and goals, as well as macro-environment factors in a fully specified theoretical model. In addition, one might also be expected to include demographic factors. These have not been included here because, following Gartner's (1988) directive that the question should not be "what traits does a business founder have" (referring to socio-demographic traits), but, "what behaviors does he exhibit and why?" We have also chosen to focus on social, cultural, and situational factors as these are factors that transcend the

individual and operate at the level of the social system.

It must also be noted that there is no "monolithic" model of immigrant entrepreneurship. Early migrant researchers studied ethnic enclaves to understand how enclaves assisted or resisted assimilation. However, as researchers began comparative studies, ethnic related differences were noted in such factors as different levels of involvement in industry sectors (such as in retail over wholesale and manufacturing) and in the importance of ethnic financial and patronage support (Heibert 2002). However, once the business behavior diversity of ethnic groups is recognized, attention can turn to efforts to understand those differences.

Despite an extensive research history, there is no clear understanding of the factors that underlie immigrant business formation. Sometimes beliefs about significant ethnic patterns of capital sourcing is based on anecdotal reports (traditions of group money pooling for example), while accurate in some cases, failed to be observed as a general explanation for the ability and determination of immigrants to found enterprises (Min 2000). Issues of language, education, social class, and certain types of cultural belief emerged as significant in some studies of how different groups interacted with their new environments (Levent 2003, Johnson 2007, Morris 2005) and yet, did not, in the end, demonstrate that pre-existing social capital or family patterns were significant in distinguishing the self-employed from those not founding firms. Moreover, persons not generally associated with either histories of self-employment nor privilege became business founders. Clearly, the factors influencing immigrant business formation are complex and variable and the field may still be considered exploratory and appropriate for qualitative investigation.

RESEARCH DESIGN

A three step process for collecting information was devised as there was little available information on the locations or numbers of businesses in the metropolitan area founded by immigrants.

1. *The diversity of immigrant communities required extensive outreach efforts to identify community contacts that would assist in identifying and supporting research collection efforts. As part of that effort, highly visible business immigrant business leaders and members of the various ethnic Chambers of Commerce were invited to participate in two focus groups. The focus groups were directed to discuss some of the issues identified in previous research as well as their understanding of the immigrant business community in the central Tennessee region.*

2. *Thirty business owners selected for diversity of business type, ethnicity, and gender. In depth interviews were conducted by the project staff. The staff were chosen both for competency and social networking: graduate students from Mexico, Russia, India, Tunisia, and China were hired. They participated along with the principles in conducting the interviews after training and understanding the interview schedule.*

3. *A survey questionnaire was developed and refined based on results from the first two stages. Getting respondents was the most difficult portion: distrust over who would see the survey results, business owners lack of free time, identification of likely respondents were among the issues. We did prepare two versions, one English and*

one Spanish. Surveys were both paper and online. Eventually we were able to collect full data from 105 respondents. Analysis of the results is now underway.

Preliminary results from analysis of the depth interviews and the focus groups are reported.

DETERMINANTS OF PURCHASE INTENTIONS FOR CELL PHONES AMONG COLLEGE STUDENTS

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EXTENDED ABSTRACT

Cell phone industry sales are declining (Gartner 2009), partly due to the current global recession and to the increasing market saturation. Given the current market situation, telecommunication companies must focus more on leveraging the purchase intentions and brand loyalty of their customer base. These factors are important, as small changes in loyalty and retention can lead to large changes in profitability (Reichheld 1996). What factors most influence customers to upgrade their cell phone and remain with the same company?

This paper focuses specifically on African American college students, who are heavy users of cell phones but are underrepresented in the literature. The intent is to examine the role of brand loyalty and selected personal variables as predictors of one's intentions to purchase a new cell phone. A secondary focus is on gender differences.

Research from social psychology suggests that purchase intentions should be a strong predictor of an individual's behavior (Fishbein and Ajzen 1975). Although using the purchase intentions scale is an effective means of evaluating an individual's likelihood to buy a product, results differ considerably based on the goods that are being considered to be bought. On average, results have shown that high purchase intentions scores are indicative of a strong likelihood of the item being purchased, but the strength of the relationship varies from study to study (Young, DeSarbo and Morwitz 1998). Significant differences in purchase intentions can occur due to a consumers' personal values and psychological wellbeing (Keller 1993).

The present study examines the influence on purchase intentions to buy a new cell phone of the following variables: self-esteem, overall grade point average (OGPA), hours worked per week (HWPW), innovativeness, brand loyalty, collectivism/individualism, and materialism. Some of these hypothesized relationships have been supported in previous literature (e.g., brand loyalty linked to increased use of brand, Chaudhuri and Holbrook 2001), while many are exploratory and need further testing. The authors used an understanding of the population of interest and theoretical development of these constructs to establish exploratory hypotheses.

The sample was from a school of business at an historically black university in the southern part of the United States. The sample consisted of 123 participants: 41% percent African American male and 59% percent African American females. Most research participants were between the ages of 18 to 29 years of age (93%) and full-time students (94.3%). Participants were Management (33.3%), Marketing (18.7%), Accounting (11.4%), Information Systems (11.4%) and Other (21.1%) majors.

The constructs were measured with Likert-type scales by using the following instruments found in the marketing literature: Purchase Intentions Scale (PIS; Klein et al. 1998); Brand Loyalty Scale (BLS; Abelson 1988); Brand Equity Scale (BES; Lin and Wang 2000); Materialism Scale (MS; Richins 1992); Innovativeness Scale (IS; Goldsmith and Hofacker 1991); Individualism Scale (INS; Erez and Early 1987); Collectivism Scale (CS; Erez and Early 1987); and Self-Esteem Scale (SES; Rosenberg 1965). Scale reliabilities were mostly acceptable, but alpha reliability for the INS and CS scales were lower than desired.

The proposed purchase intentions model was tested using structural equation modeling with LISREL 8.8 (Jöreskog and Sörbom 2006) and the two-step approach to structural equation modeling propounded by Anderson and Gerbing (1988). The covariance matrix was used as the input for all models and the maximum likelihood estimate was employed to produce the model parameters. The model achieved satisfactory fit to the data; the means, standard deviations, reliability estimates, and zero-order correlations are displayed in Table 1.

Five of the seventeen hypothesized path coefficients were statistically significant. Based on significant paths, as innovation increased in the unit, purchase intentions increased. In addition, as self-esteem increased, purchase intentions increased. Collectivism and overall grade point average also related positively to purchase intentions. Surprising, the path from brand loyalty to purchase intentions was inversely related. The model explained 70% of the total variance for purchase intentions and 4% the variance for brand loyalty.

In an additional exploration, ANOVA analysis was conducted with the independent constructs and Gender. The one-way ANOVA with Gender as the factor variable had a statistically significant omnibus F-test for Collectivism and Overall Grade Point Average. Males reported higher collectivism scores, while females reported higher overall grade point average scores than males. This exploratory extension to the study did not include hypotheses.

The current study sought to examine indicators of cell phone brand loyalty and purchase intention for a specific market of African American college students at a southern university. Comparing the results with previous research on more general populations could yield possible differences that might indicate the need to adapt marketing strategies and research for certain demographic groups.

The findings have important implications for marketing new products such as cell phones. Prime targets in this market would include collectivist individuals who reside in groups, thus marketing promotion should appeal to strong group bonds. Self esteem appeals could also be effective in helping people feel better about themselves and more open to a new purchase. Finally, targeting the innovators among the group, which apparently could include those with higher OGPA, would have higher purchase returns and possible opinion leader effects. For example, cell phone companies should target individuals in college honor societies.

Based on exploratory gender analysis, gender-based differences in marketing may be warranted. For example, advertisements could appeal to young African American men by offering group plans or stressing that this plan is best for the group. Meanwhile, ads that target

African American women would take the opposite approach, portraying its products with an appeal that the phone or plan is for the independent woman.

The current study has several limitations, including a very homogeneous sample from a single African American college. Further research should extend to other colleges and other age groups to determine the extent of generalizability. Future research should also explore more of these demographic differences in models of brand loyalty and purchase intentions. As marketing becomes more focused and customized, these findings can have beneficial implications for marketers.

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APPENDIX

Table 1: Means, Standard Deviation, Correlations, and Reliability Estimates

Variables	Mean	s.d	1	2	3	4	5	6	7	8	9
1. PIS	12.18	4.86	(0.83)								
2. BLS	19.95	7.94	-0.49**	(0.89)							
3. IS	15.58	5.25	0.45**	0.06	(0.75)						
4. SES	40.15	4.51	-0.04**	-0.16*	-0.42**	(0.79)					
5. BES	23.95	7.67	0.25**	0.02	0.37**	-0.03	(0.90)				
6. MS	26.02	5.76	-0.02	-0.06	0.04	-0.04	-0.47**	(0.64)			
7. HWPW	17.00	14.39	0.04	-0.01	-0.15	0.00	-0.14	-0.02			
8. INS	14.93	3.89	0.12	-0.04	0.1	-0.08	0.19**	0.11	-0.54**	(0.56)	
9. CS	15.44	3.18	0.63**	-0.02	0.57**	-0.25**	0.26**	0.00	0.08	0.09	(0.40)
10. OPGA	2.76	0.46	-0.17**	0.06	-0.24**	0.04	-0.05	-0.11	0.09	-0.14	-0.49**

n= 123

Reliability estimates are on the diagonals in parentheses. ** $p \leq .05$ *$p \leq .10$
PIS = Purchase Intention Scale; BLS = Brand Loyalty Scale; IS = Innovativeness; SES = Self-Esteem Scale;
BES = Brand Equity Scale; MS = Materialism Scale; INS = Individualism Scale; CS = Collectivism Scale

SPORTS SPONSORSHIPS IN NASCAR: AN EMPIRICAL INVESTIGATION OF CHANGING SPONSORS

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EXTENDED ABSTRACT

The state of the economy has lead many companies to reconsider how they are spending their marketing dollars. No one can afford to waste marketing dollars on ineffective efforts. Across many sports, one of the areas where marketing dollars have been evaporating has been in the area of sports sponsorship. In NASCAR, many sponsors reduced exposure this year; some organizations did not return. Teams reorganized and retrenched. Drivers often changed teams and/or affiliations.

The loss of marketing dollars in this area is unfortunate because research has indicated that both athletes and organizations benefit from a healthy relationship. Organizations look for creative ways to tie consumers emotionally to their products (Varley 2008). One of the manners in which organizations develop emotional ties is with sponsorships in sports for which their target consumers have a strong interest (Mason, 2005). Roy and Cornwell, (2003) indicated that sponsorships offer a "means of avoiding this clutter by enabling sponsors to identify and target well-defined audiences in terms of demographics and lifestyles."

Are organizations helped or hurt when they change affiliations with a NASCAR driver? Does the current environment of change impact consumers' ability to identify current NASCAR sponsor relationships? The purpose of this study is to provide more insight into consumer responses to the changing landscape of sport sponsorships in NASCAR and to examine the predictive characteristics of establishing strong associations between sponsor and driver. Additionally this study examines the impact of altering standing relationships and changing affiliations within the NASCAR context. Managerial implications are provided.

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CONSUMER ETHNOCENTRISM, PARTIOTISM, GLOBAL OPENNESS AND COUNTRY OF ORIGIN EFFECT: A PROPOSED STUDY

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EXTENDED ABSTRACT

Today's businesses and consumers are more globalized than ever before due to the internet and other technologies; the trend away from planned economies and toward free market economies; and the movement away from government control and toward more democratic leaning governments. Since many American businesses are partnering, allying themselves with or even being take over by foreign companies , examining consumers' attitudes and feelings towards a number of aspects of globalization is potentially interesting and useful topic. Therefore, this paper proposes a study drawing on four general areas of consumer behavior including consumer ethnocentrism, patriotism, global openness and country of origin effect.

The primary area of interest in this study is consumer ethnocentrism. Consumer ethnocentrism is the belief held by American consumers about the appropriateness, indeed morality, of purchasing foreign products (Shimp and Sharma, 1987). The construct of ethnocentrism relies on the presumption that the consumers' patriotic emotions will have significant effects on attitudes and purchase intentions and their ultimate behavior (Shimp and Sharma, 1987).

Patriotism is defined as love for or devotion to one's country (Albarq and Nik Mat, 1995). Global openness is the consumer's mindset or consumer's openness to globalization (Suh and Kwon, 2002). Finally, the country of origin effect is defined as the country of origin or the country of manufacturing for a specific product (Elliot, Cameron, and Acharya, 1994). All of these variables have a relationship with consumer ethnocentrism, and this study will seek to replicate and extend the findings of past studies.

After defining consumer ethnocentrism, patriotism, global openness and the country of origin effect, literature related to each variable is examined. Survey research is then proposed utilizing a questionnaire consisting of established scales regarding consumer ethnocentrism (Shimp and Sharma, 1987), patriotism (Kosterman and Feshbach, 1989), global openness (Cleveland and Laroche, 2007), the country of origin effect (Klein, Ettenson, and Morris, 1998) and a number of demographic variables. Those to be surveyed include samples taken from business administration students in the United States and abroad as well as military personnel and civil servants. These groups were chosen in order to compare results to previous research. Once questionnaires are collected and analyzed it is proposed that results, conclusions, and recommendations be reported.

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DETERMINANTS OF TOURISM DESTINATION COMPETITIVENESS IN CHINA

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ABSTRACT

With an increasingly intensive competition among tourism destinations, tourism researchers and practitioners start to consider important factors that would make a particular tourism destination more competitive than other tourism destinations in travelers' mind. This paper proposes a model to measure the determinants of tourism destination competitiveness in China and then empirically assess these factors' relevant importance. Survey data were gathered from a wide spectrum of tourism specialists such as tourism practitioners, government employees working in tourism development bureaus, as well as teachers and graduate students in the tourism management field. Empirical findings revealed that the concept of tourism destination competitiveness are multi-dimensional in nature, including tourism resources, tourism superstructure, infrastructure, destination management, destination supporting factors and tourist service quality.

STRATEGIC AND TACTICAL ISSUES IN MARKETING THE COMMUNITY BANK

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ABSTRACT

Over the past few years, the banking industry in the United States and several other countries has seen significant upheavals. Brought on as a result of dubious fiscal management, questionable lending practices and outright fraud, the banking crisis of recent years has shaken the industry to the core and invited unprecedented regulatory and public scrutiny. While the failing fortunes of the behemoth banks have garnered most of the media attention, smaller community banks have not been exempt from feeling the effects of the banking crisis. The objectives of this paper are to: provide a framework for community banks to identify attractive positions in the competitive landscape of banking, to identify potential source of strategic advantage, and to evaluate and select tactics for achieving competitive advantage. Based on case analyses of several community banks, the paper presents recommendations for the development of successful strategies and tactics for community banks.

Due to the high levels of media coverage, increased public scrutiny and financial instability of some of the largest banks, consumer confidence in the stability and integrity of banks has been shaken. The first task of community banks should be to keep customers' confidence in their institutions and use trust as a salient attribute in distinguishing themselves from their large competitors. Community banks can also use their personalized service encounters as a distinguishing factor. Community banks' smaller size and reach require a limitation of their strategic scope and consequently a differentiation strategy that includes approachability, community involvement and a focus on small business banking.

Case studies of several community banks reveal service differentiation to be a significant contributor to the successful execution of a focus strategy for community banks. Service differentiation allows community banks to successfully compete with other community banks as well as with larger banks. Successful banks utilize both high-tech and high-touch approaches to enabling a differentiated service experience and consequently building durable customer relationships.

LOGISTICAL OVERVIEW OF IMPORTING PRESSURE RELIEF VALVES FORM INDIA INTO THE UNITED STATES

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ABSTRACT

This case study was conducted in order to gain a better understanding of the cultural issues and logistical processes associated with the import of a foreign made product into the United States. Specifically, the group worked with associates from the TYCO FlowControl division of TYCO INTERNATIONAL, to analyze the steps involved in importing Pressure Relief Valves from India into the United States. An in-depth analysis was completed, which details the complex cultural environment of India, and the impact it has on the importation process for a company doing business there. After the case study was completed, conclusions were drawn that reflect unique observations made while interviewing various TYCO FlowControl representatives. Finally, suggestions for improvement were presented, which could potentially improve the TYCO logistical importation process.

INTRODUCTION

Tyco Flow Control

Tyco International Ltd. is a diversified manufacturing and service company, with five main operating groups. Tyco Fire and Security is the world leader in the design, manufacture, installation, monitoring, and service of fire detection, protection, and suppression systems, as well as being the world leader in electronic security services. Tyco Flow Control manufactures high-tech valve and actuator products that are frequently utilized throughout the power generation, oil production and refining, chemical and petrochemical, pharmaceutical, food and beverage, gas, water, marine and shipbuilding, nuclear and allied industries. In 1997 Tyco acquired Keystone International Inc., which became an integrated brand under Tyco Flow Control. Houston-based Keystone was a world leader in the manufacture of valves, pipes, and other equipment used in the chemical, power, food/beverage, and petroleum industries.

KEYSTONE K-LOK® BUTTERFLY VALVES

The Keystone K-Lok® is a sophisticated version of the butterfly valve. A butterfly valve is a valve used for flow regulation in large pipe diameters. While the operation is similar to that of a ball valve, a plate or disc that is positioned in the center of the pipe, has a rod passing through it and is connected to an actuator on the outside of the valve. Rotating the actuator turns the disc either parallel or perpendicular to the flow. Unlike a ball valve, the disc is always present

within the flow, therefore a pressure drop is always induced in the flow, regardless of valve position. Butterfly valves are used during airport refueling, hydrocarbon processing, HVAC, purified gas, steam and vacuum services, and potable water.   Keystone K-Lok® high performance butterfly valves are also fully rated for applications in the marine, water, oil, gas and process industries.

Background on India

India, officially the Republic of India, is the seventh-largest country by geographical area, the second-most populous country, and the most populous democracy in the world.   The economy of India is the twelfth largest economy in the world by GDP and the fourth largest by purchasing power parity (PPP). The key factors that have fueled the strong growth of the Indian economy are a huge manpower base in the semi-skilled and skilled working class, diversified natural resources, and a strong macro-economy. In the 1990s, following economic reform from the socialist-inspired economy of post-independence India, the country began to experience rapid economic growth, as markets opened for international competition and investment. In the 21st century, India is an emerging economic power with vast human and natural resources, and a huge knowledge base. Economists predict that by 2020, India will be among the leading economies of the world.

LOGISTICS IN INDIA

Long Distance Transportation

According to a 2002 report by the Planning Commission, India has a road network of over 3.314 million kilometers of roadways (2.1 million miles), making it the second largest network in the world. However, only 47.3% of the roads in the total figure are paved.

Rail transport is also a commonly used mode of long-distance transportation. Almost all rail operations in India are handled by a state-owned organization, Indian Railways and the Ministry of Railways. The rail network traverses the length and breadth of the country, covering a total length of 63,140 kilometers (39,233 mi). It is said to be the 4th largest railway network in the world, transporting over 6 billion passengers and over 350 million tons of freight annually.

Sea Transport

Maritime transportation in India is managed by the Shipping Corporation of India, a government-owned company that also manages offshore and other marine transport infrastructure in the country. It owns and operates about 35% of Indian tonnage and operates in practically all areas of shipping business servicing both national and international trades. Additionally, there are several private companies that provide both domestic and international services. Ports are the main centers of trade. In India about 95% of the foreign trade by quantity and 70% by value takes place through the ports. The distinction between major and minor ports is not based on the amount of cargo handled. The major ports are managed by port trusts which are regulated by the central government.

Bullock Carts – are still used!

Bullock carts have been traditionally used for transport, especially in rural India. In recent years some cities have banned the movement of bullock carts and other slow moving vehicles on the main roads. However, one can still see them hauling freight – even pipeline valves!

OUTLINE OF STUDY

In order to gain a better understanding of the complex operating environment that TYCO operates within India, we made an effort to learn about relevant Indian cultural practices and the pertinent logistical processes involved in the transportation of PVRs from the Port of Chennai to their final destination in Houston, Texas.

INDIA GENERAL ENVIRONMENT

Culture

India's culture is marked by a high degree of syncretism and cultural pluralism. It has managed to preserve established traditions while absorbing new customs, traditions, and ideas from invaders and immigrants and spreading its cultural influence to other parts of Asia, mainly South East and East Asia. Traditional Indian society is defined by relatively strict social hierarchy. Traditional Indian family values are highly respected, and multi-generational patriarchal joint families have been the norm, although nuclear families are becoming common in urban areas. The various religions and traditions of India that were created by the blending of separate and distinct cultures have influenced other parts of the world too. In some rural areas and small towns, the caste system is still very rigid. Caste is also a factor in the politics of India. The Government of India has officially documented castes and subcastes, primarily to determine those deserving reservation (positive discrimination in education and jobs) through the census.

Social Environment

The social system of India has been shaped by its long history, unique geography, diverse demographics and the absorption of customs, traditions and ideas from some of its neighbors as well as by preserving its ancient heritages, which were formed during the Indus Valley Civilization and evolved further during the Vedic age, rise and decline of Buddhism, Golden age, Muslim conquests and European colonization. India's great diversity of religious practices, languages, customs, and traditions are examples of this unique co-mingling over the past five millennia.

Geographical Environment

The northern frontiers of India are defined largely by the Himalayan mountain range where its political boundaries with China, Bhutan, and Nepal lie. Its western borders with Pakistan lie in the Punjab Plain and the Thar desert. In the far northeast, the Chin Hills and

Kachin Hills, deeply forested mountainous regions, separate India from Burma while its political border with Bangladesh is defined by the watershed region of the Indo-Gangetic Plain, the Khasi hills and Mizo Hills. The Ganges is the longest river in India and forms the Indo-Gangetic Plain. The Ganges-Brahmaputra system occupies most of northern, central and eastern India, while the Deccan Plateau occupies most of southern India. Climate across India ranges from equatorial in the far south, to Alpine in the upper reaches of the Himalayas.

Port of Chennai

Chennai is the capital city of the Indian state of Tamil Nadu. Chennai is the fourth most populous metropolitan area and the fifth most populous city in India. Located on the Coromandel Coast of the Bay of Bengal, Chennai city had a population of 4.34 million in the 2001 census within the area administered by the Corporation of Chennai. The urban agglomeration of metropolitan Chennai has an estimated population over 8 million people.

Politics of India

According to its Constitution, India is a "sovereign socialist secular democratic republic." India is the largest state by population with a democratically-elected government. Like the United States, India has a federal form of government, however, the central government in India has greater power in relation to its states, and its central government is patterned after the British parliamentary system.

Legal Issues

The Indian legal and regulatory framework is based on the British legal and regulatory system which has been in operation since before India's independence. Indian laws governing commercial organization can be group under organizational, operational and sector specific regulations. All transactions that include foreign exchange are regulated by the Foreign Exchange Management Act (FEMA) of 1999. The Reserve Bank of India has been assigned the function of administering the various provisions of FEMA. Exports and imports are regulated by the Foreign Trade Act of 1992. Under the act, every importer and exporter must obtain an Importer/Exporter Code Number (IEC) from the Director General of Foreign Trade.

Infrastructure Issues

Development of infrastructure was completely in the hands of the public sector and was plagued by corruption, bureaucratic inefficiencies, urban-bias and an inability to scale investment. India's low spending on power, construction, transportation, telecommunications and real estate, at $31 billion or 6% of GDP in 2002, had prevented India from sustaining higher growth rates. This has prompted the government to partially open up infrastructure to the private sector allowing foreign investment which has helped in a sustained growth rate of close to 9% for the past six quarters. Container traffic is growing at 15% a year. Nearly 60% of India's container traffic is handled by the Jawaharlal Nehru Port Trust in Mumbai.

Labor Laws

India's labor regulations, among the most restrictive and complex in the world, have constrained the growth of the formal manufacturing sector where these laws have their widest application. Given the country's momentum of growth, the window of opportunity must not be lost for improving the job prospects for the 80 million new entrants who are expected to join the work force over the next decade. –World Bank: India Country Overview 2008

Trade Agreements

India is pursuing trade policy liberalization by participating in a number of bilateral trade agreements, preferential trade agreements, and regional trade agreements. Developed countries have traditional been India's, however, trade agreements have not led to a major structural change in India's external trade.

LOGISTICS AND SUPPLY CHAIN – KEYSTONE K-LOK® BUTTERFLY

Reasons for Sourcing in India

India was chosen because it was found that citizens tend to be well educated and speak English there more frequently than in China, in addition to the low operating expenses. For example, wages are a mere 80 rupees a day, which translates to 1.74 in US dollars. Travel in India is also improving at a quicker pace than in China due to the rapid construction of roads.

It is a lengthy process to become a supplier for Tyco and several methods are used to keep them in check. On time performance measurements are taken to determine if standards are being met and comparisons to RFQs must prove similar to the original estimates made. These are useful in identifying potential issues, such as whether or not suppliers are shipping on time, though reasonable adjustments are made for changes like recent decreases in ship line speeds.

Dual sourcing is not an option because it is too time consuming and costly to set up and build patterns in a facility. It is also possible that suppliers may lose interest if they're given only a portion of Tyco's business or discover they're being played off each other. As both Indian entities are joint ventures or wholly owned by Tyco, motivation for optimum performance is already present and there is no need for additional financial incentives to develop an infrastructure. Companies were bought out to obtain the facilities so they were not constructed by Tyco. One of their capital projects was to pave the area around the building and out to main road.

Tyco works to control supply through the use of Joint Ventures. Tyco stresses the importance of knowing its source of material and knowing the quality of product so goods are not outsourced unbeknownst to Tyco. Tyco has two different IPO groups, one in India and the other in China. Tyco employees work to cultivate supplier relationships in the country of interest. IPO's are primarily staffed with 35 technical employees that monitor supplier quality. Product checks are performed at the supplier's site on a weekly basis to monitor the quality of product and to ensure work is not being subcontracted to another supplier. Some of the valves are in service for 40, 50 and 60 years so quality is paramount.

Transportation and Logistical Issues

Tyco's products are involved in a continuous flow; goods are sitting on the shelf in a distribution center, floating across the ocean, and being manufactured at all times. Butterfly valves called K-LOKS® (HTS: 8481803075), are purchased from facilities near Chennai in India. These run from a few hundred to two thousand dollars per item, with the exception of those created with stainless steel, which can reach more than $10,000 each. This facility is fairly close to port so local transportation is used to pass on the finished goods, doing several pickups a week and consolidating them into the 18 kilo containers at the border. Tyco's products are often sent at LCL (less than container load) with others going to a similar location, though the consolidation of shipments is preferable.

Consolidation presents cost savings opportunities and in recent years has enabled Tyco to cut approximately 7-9 days off transit times because they pass through fewer ports on their way to their final destination, which also results in fewer inspections. However, the company encountered a few internal problems in filling shipments solely with Tyco products rather than sharing with other corporations because when it was the poor planning of other Tyco facilities that caused a delay and held up their shipment, employees became more upset. Tyco's carriers assign tracking numbers when the containers are logged or submitted for shipment, and up-to-date information on the goods location is available through their websites, even its exact position on the ocean through GPS. Lead time for the product varies from 22-26 weeks, taking 16-18 weeks to manufacture and approximately 6 weeks out on the water. They also purchase raw castings for Stafford in Houston out of another supplier in India, which are used for final assembly and manufacturing in their plant. Everything is sourced from these two suppliers in India, though they have their own local supply chains.

The majority of the time Tyco prefers to ship by sea because it's more economical, but this requires more planning and they do occasionally use air freight. Previously air freight was frequently used due to supplier instability caused by the rapid transfer of too many products to their supplier's facility, and the consequential backlog which affected the entire supply chain. To alleviate this, Tyco now gets improved commitments up front for big projects and issues purchase forecasts for suppliers. Shipments are received in the Port of Long Beach, where Stafford products are shipped by rail into Houston and finished goods remain in California's distribution centers. Generally they come in full containers, but in the case of consolidation with other Tyco facilities are broken in Houston and the remainder sent via LTL (less than container load) to their final destinations.

Over the past 18 months RFGs have been performed on potential partners for the major modes of transportation, and freight awarded accordingly to one provider for each ocean and air. Tyco ships Ex Works, which means they bear all the costs and risk of shipping from their back door, and they use freight forwarders for the bulk of work on the front end because both ocean (KN Portal) and air freight (CEVA Logistics) have the power of attorney to clear goods and are able act as brokers. This prevents delays from slow-filing brokers and paperwork which they previously encountered with forwarders who did not have power of attorney.

As long as Tyco remains the paying party, they are able to give guidelines to suppliers on how products should ship and other requirements, such as working collaboratively with the forwarder of their choice if necessary. By this point in time most suppliers have figured out how to locally package products or simply work with a forwarder. There were formerly some problems with the changes requested because Americans are accustomed to plywood in crate construction, but this material is difficult to acquire in India. A commercial invoice is the documentation primarily needed for the importation process, though Tyco requires suppliers to make additional information available, such as a good product description, HTS, the sender and recipient, country of origin, and everything extended in US dollars.

Measures of Performance

Tyco monitors both the performance of suppliers and logistical providers. On-time performance measures are used to determine whether suppliers are performing to Tyco's shipping needs and requirements. In India, supplier audits are conducted by IPO's on a quarterly basis. State-side, finished goods are inspected and checked for quality by quality-control personnel as they arrive to the Stafford location in Houston, TX. Transit times are used to the measure the performance of logistical providers. Freight forwarders are expected to meet time requirements estimated in the RFQ. Time derivations, either up or down, negatively affect supply planning because accurate times are need to produce accurate forecasts. If transit times improve, it creates problem of bringing in material faster than it can consumed. Levels of coordination need to occur if the supply chain is to perform efficiently.

CONCLUSIONS

Changing Global Environment

Because of the recent global economic recession, air lines and shipping companies have begun to pull capacity to maintain costs because the amount of freight moving globally has lessened. Shipping lines have begun slowing down their vessels to cut fuel costs which could possibly affect the Tyco shipping times.

United States Customs Difficulties

Over the course of the last three or four months Tyco has experienced difficulties with US customs. Nearly all ocean liner shipments have been pulled aside and put on hold to inspect the products and their documentation. The global scope of the United States economic recession has resulted in fewer total net imports into the United States which has allowed customs officials more time for container inspections.

Logistics "Nightmares" - Intrusive Bug

Dealing with international shipments is often made difficult due to innocuous occurrences. For instance, inspection of a container revealed the presence of bugs living within the wooden crates, which contained the pressure relief valves being shipped to the United States. However, the United States has strict customs regulations designed to prevent any non-native or

invasive species from entering onto domestic soil. Because of these regulations, TYCO has been burdened with the extra cost of heat-treating any wood sourced from India, which were used to make its shipping crates. Furthermore, crates entering into United States must now must pass a customs certification, stating that they are bug-free before being allowed to continue transit after being received into the Port of Long Beach. This delay in transit time has directly resulted in an increase in inventory holding costs of the products TYCO ships and receives into the United States.

Potential Logistical Alternatives

Tyco has the option of keeping its supply chain as is. This follows the company logic that it is easiest to operate in India because of its educated work force that speaks primarily English and because of the low operating costs associated with doing business in India. Also, transportation infrastructure is currently more developed in India than it is in China. If Tyco continues sourcing from India, it would continue to encounter problems associated with supplier instability in India, and the increased scrutiny of imported goods in the United States by US customs officials.

As a second alternative, Tyco could manufacturer or buy butterfly valves from a manufacturer in the United. This move would lessen transportation costs, but operational expenses would mostly certainly increase due to the more expensive labor costs associated with domestic workers. Also, large amounts of capital and time would be required for Tyco to develop a manufacturing process that fits its current facilities.

As a third alternative, Tyco could begin consolidating ship goods in FCLs instead of LCLs to take advantage of discounted shipping rates. There are obvious costs savings available with this maneuver. However, this could create internal tension within Tyco because departments are sensitive to changes in shipping arrangements.

A CROSS-CULTURAL SURVEY OF SHOPPING BEHAVIOR IN U.S. SUPERMARKETS

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EXTENDED ABSTRACT

One area of substantial concern in supermarket retailing today is the issue of the increasing complexity of competition. As new forms of retailers that compete with traditional supermarkets have recently evolved, the primary concern of most supermarkets is now inter-type competitors. The growth of Wal-Mart (both stores and supercenters) and the emergence of wholesale-clubs and online shopping have thrust the traditional retail format of "supermarket" into a harsh new topography of competition. While strategies to increase customer loyalty and retail differentiation have been developed to deal with this intensified inter-type competition, these methods have proven to be limited in their effectiveness.

While inter-type competition to supermarkets has held the focus of most retail theorists and managers over the past decade, non-traditional examples of supermarkets have also been evolving. Of particular importance is the emergence of large ethnic supermarkets which carry product assortments that are largely overlapping with those of conventional supermarkets, but which focus on markets with high proportions of shoppers of a particular ethnicity. These ethnic supermarkets do not represent a truly different form of retailer, per se, but nonetheless greatly threaten the large conventional supermarket chains by virtue of their large assortments and intimate knowledge of their target markets.

Popkowski-Leszczyc and Timmermans (1997) demonstrated that most households in the U.S. regularly shop at more than one supermarket, with a sizable proportion shopping at more than five different stores on a regular basis. Typically, however, supermarket shoppers have a "main" store to which they are loyal, while other stores are occasionally patronized for product assortment reasons or for "cherry picking" (Rhee and Bell, 2002). While ethnic grocers have long existed in the United States and elsewhere, these retailers have traditionally been smaller stores that served as a shopping complement to larger supermarkets. Recently, with the emergence of large ethnic supermarkets, this pattern of retail patronage has begun to change, with many ethnic shoppers shifting their primary loyalty to the ethnic supermarket, and utilizing conventional (non-ethnic) supermarkets for supplemental purchases. This noticeable shift represents a new and substantial threat for supermarkets that is intra-type rather than inter-type.

Prior studies have explored the impacts of price, product quality, and merchandise assortment as factors influencing supermarket choice. For example, price has been demonstrated by some research to be relatively less important in comparison with either product quality (Sirohi, McLaughlin and Wittink, 1998) or availability of favorite products (Broniarczyk, Hoyer and MeAlister, 1998). Ethnicity was identified by other studies as a factor which could

also influence the relationship between price, product quality, or merchandise assortment and store choice. For example, Hispanic shoppers (Lavin, 1996) and Chinese shoppers (Ackerman and Tellis, 2001) have been identified as price-sensitive, which in turn is seen as influencing these shoppers' patronage patterns and store preferences. On the other hand, other researchers have suggested that price is equally important for all shoppers. For instance, a Simmons Market Research study suggested that Americans of all ethnic groups were equally bargain-conscious regarding supermarket shopping (Kelly, 2003).

Given the diversity of findings regarding the influence of shopper ethnicity on the relationship between store choice and attention to price, quality, and merchandise assortment, the purpose of this study was to further explore this issue from a perspective which places a more critical focus on customer ethnicity. In this effort, our goal was to develop a richer understanding of these relationships for the purposes of assisting retail strategists in the development of more effective approaches to competing with emerging forms of large ethnic supermarkets.

This study utilized a large-scale, multi-language survey to examine the factors that commonly influence consumers' decisions in selecting between mainstream and ethnic supermarkets, and the incidence of shopping behaviors that result from these decisions. Our findings suggest that price considerations are critically important to shoppers of all ethnicities, and represent the primary factor determining store choice regardless of ethnic background. Most of the respondents in our research tended to demonstrate more interest in price than in product quality and/or merchandise assortment. Further, multiple-store shopping behavior was also shown to be largely motivated by price, suggesting that cherry-picking behavior may represent an underlying motive for this pattern of retail patronage. Additional findings regarding ethnic shoppers' beliefs regarding both ethnic and mainstream supermarkets are presented. Implications of these findings for retail theory and supermarket strategies are discussed, and recommendations for future research are proposed.

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A GROUNDED THEORY BASED APPLICATION OF SERVICE–DOMINANT LOGIC TO LOGISTICS SERVICE QUALITY

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EXTENDED ABSTRACT

Leveraging logistics service quality has been considered an effective tool for building closer relationships with customers (Davis and Mentzer 2006) and the relation between service quality and business performance, lower costs, customer satisfaction, loyalty, and profitability have been emphasized in numerous research (Cronin and Taylor 1992; Davis and Mentzer 2006).One of the most difficult tasks of providing high quality service is often the determination of what the customer truly values.

Given the importance of logistics service quality in customer satisfaction and overall performance, it is extremely important for managers to have a valid and reliable measure of how customers perceive logistic service quality. However, with the major exception of excellent works of Mentzer and colleagues (e.g. Metnzer et al. 1999) , still unaddressed areas exist in the development and measurement of the logistics service quality and the nine measurement constructs identified and tested in logistics service quality (LSQ) model developed by Mentzer et al. (1999) may not be the only components of logistics service quality. Thus, there is a need to uncover other possibilities and develop a model to better meet the turbulent and competitive business environment to achieve customer satisfaction and loyalty. It is important to design evaluation criteria that are continually improved to focus on changing customers' and suppliers' needs. One important aspect of evaluation is the ability to identify and support activities that create value versus those that only increase revenue and decrease costs (Stank et al., 2005).

Service dominant (S-D) logic (Vargo and Lusch 2004), a recent paradigm in marketing literature, proposes the role of service as the heart of value-creation, exchange, and marketing. Such perspective calls logistics researchers for a closer look at the whole process of value creation and service provision to logistics customers. Further probing into the proposed concepts of service dominant logic (10 fundamental propositions) clarifies some of the issues that logistics service quality has not addressed so far.

This research is an attempt to explore logistics service quality using a qualitative research design to unmask a much more complex picture of logistics service quality model. The purpose of this research is thus, to provide an exploratory step to understand service quality needs of logistics customers in order to address some of the gaps in the logistics service quality literature. According to S-D logic, value is defined and co-created by customers rather than being embedded in the output. Thus, customers are collaborative partners viewed as resources who are capable of acting on other resources rather than being passive receivers of the service (Vargo and Lusch 2004, 2008). Looking at the LSQ model through an S-D logic lens identifies conceptual areas where S-D logic and LSQ overlap and where they diverge. The areas of divergence suggest potential value in the development of a hybrid S-D logic-LSQ model which is

more congruent with today's customers' expectations. This potential opportunity motivates the current study.

In order to develop a new conceptualization of logistics service quality, a qualitative methodology seems appropriate in the early stages to gain a better understanding of the whole phenomenon since "the purpose of qualitative research is to accumulate sufficient knowledge to lead to understanding and explanation" (Davis and Mentzer 2006). This research applies grounded theory approach to seek out previously uncovered aspects of logistics service quality. Grounded theory is a qualitative research methodology that makes the exploration of concepts, identification of relationships in raw data, and organization of concepts and relationships into a theoretical scheme possible (Strauss and Corbin 1990).

The results can improve our understanding of service quality in logistics context which will lead to a more comprehensive model for logistics service quality. Such model will be more congruent with recent conceptualizations of service logic and will have a more customer base and relational foundation. Firms seeking to develop strong customer relationships should recognize that all customers do not have the same service expectations and do not necessarily want or demand the same overall level of service. Given an understanding of what drives end-consumer purchase behavior, a supply chain based on relationships has the greatest potential to result in unique logistical solutions that are simultaneously effective, efficient and relevant (Bowersox, Closs and Stank 2000).

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CAPTURING CONSUMER HETEROGENEITY IN LOYALTY EVOLUTION PATTERNS

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ABSTRACT

Two common approaches of market segmentation (i.e., the hard-core loyal and proportional approaches) are based on the assumption that the market consists of two consumer groups; this assumption restricts the capability of these frameworks in capturing the heterogeneity in consumer loyalty. We extend the literature by proposing a framework to estimate the optimal number of consumer segments (i.e., relaxing the dichotomous assumption) and capture both across- and within-household heterogeneity (i.e., the evolution patterns of consumer loyalty characterizing these segments and the differences in the responses to marketing variables of consumers within each segment upon repeat purchasing and switching brands).

INTRODUCTION

Past research has devoted an immense amount of effort to help marketing practitioners segment a target market. Among the many classification frameworks are two popular approaches: (1) the hard-core loyal (denoted hereafter *HCL*; Colombo and Morrison 1989), and (2) proportion of purchase (denoted hereafter *POP*; Krishnamurthi and Raj 1991) approaches; both of them assume that there exist two distinct groups (or segments) of consumers in the market, i.e., hard-core loyals and potential switchers under the *HCL* approach, and loyal and non-loyal customers under the *POP* approach. Though popular, these dichotomous classification approaches are subject to the following limitations.

First, most dichotomous classification approaches seem to overlook (and consequently, restrict the capability of the respective models in capturing) consumer heterogeneity in loyalty. In other words, it is too restrictive to assume that a market only consists of two consumer segments—loyal and non-loyal. In fact, consumers exhibit a variety of purchasing behaviors (see McAlister 1982, Lattin 1987, Bawa 1990, among others); accordingly, we extend this stream of research by proposing a new classification framework that relaxes this dichotomous assumption and captures the heterogeneity in consumer loyalty in a greater extent. Specifically, we address the question: What is the optimal (i.e., most effective in capturing the market's heterogeneity in consumer loyalty) number of segments that marketer should divide the market into?

Next, the above-mentioned dichotomous classification approaches are based on the behavioral loyalty perspective (Jacoby and Chestnut 1978; Krishnamurthi and Raj 1988, 1991), under which loyal consumers are defined as those who exhibit high cumulative share (or repeat purchase rate) of a specific brand in a product category. Accordingly, the *HCL* approach defines hard-core loyal consumers as those who exhibit a loyalty level of more than 99.9% (i.e., absolute

loyalty); in contrast, the *POP* classifies consumers into loyals and non-loyals using the predetermined 50% cut-off point of loyalty. In addition, implicit in these approaches is the assumption of repurchase exclusivity (i.e., loyal consumers, who show high level of loyalty to a specific brand up to time *t*-1, are assumed to repeat purchase this brand at time *t*; see Banasiewicz 2005). This results in a *static* classification that does not capture the *dynamic* nature of loyal behaviors, i.e., the impact of past repeat-purchase behavior on current purchase decision and subsequently, the loyalty level of a consumer. Given this limitation, this paper addresses the issue of capturing the heterogeneity in consumers' evolutional patterns of loyal behavior that characterize the various consumer segments.

Finally, past research employing the dichotomous classification frameworks also assumes that consumers belonging to each of the two segments are homogeneous in their intrinsic preferences and responses to changes in marketing variables—such as price—across purchase occasions. This assumption implies that consumers respond to marketing variables in the same way regardless of whether they repeat purchase the same brand or switch to a different one. Accordingly, the differences in consumers' motivations upon making these two decisions have not been accounted for appropriately; this issue is addressed by our proposed model, which provides separate estimates of sensitivity to various marketing variables when consumers make repeat-purchase and brand-switching decisions.

In this paper, we develop a finite-mixture brand-choice logit model and subsequently calibrate it on the scanner data of liquid detergent and toilet tissue. First, we relax the dichotomous assumption (i.e., consider the possibility that the market may consists of more than two segments of consumers) and investigate the optimal number of consumer groups to segment the market empirically, based on the measure of model fit using the Akaike Information Criterion (denoted *AIC*) and the Bayesian Information Criterion (denoted *BIC*) indices. Our finding shows that the dichotomous classification is suboptimal in capturing the heterogeneity in consumer loyalty; a four-segment classification turns out to be the most efficient in the two product categories (i.e., liquid detergent and toilet tissue).

Next, we capture the impact of past repeat-purchase behavior on the evolution of consumer's loyal behavior by introducing a variable measuring consumer loyalty (which is operationalized as the share of a focal brand in a consumer's purchase history) into the membership function of the finite-mixture model. This framework allows marketers to describe the various patterns of consumers' loyal behavior in a dynamic manner, based on the extent of prior loyalty level. We find that there exist two evolving patterns of loyal behavior: (1) past experience with a particular brand increases—i.e., reinforces—the current loyalty level, and (2) past experience with a particular brand results in boredom (or other switching motivations) and therefore, decreases the current level of loyalty.

Finally, we also investigate the behavioral differences in consumers' motivations and consequently, responses to various marketing variables—for instance, prices—between making repeat and switching behaviors within each of the identified segments. To do so, we relax the above-mentioned assumption of homogeneity in our model; accordingly, we allow for both across- and within-household heterogeneity (i.e., between repeat and switching decisions) in consumers' sensitivity to various marketing variables. Our empirical findings provide the

evidence for the existence of both types of heterogeneity and important managerial implications about how to segment the market as well as how to design effective loyalty programs.

The paper is organized as follows. In the next section, we briefly review the related literature. The Model and Data Description section describes the finite-mixture logit model as well as the data used in our analysis. The results are provided and discussed in the following section. The final section concludes the paper.

LITERATURE REVIEW

Current Approaches of Consumer Classification

Past research on segmentation has proposed various approaches to classify consumers into different segments. Most of them rely on the assumption that there exist two groups of consumers—loyal and non-loyal (Jacoby and Chestnut 1978; Lattin 1987; Bawa 1990) or inertial and variety-seeking (Jeuland 1979; Givon 1984; Seetharaman and Chintagunta 1998)—in the market. Among these dichotomous classification frameworks, the hard-core loyal approach (*HCL*, Colombo and Morrison 1989; Kamakura and Russell 1989; Grover and Srinivasan 1992; Dillon and Gupta 1996; Yim and Kannan 1999) and the proportion-of-purchase approach (*POP*, Jacoby and Kyner 1973; Jacoby and Chestnut 1978; Krishnamurthi and Raj 1991) have been popular in practice. Based on the perspective of behavioral loyalty, both approaches operationalize loyalty as the proportion of purchases devoted to each brand in a consumer's purchase history; consequently, loyal (non-loyal) consumers are those who exhibit high (low) loyalty level.

Under this assumption, the *HCL* approach (which is a revised version of the mover-stayer framework; Blumen, Kogan, and McCarthy 1955; Goodman 1961) employs the 99.9% level of loyalty as the cut-off for identifying the two groups of consumers, i.e., hard-core loyals (hereafter, *HCLs*) and potential switchers (hereafter, *PSs*). Stated differently, following this approach, consumers are classified into either the *HCL* segment—if they purchase only one brand exclusively during the entire purchase history—or the *PS* segment. In contrast, the *POP* approach uses the predetermined 50% loyalty level (as a median value) to classify consumers into loyal and non-loyal segments for each brand.

The above-mentioned assumption seems to restrict the capability of both approaches (i.e., the *HCL* and *POP*) in capturing the heterogeneity in consumer loyalty. In this regard, it remains unclear about the optimal number of segments that can capture the *most* heterogeneity in consumer loyalty. Further, another dimension of market heterogeneity, which is the dynamic evolution patterns of loyalty, is not accounted for under these approaches. Specifically, past research in this stream assumes that consumers who have shown high loyalty level in the past will repeat purchase the same brand (i.e., repurchase exclusivity; Banasiewicz 2005); as a result, the impact of past (repeat-) purchases on current purchase decision and loyalty (as well as the impact of current on future purchase decision) is not accounted for. In practice, consumers' preferences are changing over time; interestingly, Heilman, Bowman, and Wright (2000) demonstrate that consumers' preferences may either strengthen or weaken (i.e., both the increasing and decreasing patterns may exist simultaneously). In this study, we fill this gap in

the literature by investigating (and capturing) the heterogeneity in consumers' evolution patterns of loyalty (i.e., the impact of past loyalty on current repeat/switching behaviors).

Across- and Within-Household Heterogeneity

Another related stream of research is the one that investigates consumers' within-household heterogeneity. In the frequently purchased product category, past research has shown that consumers tend to develop their own decision-making heuristic(s) when making purchase decisions (Deshpande, Hoyer, and Jeffries 1982; Deshpande and Hoyer 1983; Heilman, Bowman, and Wright 2000). These heuristics (aka. *choice tactics* or *choice strategies*) are created—and subsequently updated—as consumers accumulate past purchase experience, and include (1) brand loyalty (or habit) and (2) variety-seeking tactics (Hoyer and MacInnis 2007).

In practice, when loyal consumers repeat purchase the same brand, their decision is (most likely) driven by their brand preference – as a result of the unique value of this brand (Ailawadi, Neslin, and Gedenk 2001). In contrast, when switching to a different brand, they may be motivated by the attractiveness of new brand's promotional incentives (such as price-cut). Analogously, non-loyal consumers may repeat purchase the same brand in response to the aggressive economic incentives provided by that specific brand (Brown 1974; Schneider and Currim 1990; Currim and Schneider 1991) or switch to another brand due to their desire for variety (McAlister and Pessemier 1982; Givon 1984; Seetharaman and Chintagunta 1998). This suggests that both loyal and non-loyal consumers may exhibit different levels of sensitivity to various marketing variables – especially to prices – when making repeat purchases and switching brands (as a result of the different motivations underlying these decisions).

Recently, Yoon (2008) and Yoon and Kwak (2009) demonstrate that consumers are more likely to use the habit tactic when making repeat purchases. This work suggests that consumers may exhibit different sensitivities to various marketing variables when making repeat and switching behaviors. We add to this stream of research by investigating the magnitude of consumers' within-household heterogeneity and how it affects their sensitivities to prices upon making repeat purchases versus switching brands. Overall, our paper provides insights into consumers' loyal behavior and suggests a more efficient framework of market segmentation. In the next section, we outline the model and describe the data used in our empirical analysis.

MODEL AND DATA DESCRIPTION

We develop a finite-mixture brand-choice logit model by assuming that the market could be (optimally) divided into S segments based on consumers' heterogeneity regarding their loyalty levels; S is estimated subsequently. Given that household h belongs to segment s ($s = 1,2, …, S$), the utility that household h derives upon purchasing brand j ($j = 1, 2, …, J$) in purchase occasion t is given by:

$$V_{ht}(j \mid s) = I_{hjt}^{Rp}(\mathbf{X}\beta_s^{Rp}) + I_s^{Sw}(\mathbf{X}\beta_s^{Sw}) = I_{hjt}^{Rp}(\beta_{js}^{Rp} + \beta^{Rp}_{Ps}\, price_{hjt} + \beta_{Fs}^{Rp}\, feature_{hjt} + \beta_{Ds}^{Rp}\, display_{hjt})$$

$$+ I_{hjt}^{Sw}(\beta_{js}^{Sw} + \beta_{Ps}^{Sw}\, price_{hjt} + \beta_{Fs}^{Sw}\, feature_{hjt} + \beta_{Ds}^{Sw}\, display_{hjt}) + \grave{o}_{hjt},$$

$$(3)$$

where $I_{hjt}^{Rp} = 1$ and $I_{hjt}^{Sw} = 0$ if the purchase of brand j in occasion t is a repeat purchase, and $I_{hjt}^{Rp} = 0$ and $I_{hjt}^{Sw} = 1$ otherwise; β_s^{Rp} and β_s^{Sw} are the *repeat* and *switching* parameter vectors (respectively) associated with the vector of marketing variables $\mathbf{X}$, which includes *price*, *feature*, and *display*. Given the assumption that the error term, $\grave{o}_{hjt}$, follows the extreme value distribution (Guadagni and Little 1983, Ben-Akiva and Lerman 1985), we can derive the probability that household h chooses brand j on purchase occasion t, conditional on h belonging to segment s as follows:

$$P_{ht}(j \mid s) = \frac{\exp[V_{ht}(j \mid s)]}{\sum_{k=1}^{S} \exp[V_{ht}(j \mid k)]} . \qquad (4)$$

The membership probability that household h belongs to segment s depends on the rate of repeat purchase, $mshr_{ht}$, (i.e., maximum share of a particular brand) which is updated in each purchase occasion as follows:

$$P_{ht}(s) = \frac{\exp(\lambda_{st})}{\sum_{k=1}^{S} \exp(\lambda_{kt})}, \qquad (5)$$

where $\begin{cases} \lambda_{st} = a_s + b_s \, mshr_{ht}, \\ mshr_{ht} = \mathbf{max}\{share_{ht}(j)\} \text{ (where } j = 1, 2, ..., J), \\ \text{and } share_{ht}(j) \text{ is the share of brand } j \text{ in the purchase history up to } t. \end{cases}$

Note that $share_{ht}(j)$—and consequently, $mshr_{ht}$—is updated in each purchase occasion; this allows us to capture the evolution of loyal behavior of consumers. This is similar to the approach of using concomitant variable in membership function of the finite-mixture model (Gupta and Chintagunta 1994).

Given the data consisting of N observations and J brands, the likelihood function of the sample is given by:

$$L = \prod_{h=1}^{N} \left\{ \sum_{s=1}^{S} P_{ht}(s) \prod_{j=1}^{J} [P_{ht}(j \mid s)]^{\delta_{hjt}} \right\}, \qquad (6)$$

where $\delta_{hjt} = 1$ if household h buys brand j on occasion t and $\delta_{hjt} = 0$ otherwise. The model is estimated using the maximum likelihood method and the optimal number of segments (i.e., S) is determined by carrying out the estimation for $S = 2, 3, 4, 5, \ldots$ and then comparing the resulting model fit using the Akaike and Bayesian Information Criterion (i.e., the *AIC* and *BIC*; Bucklin and Gupta 1992) as follows:

$$AIC = -2\frac{LL-k}{N}, \text{ and}$$

$$BIC = LL - \frac{k}{2}\log[N] \quad \textbf{(where } k \text{ is the number of parameters).}$$

The proposed model is calibrated on the scanner data of liquid detergent and toilet tissue, obtained from the ERIM scanner panel of A.C. Nielsen. The data preparation process is similar to that of Krishnamurthi and Papatla (2003). Table 1 provides a description of several key features including brand shares, average price, and promotional frequencies.

Table 1:
Descriptive statistics of each product category

Product Category	Market share	Average Unit Shelf Price	Average Unit Paid Price	Percentage of Purchase on	
				Display	Feature
Liquid Detergent					
Surf	10.4	5.22	3.83	1.45	1.71
Wisk	33.1	4.90	3.71	4.33	4.53
Era	24.7	5.98	5.21	1.49	1.79
Tide	24.1	6.09	5.19	4.25	2.85
Bold	7.6	6.29	5.09	0.23	0.43
Toilet Tissue					
Northern	30.7	0.32	0.27	4.31	10.48
Charmin	27.6	0.32	0.25	5.57	10.36
White Cloud	6.8	0.42	0.36	2.15	2.30
Cottonelle	13.5	0.33	0.25	2.39	4.54
Scott	21.5	0.21	0.22	4.91	7.05

Liquid Detergent

We consider the top five brands, i.e., Surf, Wisk, Era, Tide, and Bold, which account for more than two thirds (67.1%) of the purchases in this category. We qualify households for inclusion into the analysis using two criteria. First, each household should have devoted at least 50% of its purchases of the two types of detergents, i.e., powder and liquid, to liquids. Second, each household should have made at least three purchases of the selected brands over the 138 weeks of the panel (from week 1 of 1986 through week 34 of 1988). This effort results in a pool of 1,397 households and a total of 14,082 observations. To stabilize the loyalty level of each consumer, we delete the first three observations of each household. Eventually, we obtain a sample of 9,891 observations for our analysis.

Toilet Tissues

We consider the top five brands, including Northern, Charmin, White Cloud, Cottonelle

and Scott, which, together, account for more than 80% of the purchases in this category. There are a total of 207,663 purchases of these five brands by 10,043 households. The above mentioned selection procedure is used to obtain a pool of 8,105 households and 203,124 purchase records. After deleting the first three observations of each household, we end up with a sample of 11,632 observations.

FINDINGS

In this section, we discuss the results of our empirical analysis, including (1) the optimal number of consumer groups based on the model fit, (2) the parameter estimates that demonstrate consumers' heterogeneity in the evolution patterns of loyalty (i.e., across-household heterogeneity), and (3) the evidence of within-household heterogeneity across purchase occasions (i.e., between repeat-purchase and switching behavior).

The Optimal Number of Consumer Groups

Following Gupta and Chintagunta (1994), we determine the optimal number of consumer groups (i.e., S) by calibrating our model with 2, 3, 4, 5, … segments until there is no significant improvement in the Bayesian Informational Criterion (BIC) and log-likelihood upon adding an additional segment. The result, as summarized in Table 2, shows that the four-segment specification (i.e., $S = 4$) provides the best model fit in both the liquid detergent and toilet tissue categories.

Table 2:
The model fit result

Product Category	Model Spec.	No. of Parameters	LL	AIC[b]	BIC[c]
Liquid Detergent	1 Segment	14	-3660.46	1.3718	-3720.56
(N=5357, H=1202)	2 Segments	30	-3372.30	1.2702	-3501.09
	3 Segments	46	-3251.92	1.2312	-3449.40
	4 Segments[a]	**62**	**-3071.92**	**1.1700**	**-3338.09**
	5 Segments	78	-3068.23	1.1746	-3403.09
Toilet Tissue	1 Segment	14	-4968.93	1.7638	-5029.41
(N=5650, H=402)	2 Segments	30	-4421.63	1.5757	-4551.22
	3 Segments	46	-4307.56	1.5410	-4506.26
	4 Segments[a]	**62**	**-3842.89**	**1.3822**	**-4110.71**
	5 Segments	78	-3834.09	1.3848	-4171.03

[a] Model selected for each product category.
[b] $AIC = -2 * (LL - k) / N$.
[c] $BIC = LL - (k/2) * \log(N)$, where k is number of parameters.

Heterogeneity in the Evolution Patterns of Consumer Loyalty

Given the optimal number of consumer segments (i.e., $S = 4$), we estimate the parameters and identify the characteristics of these segments with respect to the evolutional patterns of consumer loyalty (i.e., across-household heterogeneity). The result is summarized in Tables 3 and 4.

The estimates of the parameters of the membership function (i.e., a and b) in both product categories show two evolution patterns of consumer loyalty. The first pattern is characterized by the increase in consumers' loyalty level upon making additional purchases of the same brand as reflected by the positive estimates of b; this pattern can be observed in segments 1 and 3 of the liquid detergent and segments 2 and 3 of the toilet tissue (see Tables 3 and 4). In contrast, consumers in segments 2 of the liquid detergent and 1 of the toilet tissue show a different pattern of loyalty evolution; this second patterns is characterized by a decrease in loyalty level as consumers make additional purchases of the same brand. (Note that segment 4 is the benchmark, whose membership parameters are normalized for the purpose of identification.)

Interestingly, another aspect of across-household heterogeneity can be identified when comparing the two segments in each product category that exhibit the increasing patterns of consumer loyalty (i.e., segments 1 and 3 of the liquid detergent and segments 2 and 3 of the toilet tissue); one segment (i.e., segment 1 of the liquid detergent and segment 3 of the toilet tissue)

show a relatively high price sensitivity compared to that of the other segment (i.e., segment 3 of the liquid detergent and segment 2 of the toilet tissue; see the *repeat* estimates in Tables 3 and 4). This suggests that the reinforcing effect of repeat purchases—resulting in the above-mentioned increasing patterns of loyalty—among consumers belonging to these segments is driven by different factors. Specifically, those in segment 1 of the liquid detergent and segment 3 of the toilet tissue are quite sensitive in prices upon making repeat purchases and therefore, are probably motivated to *reinforce* their loyalty following the intensive price promotions offered by the same brand(s). In contrast, consumers in segment 3 of the liquid detergent and segment 2 of the toilet tissue focus less on prices (as shown by the low estimates of price sensitivity); instead, they are attracted by the features of the product—the estimates of the feature variable of consumers in these segments are positive (i.e., 0.34 and 6.27 for segment 3 of the liquid detergent and segment 2 of the toilet tissue respectively; see Tables 3 and 4). This indicates that these consumers probably develop their increasing (evolutional) patterns of loyalty based on the unique characteristics of the product(s)/brand(s).

Table 3:
The estimated parameters of the liquid detergent category (t-ratios are provided in parentheses)

Variables	Segment 1	Segment 2	Segment 3	Segment 4
Repeat				
Surf	-1.39 (-2.15)	-2.09 (-3.73)	5.02 (1.72)	-6.60 (-1.98)
Wisk	-0.84 (-1.48)	-3.96 (-4.67)	3.48 (4.12)	-9.83 (-1.56)
Era	5.58 (6.45)	2.02 (1.96)	4.21 (1.91)	-2.09 (-1.29)
Tide	4.77 (6.51)	2.18 (2.55)	3.99 (1.91)	-2.04 (-1.20)
Bold	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Price	-3.51 (-7.83)	-7.32 (-7.85)	-0.38 (-2.66)	-4.35 (-2.71)
Feature	-0.13 (-0.12)	5.78 (2.82)	0.34 (0.22)	-0.47 (-0.48)
Display	-0.93 (-1.51)	-0.19 (-0.10)	-1.31 (-0.80)	1.19 (1.27)
Switch				
Surf	-3.82 (-5.01)	-2.79 (-4.63)	-17.46 (-3.75)	1.26 (3.14)
Wisk	-15.18 (-3.02)	-5.87 (-4.15)	-18.63 (-3.15)	0.72 (1.46)
Era	-2.08 (-2.37)	1.45 (2.34)	-10.17 (-3.36)	1.31 (3.75)
Tide	-1.20 (-1.29)	1.50 (2.45)	-9.20 (-2.71)	1.27 (3.81)
Bold	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Price	-3.50 (-7.88)	-7.33 (-9.99)	-11.33 (-4.83)	-0.54 (-4.16)
Feature	0.81 (0.84)	-0.19 (-0.36)	1.17 (0.93)	0.95 (2.96)
Display	1.06 (0.68)	1.04 (2.06)	-0.19 (-0.06)	0.33 (1.22)
Segment Parameters a	-4.78 (-7.37)	1.09 (2.82)	-0.95 (-2.97)	0.00 (0.00)
b	7.17 (11.05)	-0.92 (-1.23)	2.11 (3.96)	0.00 (0.00)
Segment Size	0.393	0.401	0.130	0.076

Table 4:
The estimated parameters of the toilet tissue category (t-ratios are provided in parentheses)

Variables		Segment 1	Segment 2	Segment 3	Segment 4
Repeat					
Northern		5.51 (3.25)	5.81 (0.53)	-0.55 (-0.34)	13.12 (14.20)
Charmin		7.64 (9.03)	7.42 (0.28)	-3.18 (-1.55)	13.19 (15.34)
White Cloud		11.84 (12.95)	19.76 (0.23)	1.81 (1.24)	15.11 (16.77)
Cottonelle		9.08 (9.81)	7.52 (0.68)	0.91 (0.73)	14.49 (16.68)
Scott		0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Price		-7.08 (-8.17)	-0.24 (-0.28)	-2.48 (-3.11)	-7.09 (-10.19)
Feature		8.91 (4.95)	6.27 (0.44)	1.88 (1.37)	0.45 (0.76)
Display		4.48 (5.90)	-1.69 (-0.10)	1.39 (2.19)	1.08 (2.99)
Switch					
Northern		4.96 (7.08)	0.78 (0.54)	-1.09 (-5.14)	12.55 (13.65)
Charmin		4.12 (4.03)	-12.47 (-0.24)	-1.30 (-5.68)	12.29 (12.93)
White Cloud		7.83 (6.58)	18.64 (0.20)	-1.43 (-8.41)	14.29 (15.95)
Cottonelle		6.07 (10.11)	16.52 (0.18)	-0.69 (-3.43)	12.83 (15.11)
Scott		0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Price		-7.15 (-16.37)	-31.92 (-0.19)	-0.04 (-13.35)	-7.03 (-17.23)
Feature		4.76 (7.70)	-2.84 (-0.05)	1.42 (3.14)	0.72 (2.49)
Display		3.99 (4.93)	9.53 (0.33)	1.40 (6.01)	1.23 (3.04)
Segment Parameters	a	1.11 (1.03)	-4.21 (-7.21)	-1.67 (-4.24)	0.00 (0.00)
	b	-3.96 (-1.22)	5.71 (7.50)	0.85 (0.83)	0.00 (0.00)
Segment Size		0.137	0.067	0.189	0.607

Within-household Heterogeneity

The result, as summarized in Table 5, shows that within-household heterogeneity in consumers' responses to market variable (i.e., upon making repeat purchases and switching to different brands) does exist. Here, we report the characteristics of the four identified segments, including the size and magnitude of price elasticity of each segment, among others. Accordingly, we observe three different patterns of within-household heterogeneity.

Specifically, the first pattern as observed in segments 1 and 3 of the liquid detergent and

segment 2 of the toilet tissue shows significantly higher price elasticity when consumers switch brands than when they repeat purchase the same one. This implies that these consumers develop their brand loyalty (i.e., repeat purchase the same brand) based on the unique features of the brand—rather than on its attractive prices—and switch to other brands only when these competing brands provide significant economic incentives (via low prices). In other words, within-household heterogeneity does exist in these consumer segments.

Next, segments 4 of the liquid detergent and 3 of the toilet tissue exhibit a reverse pattern of within-household heterogeneity. Consumers in these segments are significantly more price elastic when making repeat purchases than when switching to other brands. This behavior can be driven by the variety-seeking tendency of these consumers; they seem to *get bored* with the previously purchased brands and enjoy the *variety* offered by different brands. These consumers will repeat purchase the same brand only when it has significantly attractive prices.

Finally and interestingly, the third pattern is characterized by relatively similar magnitudes of price elasticity under repeat-purchase and switching decisions; this pattern is observed in segment 2 of the liquid detergent and segments 1 and 4 of the toilet tissues. This suggests that for consumers in these segments, *attractive* prices do not seem to affect their choice among brands—they respond to prices in the same way no matter of repeat purchasing the same brand or switching to a new one. In other words, the above-mentioned within-household heterogeneity does not seem to exist in these consumer segments.

In summary, various patterns of within-household heterogeneity do exist among consumers belonging to different segments, suggesting that consumers follow a variety of motivations when making different purchase decisions.

Table 5:
The estimates of price elasticity of each consumer segments

Product Category	Segment 1	Segment 2	Segment 3	Segment 4
Liquid Detergent				
Segment size	0.393	0.401	0.130	0.076
Repeat	-0.86 (4.62)	-1.03 (3.77)	-0.14 (5.33)	-4.16 (5.27)
Switch	-4.26 (4.11)	-3.24 (3.92)	-9.98 (4.07)	-2.33 (5.83)
Average of Maximum share[a]	0.943 (0.095)	0.518 (0.127)	0.698 (0.175)	0.593 (0.194)
95% CI	(0.939, 0.947)	(0.512, 0.523)	(0.574, 0.612)	(0.685, 0.711)
Toilet Tissue				
Segment size	0.137	0.067	0.189	0.607
Repeat	-2.52 (0.254)	-0.08 (0.304)	-2.69 (0.229)	-10.08 (0.268)
Switch	-2.54 (0.246)	-14.59 (0.297)	-0.04 (0.219)	-11.92 (0.256)
Average of Maximum share	0.381 (0.069)	0.803 (0.149)	0.567 (0.195)	0.549 (0.175)
95% CI	(0.376, 0.386)	(0.788, 0.818)	(0.555, 0.579)	(0.543, 0.555)

[a] the value in parentheses are the standard deviation of maximum value.

CONCLUSION AND FUTURE RESEARCH

This study addresses three issues related to the popular dichotomous segmentation frameworks: (1) the number of consumer groups that marketer should segment the market in order to optimally capture the heterogeneity in consumers' loyalty behavior, (2) the evolutional patterns of consumer loyalty that characterize these consumer segments (i.e., the across-household heterogeneity), and (3) the within-household heterogeneity reflected in different responses to marketing variables—specifically, prices—when making repeat purchases and switching to different brands, as well as the possible explanation of these behaviors.

First, we find that the traditional dichotomous classification framework is suboptimal in capturing the heterogeneity in consumers' loyalty. Instead, the four-segment classification turns out to be the most efficient—in both product categories used in our study. These four segments are characterized by two different evolutional patterns of loyalty: (1) an increasing (i.e., reinforcing) pattern of loyalty upon each additional purchase of the same brand, and (2) a decreasing pattern of loyalty when consumers happen to purchase the same brand (probably due to the various economic incentives offered by the brand). Finally, we also find the evidence

showing the existence of within-household heterogeneity in price elasticity upon repeat purchasing and switching brands.

This study is subject to the following limitations. First, it does not capture consumers' variety-seeking or inertia tendencies (e.g., using a dummy variable for last-purchase indicator as suggested by past research; Lattin 1987, Chintagunta 1998, 1999). However, the brand-specific constants in the model can actually capture (part of) the inertia tendencies in repeat purchase cases and variety-seeking tendencies in switching behavior cases. Next, this study does not account for the effect of the scale parameter which has an important impact on the recovery of (unbiased) parameter estimates (Swait and Louviere 1993; Yoon and Kwak 2009). Accordingly, future extensions should (1) include a specific variable that captures consumers' inertia and variety-seeking tendencies and (2) incorporate the scale parameter in the model to capture the heterogeneity in the scale of parameters and improve the empirical estimates.

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THE IMPACT OF ADVERTISING HUMOR ON AD MESSAGE ATTENTION, ELABORATION, AND RECALL

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ABSTRACT

Advertising humor has long been used to influence consumer responses to ad messages. While advertising humor has been demonstrated to impact a variety of consumer response variables, this study focuses on the influence of advertising humor on the cognitive processing of advertising messages by ad viewers rather than studying more emotional responses, such as, liking. Based on theoretical development that the roles of humor in advertisements are contingent upon a variety of situational variables, it is argued that ad humor may be particularly effective in elevating consumers' psychological arousal and interest desired by advertisers. It is hypothesized that, compared to a non-humorous ad, ad humor serves to increase viewers' message involvement, hence, resulting in enhanced ad message attention, elaboration, and recall. An experiment was designed to test such hypotheses. Both multivariate and univariate ANOVAs were employed to analyze the data. Results indicate that humor did attract more attention to the ad messages, and enhanced both message involvement and elaboration. In addition, humor was also found to have also facilitated recall of both the ad messages and brand names. Implications are discussed in relation to previous conflicting research findings as well as advertising strategies in employing humor.