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M. Meral Anitsal
and
Ismet Anitsal
Co-Editors
Tennessee Tech University

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MAKING UNIVERSITIES RELEVANT: MARKET ORIENTATION AS A DYNAMIC CAPABILITY WITHIN INSTITUTIONS OF HIGHER LEARNING

Jun Ma, Indiana University-Purdue University Fort Wayne
Zelimir Todorovic, University-Purdue University Fort Wayne

ABSTRACT

As the globalization of the world economy continues, universities face the increasing challenge of being relevant. We explore the role of Market Orientation (MO) in helping universities align their internal resources, and thereby become more relevant to their stakeholders. Using the adapted Narver and Slater's (1990) measure items, we survey 3072 department chairs of computer science, engineering, and health science departments across the US. Our results show that MO is positively *correlated to university commercialization. In a more surprising outcome, however, two dimensions of MO (Customer orientation and Inter-functional coordination) loaded on the same factor. Our results support the position that the external community, rather than students, represents the appropriate definition of a "university customer". Therefore, the appropriate emphasis of university MO is the external community. Using students (internal stakeholders) as end customers reduces the speed of absorption of information from the external environment. We suggest that the identification of the external customer will differ with each university, with a resulting differentiated effect on university's MO emphasis and relevance.*

INTRODUCTION

Today's universities are facing significant budget constraints due to economic downturns as well as political and funding trends. Private universities experience reduced donations and returns on investment, while public universities receive less financial resources from governments and other funding sources. Faced with these challenges, many universities reduced the scholarships for newly enrolled students, postponed university building renovations, minimized hiring, and reduced or eliminated salary increases.

Recognizing that these steps represent only a short term solution, many universities focus on promoting programs or actions that can generate long-term revenue for their institutions. Consequently, some universities entered the global market and recruited higher numbers of international students, especially from China and India (Iling, 1996). Other universities focused on bridging gaps between universities and the industry, toward greater facilitation of the technology transfer process. Finally, other universities created different programs to meet specific community needs, such as entrepreneurship programs, leadership certificate programs, and healthcare management programs. To survive the competitive pressures and economic downturns, universities continue to react to political, economic, technological, and other environmental changes.

To deal with the new environmental uncertainty, a university needs a culture that is relevant and responsive to the external environment. Culture, as defined by Todorovic (2004) is a set of complex routines which configure internal organizational resources into capabilities and competencies. Market orientation represents one set of dynamic complex routines, in itself a dynamic capability, which in the private sector is closely correlated to organizational performance (Day, 1994a; Hurley & Hult, 1998; Jaworski, Stathakopoulos, & Krishnan, 1993; Kohli & Jaworski, 1990; Menguc & Auh, 2006; Narver & Slater, 1990; Slater & Narver, 1994b, 1995, 2000). Kotler and Fox (1985) also documented the importance of strategic marketing (also referred to as an orientation) in higher education more than two decades ago. Therefore, a market-oriented university culture should help enable universities to facilitate and manage the change process. We therefore posit that Market orientation does and will increasingly continue to play a significant role in increasing universities' performance - in an increasingly competitive environment.

Although the effect of market orientation on firms' performance has been widely recognized, few studies explore the relationship between market orientation and university performance. This study attempts to fill the gap by first examining the structure of market orientation within the university context. Next, we examine what constitutes MO within the university environment, and how MO is related to university performance (Homburg, Krohmer, & Workman Jr, 2004). To this end, our paper proceeds as follows. First, we review and discuss relevant literature constructs. Then, we discuss the methodology employed in this study and present our findings. We conclude with a discussion of findings, including the overarching role of market orientation, as well as the unique function played by each dimension, in terms of its impact on university performance.

DYNAMIC CAPABILITIES APPROACH

Dynamic capabilities approach is part of the overarching Resource Based View (RBV) paradigm. While RBV considers the competitive advantage gained based on the heterogeneity of firm resources, dynamic capability approach examines the management of those capabilities (Eisenhardt & Martin, 2000). The dynamic capability approach was originally developed as a response to the recognition that the application of the RBV to firms in an environment of rapid technological change is problematic. According to this approach, changes in the external environment are accompanied by a heightened emphasis on "invisible" assets (Arthurs & Busenitz, 2006; Ho & Tsai, 2006; Itami & Roehl, 1987; Lavie, 2006). As the speed of technological expansion increases, firms start to rely more heavily on their internally developed advantages (Kessler & Chakrabarti, 1996; Teece, Pisano, & Shuen, 1997). Learned et al. (1969), quoted in Teece et al. (1997), proposed that the real key to a company's success lies in its ability to find or create a competence that is truly distinctive. This notion is in contrast to the RBV framework, which focuses on the rents accruing to the owners of scarce firm-specific resources (Teece et al., 1997). According to Teece et al. (1997), "the dynamic capabilities framework analyses the sources and methods of wealth creation and capture by private enterprise firms operating in environments of rapid change" (p. 509).

Also seen as best practices, dynamic capabilities have been defined as a set of "specific strategic and organizational processes," by Eisenhardt and Martin (2000, p. 1106). As the dynamic capability patterns vary with market dynamism, this theory is useful for studying firms that operate within dynamic environments (Eisenhardt & Martin, 2000). Dynamic capabilities are seen as the "antecedent organizational and strategic routines by which managers alter their resource base to generate new value-creating strategies" (Eisenhardt & Martin, 2000, p. 1107). Eisenhardt and Martin (2000) further define these capabilities as "the firm's processes that use resources – specifically the processes to integrate, reconfigure, gain and release resources – to match and even create market change" (p. 1107). Branzei and Vertinsky (2006) linked dynamic capabilities to life-cycle stages, providing greater understanding of the timing and extent of expected returns. Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die.

Winter (2003) cautions that dynamic capabilities have costs associated with their implementation and development. Winter (2003) finds it is "not necessarily advantageous for a firm to invest in (first-order) dynamic capabilities" (p. 993). Rather, a long term managerial focus on the development of dynamic capabilities is more likely to yield the desired results (Kor & Mahoney, 2005). For such an investment to be beneficial, the long-term benefits of dynamic capabilities must exceed the cost of implementation (Winter, 2003). Winter (2003) defines "first order dynamic capability" (p. 992) as a capability used to directly modify an operational capability, such as a new product development.

Recognizing that dynamic capabilities are often associated with an organization's management, Adner and Helfat (2003) propose the concept of dynamic managerial capabilities, the capabilities with which managers build, integrate, and reconfigure organizational resources and competencies. Rooted in three underlying factors (managerial human capital, managerial social capital, and managerial cognition), dynamic managerial capability influences the strategic and operational decisions of managers, thus providing a potential competitive advantage for the organization (Adner & Helfat, 2003).

MARKET ORIENTATION AS MANIFESTATION OF DYNAMIC CAPABILITY

The concept of market orientation (MO) was first introduced by Narver and Slater (1990) and Kohli and Jaworski (1990) from two different perspectives: behavioral perspective and cultural perspective. Kohli and Jaworski (1990) described market orientation from behavioral perspective and identified manifestation of market orientation of an organization. They suggested that market orientation is exhibited in the generation and dissemination of market intelligence, and the response to such intelligence. Narver and Slater (1990) viewed market orientation from a cultural perspective as "the organizational 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" (p. 21). Since then, there has been a growing body of research exploring the construct of market orientation and its impact on business performance (Day, 1994b; Hurley & Hult, 1998; Jaworski & Kohli, 1993; Kohli & Jaworski, 1990; Narver & Slater, 1990; Slater & Narver, 1994b, 1995, 2000).

Although the two seminal articles published in 1990 examined market orientation from different perspectives, there are underlining connections between the two perspectives. In other words, the three dimensions of MO identified by Naver and Slater (1990) are connected to the three types of behaviors, described by Kohli and Jaworski (1990). Naver and Slater (1990) argued that MO contains three dimensions: customer orientation, competitor orientation, and inter-funcational coordination. On the other hand, Kohli and Jaworski (1990) argued that market intelligence includes "a broader concept than customers' verbalized needs and preferences in that it includes an analysis of exogenous factors that influence those needs and preferences" (p. 4). These exogenous factors include government regulations, competition, technology, and environmental factors, which influence the needs and preferences of their customers. From the definition of market intelligence, we can see that it is related to customer orientation and competitor orientation defined by Narver and Slater (1990). In addition, the generation, dissemination, and the reaction responding to market intelligence requires inter-functional coordination within the organization.

Essentially, MO describes a culture that helps to nurture dynamic capability which enables the firms to react to the changing external environment. Consequently, MO has a positive relationship with firms' financial performance which is evidenced by later studies (Deshpande & Farley, 1998; Matsuno & Mentzer, 2000; Slater & Narver, 2000). In addition, MO also has an impact on other performance. For example, Hult and Ketchen (2001) found that market orientated companies are more innovative and have a higher ability to create and implement new ideas, products, and processes. Increased innovation, in turn, is related to firms' ability to bring in new products and services (Im & Workman Jr, 2004). Market orientation also enhances customer's perception of quality of products and services provided, thereby creating and maintaining superior customer value (Brady & Cronin, 2001) and increasing customer satisfaction and loyalty (Slater & Narver, 1994b).

The relationship between MO and firms' performance is dynamic one, moderated by factors such as market turbulence, technological turbulence, competitive intensity (Slater & Narver, 1994a), economic ideology, and industry type (Sin, Tse, Yau, Chow, & Lee, 2005), culture and profit/non profit (Rodriguez Cano, Carrillat, & Jaramillo, 2004).

MARKET ORIENTATION IN PUBLIC SECTOR: FOCUSING ON UNIVERSITIES

A plethora of studies show evidence of the positive relationship between MO and firm performance in private sector. However, the role of MO in organizations' performance in the public sector received little attention.

Few studies examine the effect of market orientation on organizational performance in not-for-profit organizations such as hospitals (Bhuian & Abdul-Gader, 1997; Lonial, Tarim, Tatoglu, Zaim, & Zaim, 2008; Raju, Lonial, & Gupta, 1995; Wood, Bhuian, & Kiecker, 2000), local government (Cervera, Molla, & Sanchez, 2001) and universities (Caruana & Ramaseshan, 1999; Caruana, Ramaseshan, & Ewing, 1998b; Hammond, Webster, & Harmon, 2006; Webster, Hammond, & Harmon, 2006).

Since this study focuses on universities, we review past research on this topic below. Caruana et al. (1998a, 1998b) surveyed 184 heads of schools or departments in both business and other disciplines in Australia and New Zealand. Using the MARKOR scale (Kohli and Jawoski, 1993) and overall assessment performance measures they developed, they found a positive relationship between universities' market orientated behavior and performance. Building on Narver and Slater's (1990) work, Hammond, Webster, and Harmon (2006) and Webster, Hammond, and Harmon (2006) examined whether the market orientation scale can be reworded to fit the universities context. They also examined the relationship between market orientation and performance measured by the overall subjective performance and enrollment change. Their studies showed that reworded market orientation scales had adequate reliability and validity. They also found that the relationship between the three dimensions of marketing orientation and overall market orientation were positively correlated with business school performance (measured by student enrollment).

Although the above studies are crucial to promoting greater understanding of the topic, they also present some challenges. First, studies by the two groups of authors did not capture the multifaceted nature of university performance. Because universities carry different roles in our society, present measures of performance are rather subjective. Therefore, there is a need to develop a scale that will specifically measure multifaceted university performance. Second, the previous studies adopted measures from the literature but never examined the underlying dimensions of market orientation. Although MO is well defined in the private sector, we observe that the university structure is different from private sector and other not-for-profit organizations (Todorovic, McNaughton, & Guild, 2005). In other words, the same elements of market-oriented behaviors expressed by three dimensions of MO in the private sector may evidence themselves in behaviors unique to universities, which try to satisfy multi-pronged mission objectives. Consistent with the observations made by Todorovic (2004) who noted that entrepreneurial orientation evidenced itself with different dimensions within universities, it is posited that market orientation of universities is evidenced with different constructs than is the case in the for-profit world. To this end, we propose to answer the following three questions: 1) What is the underlying structure of market orientation of university departments? Is the structure of market orientation of university departments the same as market orientation of companies? 2) How to measure university performance? 3) What is the relationship between market orientation of university departments and university performance?

METHODOLOGY

Sample and Data Collection

We employed online surveys to collect data from university department chairs from computer science, engineering, and health science departments within the United States. These departments were selected because they are more likely to engage in research activities, teaching, and outreach to communities (Todorovic 2004). In addition, these three departments were selected because they are usually the most entrepreneurial and market oriented departments within the university (AUTM, 2003). A total of 3072 department chairs were identified, 1531 of them from health science departments, 1113 of them from engineering departments, and 428 of them from computer science departments. One week after we sent the link to the 3072 department chairs, we followed up with phone call. Two weeks after the initial e-mails, a second wave of e-mails was sent to those who had not yet responded to the survey. The second wave of e-mails was followed up with another set of phone calls approximately a week later.
We received 688 responses, which represents a response rate of 22.4%. The breakdown of responses by discipline shows health science with 355 responses; engineering with 242 responses; and computer science with 91 responses. Each respondent was asked to put a pre-determined code before entering the survey for identification purposes.

Measures

Market orientation.

Recognizing that market orientation is a part of the organizational culture within universities, we adapted the market orientation scale by Naver and Slater (1990). After being modified for the university context, the measures were sent to 30 department chairs and administrators in a university in northeast Indiana for pretesting. Using the feedback from the pretest, we further modified some of the items and eliminated two items from the instrument.

The item “We give close attention to after-sales services” was determined to be inappropriate, as there is no clear understanding about what constitutes the after-sales services in the university context. In addition, we deleted “sharing customer information” because our pre-test results show that it is very rare for the departments within the university to share student information to different departments. This is also compounded by the fact that students’ information is considered confidential. The final set of questions representing the marketing orientation within university culture is listed in Table 1.

Performance of University Departments.

We borrowed the university performance measure from Todorovic’s (2004) study. The measures are well established and tested within Canadian universities. Todorovic (2004) developed these items as he observed that patents and licensing are not appropriate performance measures of entrepreneurship within most university environments (Todorovic et al., 2005). Developed items, therefore, represent a more appropriate measurement of the constructs sought in this study, as the same incorporate multifaceted aspects of performance of different activities.

Construct Reliability

Table 1 shows the Cronbach’s alpha coefficients of the three components of marketing orientation and performance.

Table 1: Construct Reliability

	Construct	Item-to-Total Correlation	Cronbach's Alpha
Customer Orientation			.752
	We closely monitor and assess our commitment to serving student’s needs.	.811	
	Our strategies are driven by the goal of enhancing student learning experience.	.776	
	Our competitive advantage is based on our understanding of students needs.	.770	
	Our department objectives are driven solely by student interest.	.574	
	We measure student satisfaction systematically and frequently.	.686	
Competitor Orientation			.652
	Our department stays informed about the action of peer departments of other universities.	.695	
	We respond rapidly to actions of competitive universities.	.785	
	Our administration regularly discusses our strengths and weaknesses compared to other universities.	.726	
	Students are our primary emphasis when we have, or can develop, an opportunity for competitive advantage.	.600	
Inter-functional Coordination			.714
	Meeting with students is the highest priority of our faculty.	.770	
	All of our departments are highly dedicated to serving the needs of students.	.827	
	Our entire university contributes to student learning experience.	.705	
	We share resources with other departments.	.635	

Table 1: Construct Reliability			
Construct		Item-to-Total Correlation	Cronbach's Alpha
Performance			.791
	We are recognized by industry and/or society for our flexibility and innovativeness.	.748	
	Our department is highly regarded by industry.	.749	
	Many of our faculty members conduct research in partnership with non-academic professionals.	.775	
	We have spun-off a high number of ventures.	.623	
	Our graduate students often secure high quality industry positions.	.714	
	Faculty members in our department emphasize applied research.	.630	

RESULTS

Structure of Market Orientation for Universities

Since this study explores waters not frequently charted by researchers, exploratory factor analysis was undertaken to confirm that MO remains a three dimensional latent construct in this environment (Narver & Slater, 1990). Although the original work by Narver & Slater (1990) presented MO as a three factor latent variable, the exploratory factor solution for MO within university environment strongly supports a two (rather than three) factor solution. Items measuring customer orientation and inter-functional coordination (with the exception of one item) were highly loaded on the first factor. The three items for competitor orientation, however, loaded significantly on the second factor.

The results from the exploratory factor analysis suggest that the construct structure of market orientation within universities is different than in the private sector. Based on these results, we posit that market orientation of university departments contains only two dimensions, and thereby strongly affects university's ability to be aligned to the market conditions of the external environment (discussed in greater depth in the next section).

We also utilized the results of the exploratory factor analysis to examine the relationship between market orientation and performance. Using the naming convention suggested by Hair et al. (1998), we labeled the first factor as internal capacity and the second factor as competitor orientation. Table 2 shows the results of the exploratory factor analysis.

To assess the overall correlation matrix significance, Barlett's Test of Sphericity was employed. Although Barlett's Test of Sphericity tests the presence of non-zero correlations, it does not test the pattern for those correlations. For this purpose the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was used. To ensure that the data is suitable, the measure of sampling adequacy (MSA) should be 0.50 or higher (Hair, Anderson, Tatham, & Black, 1998). The KMO of Sampling Adequacy is .868, which exceeds the threshold of 0.50. Chi-Square of Bartlett's Test of Sphericity is 3293, with 78 degree of freedom ($p<.001$).

Table 2: Factor Analysis With Oblique Rotation			
Items of Market Orientation	Factor		
	F1	F2	F3
Our strategies are driven by the goal of enhancing student learning experience.	.797		
Meeting with students is the highest priority of our faculty.	.770		
All of our departments are highly dedicated to serving the needs of students.	.744		
We closely monitor and assess our commitment to serving student's needs.	.731		
Students are our primary emphasis when we have, or can develop, an opportunity for competitive advantage.	.728		
Our entire university contributes to student learning experience.	.681		
Our competitive advantage is based on our understanding of students needs.	.670		
We measure student satisfaction systematically and frequently.	.606		
We share resources with other departments.	.435		
Our administration regularly discusses our strengths and weaknesses compared to other universities.		.865	
We respond rapidly to actions of competitive universities.		.792	
Our department stays informed about the action of peer departments of other universities.		.643	
Our department objectives are driven solely by student interest.			.916
Percentage variance explained	37.938	11.326	8.480

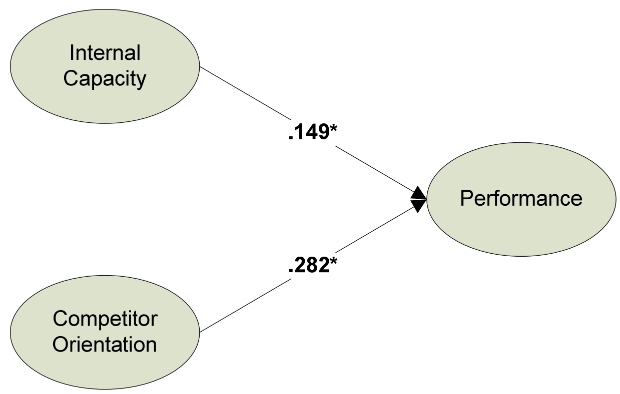
The Relationship between Market Orientation and University Department Performance

Regression analysis was employed to examine the impact of the two derived factors on university department performance. The results from the regression analysis are shown in Table 3. The model fit the data well ($p<.01$). The coefficients for the two factors are significant ($\beta_{capacity}=.103$, $p=.009$; $\beta_{competitor}=.243$, $p<.001$) indicating that the two derived factors of market orientation contribute significantly to university department performance.

Table 3: Regression Analysis		
Independent Variable	Coefficient	p-value
Internal capacity	.123	.009
Competitor Orientation	.257	<.001
F Statistics	33.038	
p-value	<.001	
R-square	0.088	

We also assessed the relationship using structure equation modeling approach. The data was derived through EQS. The model we tested and the results are shown in Figure 1.

Figure 1: Structural Equation Model



(Note: *p<.0. Model fit indices: NNFI=.884; CFI=.904; RMSEA=.074.)

The results from the structural equation modeling approach show that the model fit the data well and the two dimensions of market orientation have a significant impact on university department performance.

DISCUSSION AND CONCLUSIONS

In this study, we focused on understanding the role and the potential of MO within universities. To this end, we explored the relationship between market orientation and performance. We first investigated whether the market orientation of university department has the same structure as is found in private sector. Although MO is very well established in the private sector, our results (using exploratory factor analysis) do not show the three factor solution as was originally expected. More significantly, we observe that, within the university environment, the two core dimensions of market orientation (customer orientation and inter-functional coordination) merged into a single construct. This may be due to the difficulty in determining the university "customer," considering the multi-prong mission of the university. In addition, the dimensional characteristics of MO and, for that reason, of other strategic orientations may be industry specific. One can conclude that, aligned with the arguments presented by Todorovic (2004), strategic orientations may function or manifest themselves with different dimensional characteristics in not-for-profit or government sectors and yet still remain useful organizational constructs, fulfilling their strategic purpose.

Our study results pose a significant surprise, in that customer orientation and inter-functional coordination loaded on the same axis. Upon further reflection, we note that this provides a significant insight for this study. Although most organizations also have internal customers, MO definition of a customer focuses on an external entity. We also observe that MO is a dynamic capability, and as such, is involved in reconfiguration of existing and development of newly acquired capabilities and competencies (Menguc & Auh, 2006). Observing that MO aligns organizational resources with the external market conditions, it follows that in today's highly dynamic environment, universities must make sure they are aligned with the external environment. Further, we note that students were identified as university customers by our subject population. Our study results provide convincing evidence that universities, which see students as customers, are internally orientated, as most students also represent internal stakeholders. This conclusion is derived from the observation that the MO dimensions, customer orientation and inter-functional coordination, loaded on the same factor. This only leaves the competitor orientation as a separate external factor. Although the effectiveness of this factor in terms of keeping the university relevant to external environment is a concern, we also observe that this is a usual practice amongst US universities. Figure 2 is a graphical presentation of the significance of our findings, where customer orientation is positioned internally rather than externally. Since most universities have similar practices, competitor orientation is positioned on both sides of the internal-external threshold.

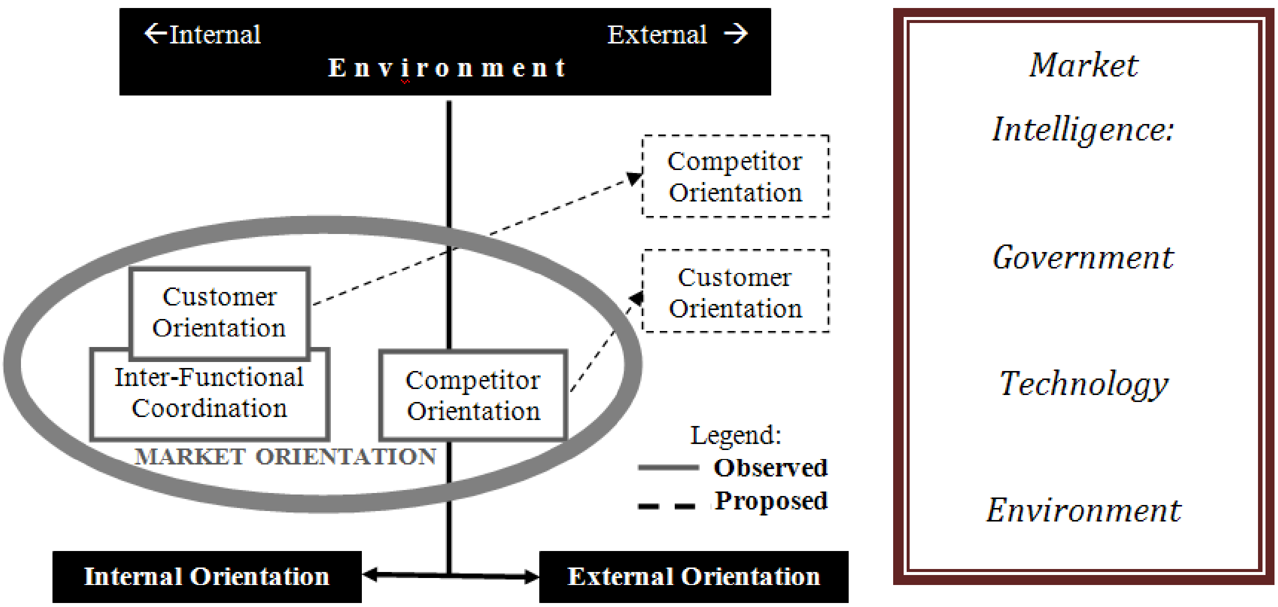
This observation points to the need for MO to configure university resources in alignment with the external environment, which is not the case in most universities. Reflecting upon past criticisms of universities not being relevant to their communities (Bercovitz & Feldman, 2008; Duderstadt, 2000, 2001), we now conclude that MO is a necessary, but mostly absent, ingredient of that readiness.

There is also a second inference gained from this observation. It appears that students, which are internal stakeholders of university, should not be used as a customer reference. Consequently, using the discussion of marketing intelligence as a base, we conclude that universities need to be aware of government, environmental and technological changes in their surroundings (Jaworski & Kohli, 1993; Kohli & Jaworski, 1990; Slater & Narver, 1994a). This, in turn, supports the notion that every university may be dealing with a slightly different set of external customers or stakeholders.

In conclusion, this study suggests that universities stand to benefit significantly from the acquisition of department level MO. Market orientation is likely to provide a much needed external alignment for university related capabilities and resources. This, in turn, will satisfy the growing number of critics who are concerned about the perceived lack of relevance of universities in dynamic global environment.

This study also has managerial implications, especially for university administrators. The results can help university administrators understand how to build competitive advantage to compete in the extensive competitive environment. First, universities may need to better define their customer, and indeed, examine whether it is only the student body. Likewise, this study does not indicate that there is no significant interdepartmental coordination (IC), but rather suggests that most of the interdepartmental coordination may be related to students. This in fact may be highlighting a potential weakness – universities may need to develop structures that allow more diverse IC within their institutions. Again, we have the promise of greater university performance, evidenced by strong correlation between MO and university.

Figure 2:Proposed New Model



Implications of this study may also extend to other situations in the private sector, such as departmental units with no clear indication of who their customer is. In such cases the customer may be another internal entity rather than an external entity. In such situations, the theoretical implications of the two dimensions accumulating in a single factor may be significant.

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HUMAN ROLES AND COMMUNICATION STRATEGIES OF CORPORATE IDENTITY PERFORMANCE: ENHANCING GLOBAL IMAGE, LEADERSHIP, AND LEGACY OF A HIGH-TECH LEADER

Sweety Law, California State University – East Bay
Jacques Verville, University of British Columbia - Okanagan

ABSTRACT

This paper proposes a notion of corporate identity as strategic management and marketing performance by individuals, specifically one kind of performance that integrates business goals with philanthropic motivations. The integrative model of corporate identity management posited by Cornelissen and Elving (2003) is distinctive for attempting to "relate corporate identity dimensions to the management processes of deciding on a positioning strategy, and of developing codes of conduct and communication programs, as well as shaping organizational and environmental characteristics". We conducted a survey of the literature on corporate identity, corporate identity management, corporate social responsibility, and communication strategy. We then studied information available on the websites of four information and communication technology leaders; and after several iterations of exploring and learning via navigation of the websites, focused on one organization: Microsoft. This case study research is based on a content analysis of Microsoft's Unlimited Potential's website. Four strategies in Microsoft's corporate identity marketing performance become apparent: global intellectual exchange, story-telling and blogging, training, and partnerships.

INTRODUCTION

Corporate identity is an important component of corporate-level marketing, which is itself an under-investigated concept within marketing (Mukherjee and He, 2008). New requirements of business growth and product development have created the need for rethinking known approaches to corporate identity, product design, research, distribution, partnership, and even business models. Earlier, many scholars (e.g. Karaosmanoglu and Melewar, 2006) noted that different ways of creating competitive advantage are needed. In addition to opportunities created by newly-opened markets, mergers and acquisitions, more sophisticated consumers, the increase in competition, and crises such as the unraveling of US giants such as Enron, Arthur Anderson, and Tyson Foods also forced companies and governments in the US and around the world to seek a greater understanding of their business and what corporate and social responsibility (CSR) means. Furthermore, for high-technology leaders, their fortunes depend to a large extent on investments in intangible capital – intellectual and marketing assets – different from other industries. Rao (2005) argued that especially for high-tech firms, marketing capital is complementary to intellectual capital (research and development, human resources, and organizational practices); because it is only by creating and sustaining a distinctive corporate identity through difficult-to-imitate marketing strategies that the successful innovators can protect themselves against imitators and the appropriability problem. The objective of this paper is to explore the pursuit and presentation management of a particular corporate identity and its desired effect on the market and strategic behavior of a high-tech leader.

Corporate identity is strategically related to marketing at the corporate level by connotatively including marketing's concern with corporate entities in their totality, including networks and partnerships ((Mukherjee and He, 2008). Whereas Mukherjee and He (2008) outlined a conceptual framework that proposes corporate identity as an individual-level perception and having multiple routes that translate it from the minds of their beholders to performance, our paper proposes a notion of corporate identity as strategic management and marketing performance by individuals, specifically one kind of performance that integrates business goals with philanthropic motivations. It is the concept behind the work OLPC is doing with their XO computer. It is the philosophy behind Intel's World Ahead program. Similarly, Microsoft is fulfilling corporate and social responsibility through a variety of approaches that are also creating competitive advantage resources. The strategic advantages to the company are numerous, not least of which is enhancement of their global leadership identity, image, and legacy. In terms of sheer numbers, the new approach will create a class of users and potential customers who had hitherto been outside the purview of traditional business strategy thinking. These companies are acting on a vision that also produces other short term and long term results: enhancing their image and leadership and creating global citizens among their employees and the communities they serve. An array of strategies combining human roles, international communication, and training form the bulwark of this program to manage corporate identity performance – a proposition that this study will explore using empirical evidence.

Corporate Identity Management Research

In today's business environment, corporate identity and corporate communications, when viewed and managed from a strategic perspective, can imbue many organizations with a distinct competitive advantage (Balmer and Gray, 2000). In the early years of corporate identity management, the focus was mainly on the message and a campaign approach (Christensen, Fırat and Simon Torp, 2008) mostly combining advertising, promotion and press agentry. Related closely to the focus on 'message' was the synonymous use of the term 'image'; and "Image was considered the fundamental promise of the company made tangible in the minds of customers, and advertising was the vehicle that would convey the most basic of a company's promises (Vos, 1987). At the time, since demographics and monitoring systems were unavailable for television analysis, multinational firms focused on print media in many overseas markets. The "one voice, one look" approach was the promoted strategy and focused on standardizing ads to have the same look and personality across different markets and different media (Duncan, 1993). The "one voice, one look" approach was continued well until the end of the last decade when significant advances in internet and digital technology placed new tools, requirements, and challenges for corporate identity management. At the same time, there is also a distinct attempt to coalesce the message around "one voice, one look". But now there seems an equal attention on the source or messenger and communication media as on the message.

There is continuing interest in and debate about corporate identity management in both academic and practitioner worlds because of the lack of systematic conceptual and empirical work on the topic (Cornelissen and Elving, 2003; Grunig, 1992). In part, this is due to the fact that there are still ongoing attempts to determine corporate identity itself (e.g. Melewar and Karaosmanoglu, 2006; Otubanjo and Melewar, 2007; Pruzan, 2001; Suvatjis and de Chernatony, 2005; Westcott Alessandri, 2001). Today most scholars recognize that multidisciplinary approaches produce the richest understanding of the meaning and components of corporate identity. In light of these endeavors to further understanding of corporate identify, the integrative model of corporate identity management posited by Cornelissen and Elving (2003) is distinctive for attempting to "relate corporate identity dimensions to the management processes of deciding on a positioning strategy, and of developing codes of conduct and communication programs, as well as shaping organizational and environmental characteristics". While their study is conceptual like most others (e.g. Stuart, 1999, van Rekom, 1997), this study seeks to provide some empirical support to their groundwork in theorizing on corporate identity management. Importantly, it describes the strategic management and performance marketing aspects of the concept and from the perspective of a firm that is a technology leader.

HUMAN ROLES AND CORPORATE IDENTITY PERFORMANCE

The organization as a human entity is theoretically recognized via the relationship-view of the firm. Significant human roles in management and marketing literature are emphasized in relationship-marketing, customer service and sales, or professional services such as accounting or high-contact services such as in leisure and hospitality. Perhaps this study is the first to explicate the fundamental key role of humans, the individuals who comprise the internal and external stakeholders of any organization, to articulate and implement the corporate identity, strategies and vision of a business. According to Topalian (2003), in the digital age, the powerful manifestation of corporate identity will be the reality of personal relationships with an organization. We are fast approaching the point where there can be truly unique relationships with individual customers (Topalian, 2003) and this experience interface will be a decisive factor in successful corporate identity management. We theorize that our focal organization has recognized this key factor; and organized important roles for individuals to actualize their desired corporate identity.

For our study, we recognize the importance of corporate visual identity but consider its more appropriate treatment as a separate undertaking in order to focus on the behavioral and communication aspects as presented by human roles. Based on a summary of the literature, we interpreted corporate identity to comprise an organization's presentation of symbolic, communication, and behavioral components (Melewar and Karaosmanoglu, 2006; van Rekom, 1997; van Riel and Balmer, 1997). Academics further expanded the view and theorized that corporate identity is an organization's personality (van Riel and Balmer, 1997) and it is also its character (Balmer and Greyser, 2006). Since our attention is on human roles creating identity through integrating CSR and business dimensions, 'the idea of the organization as having a legal persona, rights and responsibilities' (Christensen and Cheney, 1994) is also relevant to include here. It is also important to include the temporal notion as an organization's identity comprises what is actual, conceived, ideal, and desired and this is also influenced by uncontrolled factors (Melewar and Karaosmanoglu, 2006). According to Topalian (2003), corporate identity is a 'living' 'breathing' and 'lived' experience. These perspectives underscore our attention to the human role in corporate identity performance management by premising a human persona that intentionally pursues certain goals, creates the reality of personal relationships with an organization, and in the process also responds (or not) to environmental influences.

The attention to human roles makes real corporate identity management as a deliberate strategic initiative and human undertaking that projects a firm's desired characteristics; and it also puts much control of corporate identity management in the host organization. Our research learned how Microsoft views corporate identity and communication as organized by human actors and actualized by human actors. Given its size and scale of business, and like many companies with horizontal divisions for international operations and vertical divisions of product groups, both internal and external communications needed to establish 'air-traffic control'. Because the organization focuses on impact of communications, rather than on output, it seeks to build networks of communicators, develop a storytelling framework, promote self-regulation to prevent overload and manage content, and ensure that leaders are heard (Love, 2006). This corporate communication strategy was used as a guideline to analyze their CSR and corporate identity management and it reveals significant roles for its leaders, employees, existing customers and potential users.

In this study, we adopt an integrated communications perspective on corporate identity management because "Together, the disciplines of marketing, corporate design, public relations and corporate communications are promoting a vision of an organization that is (increasingly) able to survey and monitor its own communication as one coherent entity" (Christensen, Fırat and Simon Torp, 2008). By 'international', our paper implies and extends the common definition of physical geographic entities. Additionally, 'international' as used in our paper also includes particular language, ethnicities, social and other cultural influences and issues that affect the identities and communication of individuals and communities regardless of their location. Therefore, 'international communication' in our paper refers to communication that transcends a specific national context and seeks to engage the multidimensional attributes of the human condition, its strivings and aspirations, successes and failures, and consequently recognizing the human and community rather than simply the country of origin as frames of reference.

"For most people, strategy is generally perceived as a plan – a consciously intended course of action that is premeditated and deliberate," (Graetz et al, 2002). Also, "strategy and management is … the way to provide a framework for planning and decision-making that control and manage influences from the environment" (Khanfar, 2007). Our paper conceptualizes 'communication strategy' as the framework for the communication plans developed to implement corporate, functional, operational, business, and enterprise strategy. Communication strategy also provides 'the link between key strategic issues facing the organization and communication plans' (Steyn, 2003). More specifically, this paper will focus on Microsoft Unlimited Potential and its use of human ambassadors as the most visible presentation and performance marketing of its identity and leadership, a distinctive international communication strategy that is complemented by a dynamic mirror presence on the World Wide Web.

Corporate Identity Performance Management and an IT Leader

We chose to study Microsoft because it presented many elements theorized in the emerging literature on corporate identity and performance marketing. In particular, we examined its corporate citizenship initiative because it appeared to display severally how "identity perceptions flow through the relationship between senior managers and customers (via external marketing), between senior managers and employees (via internal marketing), and the interactions between employees and customers (via interactive marketing)" (Kotler and Armstrong, 1991; Mukherjee and He, 2008). Importantly, it indicated a particular corporate identity performance located in strategic planning, managed performance, and organized presentation. The objective of this paper is to examine in what ways human roles and communication strategies are integrated for corporate identity performance and its strategic marketing impact.

Microsoft Unlimited Potential is the umbrella corporate citizenship program initiative of Microsoft. Its mission is to reach the next one billion underserved people by 2015 by developing sustained social and economic opportunity. The charter of action focuses on solutions in three key interrelated areas: Transforming education; Fostering local innovation; and Enabling jobs and opportunities. According to its website, Microsoft Unlimited Potential recognizes that for the world's more than 5 billion people, the opportunity to learn, connect, create, and succeed remains elusive. Several barriers stand in the way of effectively reaching these underserved communities. However, in the short term, Unlimited Potential believes that education and training solutions can create the greatest possible impact by building a cycle of sustained social and economic development.

The belief is that this cycle can drive communities: help build connections to form new communities; fuel local and global partnerships; and, most importantly, ultimately become locally sustainable. Sustainability is viewed as a key indicator of effective programs and activities, and is their long-term measure of success. Our paper proposes that the initiative's human agents, international communication strategies, and training offerings play, and will play, a significant role in building new communities and fostering local and global connections that would benefit the organization and the sustainable social and economic advancement of those communities. Briefly, we suggest that the human ambassadors of the company are key cornerstones in its corporate identity performance marketing. And global citizenship and global leadership will comprise other key outcomes and attributes of the human agents affecting the desired changes.

METHODOLOGY

We conducted a survey of the literature on corporate identity, corporate identity management, corporate social responsibility, and communication strategy. We then studied information available on the websites of four information and communication technology leaders; and after several iterations of exploring and learning via navigation of the websites, focused on one organization: Microsoft. The World Wide Web is a distributed information system that is based on a hyper-text paradigm, and is now regarded as the principal navigational tool for accessing the resources of the Internet (Dholakia and Rego, 1998). It is also a repository of information as well as a means of communication and training.

This case study research is based on a content analysis of Microsoft Unlimited Potential's website. "The Web has legitimized browsing strategies that depend on selection, navigation, and trial- and-error tactics, which in turn facilitate increasing expectations to use the Web as a source of learning and exploratory discovery" (Marchionini, 2006). Marchionini (2006) further theorizes that exploratory Web searches may be of three kinds – lookup searches (question-answer or fact-retrieval), learning searches (involve multiple iterations and return sets of objects that require cognitive processing and interpretation), and investigative searches (aim to achieve Bloom's highest-level objectives such as analysis, synthesis and evaluation). Our research methods are a combination of learning and investigative searching that require strong human participation in a continuous exploratory process.

The task of converting textual information of a few web pages (owners) into a database could easily be carried out manually, i.e. by eye, (Lau et al, 2004). However, we combined browsing search with the old-fashioned approach of analyzing printouts of the various media of information presentation (e.g. screen shots, textual metadata, archived pdf files, etc). Unlike log data, search queries, and other forms of internet data for which quite a few text and data mining applications have become available, our field of study is a web site and the challenge was to learn from verbal and visual content including multimedia, to discern its framework not only the direct content. To manage and evaluate the vast array of information for our purposes, we aimed to answer one question:

What are the human roles and communication strategies framing corporate identity marketing performance by Microsoft Unlimited Potential?

Based on browsing strategies 'that depend on selection, navigation, and trial-and-error tactics' (Marchionini, 2006) as well as verification, comparison, accretion, synthesis and evaluation of 'emergent themes' (Crano and Brewer, 2002) following one approach in content analysis procedures, four strategies in Microsoft's corporate identity marketing performance become apparent: global intellectual exchange, story-telling and blogging, training, and partnerships.

ANALYSIS

Global Intellectual Exchange

Global intellectual exchange defines Unlimited Potential's initiatives to organize various platforms for dialoging and intellectual exchange. It is a two-pronged strategy here – engaging state and community leaders at one level and at another level engaging students and young adults. Among the well-known events is Microsoft Government Leaders Forum (GLF) - Americas, now in its tenth year, and held most recently April 3-4, 2008 in Miami. This event brings together government, business, and education leaders from North, Central, and South America 'to exchange experiences and discuss issues related to governance, education, local economic development, and the knowledge economy, as well as to examine the role that information and communications technology (ICT) plays in achieving success in these areas'. A similar GLF-Asia convention was held in May 2008 in Indonesia. The active participation of Microsoft founder Bill Gates at these events and other similar world receives much national and global media attention partly because it contrasts with the more reclusive option exercised by most individuals of similar background of power and wealth. A number of academics have suggested that management behavior, i.e. the communication and actions of and emanating from top management, can have a significant impact on corporate identity (Fritz et al., 1999; Hatch and Schultz, 1997; Melewar and Karaosmanoglu, 2006)

On Unlimited Potential's website, a clean, uncluttered, easy-to-use interface with minimal clicking offers access to Bill Gates' speech transcripts, video copies of discussion sessions, news and press releases and hyperlink to related information on the website. Such easy access to verbal and visual information can be forceful in shaping perceptions of website visitors and consequently managing a global corporate reputation and image. As a strategy, the website offers an organized approach necessary "to manage the company's collective voice that is crucial to building a global brand" (Freivalds, 2005). And by extending the public appearance platform for their leader and the promotional value of the events, it helps to maintain the corporate image, reputation and identity.

For young adults, there is a student technology competition focused on finding solutions to real-world issues. Open to students around the world, The Imagine Cup is a contest that spans a year, beginning with local, regional and online contests whose winners then go on to attend the global finals that are held in a different location every year. For the first time this year, Unlimited Potential announced a new software design award called The Imagine Cup Rural Innovation Award to recognize the solution that contributes toward a more sustainable environment and best helps promote the social and economic growth of underserved populations in developing countries and/or best helps these populations better meet their basic needs. With its global student audience engagement, this communication strategy, coupled with the global recognition, rewards, and Microsoft corporate brand and identity appeals, will be certain to generate positive public evaluation of the company by its association with education and local innovation (and which may or may not translate to product development).

On the homepage of Unlimited Potential, the link for The Imagine Cup Rural Innovation Award leads to pages that are rich with clear, uniform, factual and relevant information – that would appeal to an adult user or researcher. Demo video-clips of the award winners and their blogs establish multiple active connections among information and social media platforms. Upon querying for additional information on the Imagine Cup, the visitor is taken to a website that is unmistakably designed to appeal to students from across the world. The calligraphy, colors, designs and patterns, and vignettes are clearly selected keeping teens in mind. This website in combination with the Global Stories and Blogs sections on the homepage of Unlimited Potential together create perceptions of the "Best Friend" image (Scholey, 2005), a transformational message element that captures "the experience of owning or using a product with psychological characteristics, such as richness, warmth, excitement, enjoyment, and so on" (Aaker & Stayman, 1992; Chen, Shen, and Chiu, 2007).

Stories and Blogs

The internationalism of Microsoft's corporate identity is extended via another communication medium – story-telling by its senior managers, employees and customers engaged in various communities across the globe. Unlimited Potential primarily tells its 'Global Stories' through video available on its web-site. The advocacy intent may be missed on this chapter's page but the images that serve as cover/title pages form a clear index for a serious visitor focused on learning verbal information and who may perchance be interested to listen and see videos of personal stories. The selected images are recognizably international in content and appeal. To see and hear individuals tell their own stories situated in their own contexts (albeit selected and edited by the site sponsor) is quite compelling to any viewer.

Web communities like newsgroups, chat rooms and networking groups have existed before bloggers and blogging came into academic attention. A blog can be defined as a personal diary, a daily pulpit, a collaborative space, a political soapbox, a breaking news outlet, a collection of links, and/or your own private thoughts or memos to the world.' (www.bloggers.com)

> Like other Web communities, blogging blurs the private and public divide. And when created by identifiable individuals such as experts, community and business leaders, and other persons of influence, the persuasive effects of the information and communication are significant. The blogs of Unlimited Potential are organized around two themes: Unlimited Potential World Updates are contributed by its team members from around the globe and Inside UP is maintained by its General Manager James Utzschneider.

Training

Training is offered in a variety of formats and platforms under what Unlimited Potential calls Programs and Solutions. Microsoft certification training is well-known. It is offered online and in hybrid format, and is thus accessible to all people anywhere in the world. In developing countries, in-person training is the common mode of instruction especially for vocational/self-employment training, thereby enabling unique interpersonal relationships and ensuring leaders are both seen and heard. What our study draws attention to are the tools and training offered to students and young adults as they participate in The Imagine Cup, and, in particular, the first-hand training experience offered at a Microsoft facility as part of the competition rewards. The very nature of the competition encourages innovative thinking and a global perspective. Students are directed to think of technology solutions in terms of community, social and environmental impact. The judges' blog and feature stories make transparent contest evaluation criteria, which by itself can be an educational experience for many students; given that in most emerging markets, such competition rules are usually unknown or ambiguous. By making available on its website the demo videos of finalists' work, Unlimited Potential presents a rich learning opportunity to all users. Additionally, links for Syndication and RSS feeds on their website present added opportunity for focused learning and updated information.

Additionally, training is offered internally to employees and managers in order to orchestrate corporate identity performance. According to senior director of communication at Microsoft, Mike Love (2006), given the company's size and scale of operations, it is important to manage 'air-traffic control' to generate focused and relevant communication. Among other methods, his office seeks to build networks of communicators, develop a storytelling framework, promote self-regulation to prevent overload and manage content, and ensure that leaders are heard.

Networks and Partnerships

To make the largest impact on socio-economic issues, networks and partnerships are necessary, and can prove to an effective business communication strategy for Unlimited Potential (and Microsoft). Through public-private partnerships with governments around the world, Microsoft is helping to bring the solutions, knowledge and tools that can help leaders and citizens be empowered to accomplish more and interact more effectively. At the core of Microsoft's partnerships is the creation of new avenues of social and economic opportunity, especially for underserved people, and bringing technology to people who previously have not had access to its benefits. Microsoft also believes in partnerships with non-governmental organizations (NGOs), development agencies and other technology companies. The OLPC announced support for Windows on the OLPC XO computer. The two organizations will work together on several pilot programs in emerging market countries. XO computers will only be available in emerging market countries where governments or NGOs are subsidizing the purchase of a large number of PCs for students.

On the website, these partnerships are highlighted on the homepage of Unlimited Potential and on nearly every sectional chapter. There are individual links for governments, intergovernmental organizations, non-governmental organizations and technological partners. In clear crisp language, Microsoft Unlimited Potential has outlined what it sees as challenges, solutions, and what it has on offer by way of its “Programs and Solutions”. The information is supported by research and contributions by technical and academic experts in the form of white papers, case studies and even video recordings.

DISCUSSION

We conclude that Microsoft ascribes visible key human roles in its corporate identity management. The literature reviewed almost unanimously makes a profound link between corporate identity and corporate image, stating that image is the collective perception that stakeholders have of corporate identity (Karaosmanoglu and Melewar, 2006). According to Christensen and Askegaard (2001), “corporate image is formed by the presentation of the total sum of signs that stands for an organization’s (identity).” Similarly, Karaosmanoglu and Melewar (2006) summarize Van Riel (1997) and Stuart’s definitions of corporate image as “The strategically planned expressions of corporate personality via the cues given by its symbols, behavior and communication.” From our exploratory study we can say that even a cursory review of Microsoft Unlimited Potential will indicate that an integrated international communication strategy focusing on individuals has effectively extended and maintained a distinctive corporate image and identity of Microsoft.

Unlimited Potential is creating not just visual and verbal identities to manage and maintain a coherent image which is a basis for favorable overall corporate reputation. It is creating the picture of a familiar individual and best friend. According to Scholey (2005), three images can distinguish any company: “best deal”, “best product/service” and “best friend”. Particularly through its Global Stories and Blogs, Unlimited Potential’s website speaks in the conversational language of a best friend. The story-telling and pictures of actual Microsoft employees reinforce the human-side and relational voice. Videos of activities and events, particularly local and involving ordinary citizens especially students, can only enhance the perceptions of a best friend image.

Offering training that is customized to local needs, and especially those intended to generate employment and economic opportunities, form a key part of Unlimited Potential’s international communication strategies. There is a separate track that focuses on education. Together the training and education initiatives may not be an apparent communication strategy but what gives it traction is the creation of message sources that are “interpersonal (word-of-mouth from close environment), intrapersonal (company-consumer identification, emotional attachment, company knowledge) and intermediary (word-of-mouth via mass media, nongovernmental organizations, governmental institutions” (Karaosmanoglu and Melewar, 2006). At the local level, such presence of interpersonal, intrapersonal and intermediary cues can be cumulatively persuasive by way of attendance by Microsoft trainers, appearance of other authority figures of influence, peer trainees, duration of training time, and other cultural elements that create emotional attachment and company knowledge.

In addition to reinforcing a corporate image, Unlimited Potential is creating, knowingly and unknowingly, global perspectives of thought and action. The Imagine Cup, by stimulating technological innovation for solving real-world issues aims to encourage global thinking among students. Internally, Microsoft employees are encouraged and rewarded for their community engagement activities and initiatives. The dedicated organizational roles and visible leadership for these endeavors put a human face to Microsoft’s image, making it more relevant, accessible and recognizable. From their blogs, there is an unmistakable sense of global citizenship and leadership among participating employees. Here are two samples:

> How to Reach Rural, Non-Electrified Classrooms
> Published 01 June 09 07:47 AM | Unlimited Potential team
>
> *The Unlimited Potential Group in the Middle East & Africa has been hard at work for more than 6 months to introduce ICT for the first time to a rural school in the village of Ha-Tumo, 30 kilometers outside Lesotho’s capital city, Maseru. Working with the Lesotho Ministry of Education & Training and technology partners, AstraLab, Learnthings Africa, and The Mindset Network, we’ve helped to integrate an innovative Compujector (in other words, a PC + projector),*

with tailored education content optimized for Windows MultiPoint, to the secondary school of 45 students.

Rather than just providing basic ICT skills training and expecting many of the teachers (many of whom had never used a computer before, let alone a Compujector) to put the technology to work immediately, we've paid close attention to making the pilot sustainable by helping the teachers integrate the Compujector into the curriculum and improve the student's learning and grades. After thorough training, we've seen the Compujector become a core part of lesson plans, with the teachers using the education content and applications for math, science, and even religion class. The school does not have access to electricity either – as is the case for so many schools in Lesotho and elsewhere in Africa – so we've also tested a low-maintenance solar array to power the Compujector. So far, there's been little need for the portable, gas-powered generator we installed for back-up.

We've written up a case study on this education pilot in Lesotho – we hope other Ministries of Education will see how this innovative solution could be replicated in rural, non-electrified classrooms in other school districts.

iCafés in China
Published 24 February 09 04:01 PM | jamesu

I spent the last week in China learning more about Internet Cafés (or iCafés) , which are becoming a key area of focus for the Unlimited Potential Group. This is part of our "shared access" strategy, where we are developing solutions for computers that are shared by a large number of people throughout the course of a day.

In emerging market countries, iCafés are a big deal. According to a recent report published by Euromonitor, 300 million people in emerging markets will be regularly using iCafés by 2010. That's 5% of the world's total population. In India and China, iCafés account for up to 40% of all Internet traffic. And compared to the rest of the world, iCafés in China are huge, averaging over 100 PCs per facility. Some iCafés in Beijing can have as many as 350 PCs and are tricked out with fancy leather chairs and cordoned off "VIP zones" with large monitors and extra network bandwidth.

So I was pretty excited when I wandered into my first Chinese Internet café last Tuesday, located on the first floor of an office building right next to an electronics mall. It was a dark, low-ceilinged room with row after row of young men hunched over in front of flat panel monitors.

And what were they all doing there?

Playing World of Warcraft. Shooting at things. Winning at Mahjong. Some were watching movies. A few were surfing the web. But most were playing games. With great intensity. Many of the gamers were there with groups of friends and were playing together. There is an interesting ecosystem that has built up over the last few years to support them. iCafé PCs in China have sophisticated game launcher software with up to 500 titles and are supported by a web service infrastructure that includes a Windows Update-like service to ensure that the games have the latest patches and bug fixes. Usage is closely monitored by the government, and your ID card is recorded before you can begin an iCafé session.

100 million people in China use iCafés on a regular basis. So this raises an interesting question for us: why on earth is the Unlimited Potential Group interested in this space, and how could any of our work here help us advance in our mission for enabling social and economic opportunity for people underserved by technology?

In other words, by focusing on iCafés, are we really being true to our mission? At first glance, the answer is obviously no. We are not going into the social and economic opportunity gaming business. But PCs are amazing tools that can be used for a lot more than just watching movies or gunning down imaginary dragons. They can be used for things like skills training and education. And that is where our strategy becomes interesting.

The government in China is really worried about unemployment right now. As my Microsoft colleague in China Nigel Burton likes to point out, the largest migration in the history of the world has occurred in China over the last 20 years, where 400 million people have moved from the countryside into cities (mostly in the eastern part of the country) to work primarily in manufacturing and construction. And as the global recession continues to prolong, more and more Chinese workers in manufacturing are losing their jobs. So the governments in China sees iCafés as a potential asset to help assist in the retraining of their workforce and are turning to companies like Microsoft for software and training programs to help with this effort. We have an iCafé eLearning pilot underway in one province in China right now, and are looking at ways to expand it to support more people.

But there are challenges we face in helping turn iCafés into a productive tool for society. Culturally, they are not viewed as friendly places where, for example, parents would want their daughters to go to learn how to use spreadsheets or other business software. We also need to create incentives for iCafé owners to support this training scenario. But our early experience from the pilot in China and from pilots in other parts of the world indicates that this idea of using iCafés as a workforce development tool has merit, and we are looking forward seeing how we can expand this idea more broadly.

Such impetus to create direct interaction between rural and urban, between corporate and consumer, across classes, across geographies, could only be driven by a corporate-level vision and impulse that transcends the local and individual. As a communication strategy tool, Unlimited Potential's website has succeeded in creating a dynamic communication platform for its global vision and multi-point endeavor. By presenting significant information that highlights both the messenger as well as the message, the website puts its employees, managers, customers, partners, and potential users in the center of the company's thinking about business and strategy. A conscious inclusion of global content and a web presence highlighting human agents in dedicated roles, real individuals, engaged in the endeavors further help to extend the credibility of its mission and efforts. Importantly, it can be argued that Microsoft has successfully created and sustained a distinctive corporate identity through difficult-to-imitate marketing strategies.

Our study examined the human roles and communication strategies of Unlimited Potential as a program and as defined and presented by its website. Given its global mission, we assumed the program would use international communication strategies in its activities and events and in its website. Apart from two anonymous short essays on GM's and IBM's use of blogging for strategic communication management, there does not appear to be any other study of this kind. As an exploratory study, there will be oversights, flaws and limitations. Given the study's cumulative purpose, it was tempting at times to focus only on the international communication strategies of global intellectual exchange events and activities. Or concentrate only on the blogs and video stories. However, our purpose was to examine generally how Microsoft seemed to organize its distinctive corporate identity performance management and marketing; and Unlimited Potential provided one indication how the company puts its people, partners, and potential customers in the center of its thinking about strategy and operations.

In terms of methodology, as more highly interactive user interfaces that continuously engage human control over the information seeking process will emerge, each of the above-mentioned future research topics could open up new directions of learning and investigation about corporate identity performance management and marketing impact. For example, the Relational Browser (RB) developed by Marchionini and colleagues aims to facilitate exploration among and between different data facets and display alternative partitions of the database with mouse action. Thus, the RB can provide researchers with a small number of facets such as topic, time, space, or data format with simple mouse-brushing capabilities; and the results can dynamically change as brushing continues. Thus, it might be possible to learn in greater detail about specific corporate identity attributes and programs that Microsoft organized and pursued and in what time frame. RB is particularly useful for a database such as Open Video Digital Library because people need a number of alternative ways to slice and dice the video corpus (Marchionini, 2006). RB may also become useful in research that seeks to analyze the blogs' archives which will only grow larger.

This may likely be the first study on Unlimited Potential and likely the first of its kind – examining the application of a new approach in corporate identity performance management that integrates philanthropic and business goals. It is also likely among the first to examine corporate identity as performance management and marketing strategy. Very likely, it is the first to study how clearly identifiable human agents are engaged in the corporate identity performance process and maintenance. And discovering an unexpected marketing impact: the creation of a class of employees, users, and potential customers who are global-minded.

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THE PERIODIZATION OF MARKETING: MYTH OR REALITY? EVIDENCE FROM THE SCOTT PAPER COMPANY

Barbara Olsen, SUNY College at Old Westbury
Costas Hadjicharalambous, SUNY College at Old Westbury

ABSTRACT

Discussions of marketing evolution appear to repeat the notion that the production, sales and marketing orientations evolved episodically. This periodization culminates with the marketing concept in the 1950s when, it is believed, consumer needs became the focus of business enterprise for the first time. This paper questions this position and revisits the discussion of the evolution of the marketing concept. The paper presents evidence obtained from the J. Walter Thompson Company (JWT) archives to demonstrate early twentieth-century strategies that focused on the needs of the consumer. The case of the Scott Paper Company, a client of the JWT, is examined by focusing on advertising strategies of Scott Tissue toilet paper during the first decades of the twentieth century. This research adds its voice to others who question marketing's sequential periodization. The paper concludes that there is a need to revise the periodization of marketing currently repeated in marketing publications suggesting consumer focused target marketing occurs only after the marketing concept appears in the 1950s.

INTRODUCTION

The epochs or eras of history are signified in time by production (1869-1930s), sales (1930s-1950) and the marketing concept post 1950s. The production, sales and marketing three-era phases that conforms to historical periodization derives from Keith's (1960) analysis of the Pillsbury Company founded in 1869. Keith conceived four sequential eras based on his familiarity as an employee with the company since 1935. Particularly germane to this paper is his declaration of a marketing revolution inspired by a consumer orientation occurring only since the 1950s when the marketing era began. After 1960, a fourth era institutionalized a corporate-wide marketing managerial philosophy. These are still perceived as "the received doctrine" especially in marketing textbooks despite the challenge from Hollander (1986, 3) and others. Hollander questioned periodization and identified its ubiquity in a sample of 25 textbooks published between 1980 and 1984. An in-depth analysis of business history proved to him that "The standard chronology does not fit" (1986, 22). Subsequent studies of contemporary texts from 2002 to 2006 indicate that little had changed regarding this categorization of sequential epochal history (Jones and Richardson 2007, 16). Jones and Richardson (2007) consider this periodization a "myth". Given Hollander's (1986) position and considering the two decade lapse and admonitions to reconsider sequential stages, it is surprising that we still find the "myth" perpetuated in many contemporary marketing texts (Jones and Richardson, 2007). One current popular text states:

> *…marketing thought has evolved through three successive stages of development: product orientation, sales orientation, and market orientation. Our description links each stage with a period of time. But you should understand that these stages depict the general evolution of marketing thought and reflect states of mind as much as they do historical periods. Thus, although many firms have progressed to a market-orientation, some are still mired in a product or sales orientation… (Etzel et al., 2007, 6-7).*

Following Hollander's (1986), Fullerton's (1988) and Jones and Richardson's (2007) suggestions to correct the record by documenting history, we probe the "myth" of periodization. The paper presents evidence obtained from the J. Walter Thompson Company (JWT) archives to demonstrate early twentieth-century brand strategy that focused on the needs of the consumer, thus questioning the position of sequential development of the marketing concept. The paper begins with a brief review of the origins of the current thinking of marketing periodization. We then probe early consumer-oriented marketing at the J. Walter Thompson Company, and Scott Paper company's toilet tissue campaign that questions the logic of marketing periodization.

MARKETING PERIODIZATION

The formation of the recent thinking that marketing evolved episodically was heavily influenced by Keith's (1960) Pillsbury case. Keith maintains that it was during the 1950s marketing revolution that "For the first time we began to be highly conscious of the consumer, her wants, and her prejudices, as a key factor in the business equation. We established a commercial research department to provide us with facts about the market" (1960, 36). This observation was based on Pillsbury's growing awareness that selective product differentiation could increase sales. As Director and Executive Vice President at Pillsbury in the refrigeration and grocery products divisions, he observed in the 1950s that the company "faced for the first time the necessity for selecting the best new products. We needed a set of criteria for selecting the kinds of products we would manufacture" (1960, 37). Thus, Pillsbury configured new management under a "marketing department." As Keith describes it, "This department developed the criteria which we would use in developing which products to market. *And these criteria were, and are, nothing more nor less than those of the consumer herself*" (1960, 37 emphasis in original). Pillsbury's in-house advertising department was turned into its marketing department. The managers of the accounts were transformed into brand managers who "must think first, last, and always of his sales target, the customer."

In marketing texts, the "myth" suggests that the production era lasts until the early 1930s during which time firms focused on producing quality products over a concern for consumers. Contemporary textbook authors say “This mindset is commonly associated with a long-ago era when the demand for goods generally exceeded supply, and the primary focus in business was to efficiently produce large quantities of products. Finding the customers was viewed as a relatively minor function” (Etzel et al., 2007, 7). The sales orientation is associated with the economic downturn from the late 1920s that required companies to initiate “substantial postproduction effort” to sell their goods (Etzel et al., 2007, 8). However, regarding the high pressure tactics of the 1930s, Hollander et al. state “in practice it becomes hard to distinguish the 1930s from the 1970s or the 1980s as representative of the ‘hard’ and ‘soft’ sell” (1986, 20). Etzel et al. characterize the market orientation since 1950 as one in which “companies identify what customers want and tailor all the activities of the firm to satisfy those needs as efficiently as possible… To increase effectiveness, input from the marketplace is sought before a product is produced not just at the end of a production cycle” (2007, 8-9). As stated in the oft-repeated three-era scenario, different firms can co-exist with either a production or sales orientation contemporaneously in the later marketing era. However, a market orientation where we act in accordance with a focus on customer satisfactions is seemingly omitted for companies predating the 1950s.

Keith was not familiar with the marketing histories of other companies that already focused on selling products (satisfactions) to particular types of customers. As noted by Fullerton (1988, p. 110) “Pillsbury was only one of thousands of companies and may not have been typical of others.” Fullerton (1988) analyzed various firms in the UK, Germany and the US from the 1860s to the 1930s. He found that while increased output of mass production was reality, it was “insufficient to prove a Production Era in business history." Instead, he says, "At the same time production was being revolutionized, so too was marketing” (Fullerton, 1988, 111). Increasing competition stimulated demand. Fullerton (1988, 121) follows Hollander’s “’continuity’” model to develop a “’complex flux’ model" whereby marketing institutions and methods became increasingly complex (not always for the better of society) as they addressed new challenges in the marketplace. Fullerton believes that while evidence exists for the stimulation of the mass production of goods, the notion of an absence of sales and marketing agendas in this period of "’modernization’” would seem “ludicrous” to those who actually experienced it.

Jones and Richardson (2007) also debunk the three era scenario and note marketing academics’ “failure” to address, retract and acknowledge the antecedents of marketing that extend back to Greek antiquity. Following Hollander’s (1986) advice to use business resources including trade publications, Jones and Richardson researched articles written in the *Canadian Dry Goods Retailer* (CDGR) citing examples over the 1890s that clearly discredit Keith’s (1960) marketing revolution as a myth. They found intense competition among firms which needed consumer research to build customer relationships and ensure brand loyalty. One CDGR writer in 1891 suggested that a “’retail merchant’” pretend to be a shopper in his store to observe female customers to better understand the habits of those to whom they are selling (Jones and Richardson (2007, 21).

METHODOLOGY

The methodology follows the general principles and guidelines of historical research. Historical research requires methodical and detailed investigation of historical evidence for accuracy, followed by a cautious interpretation to provide a reasoned reconstruction and understanding of what happened in the past (Fullerton, 1988).

The source of the investigation is the J. Walter Thompson archives held in the Special Collections Library at Duke University. The collection extends from the 1880s. JWT's archive is becoming a vital resource for marketing researchers (Davis, 2000; Olsen 2009, 2000; Reichert 2003; Scanlon 1995). Particularly insightful for historical interpretation are the verbatim minutes of Forum talks from 1916 and Representatives Meetings from 1927 to 1938 with executives discussing strategy on art direction, copy, current trends and clients' products. The archives hold the early agency history, Representatives Meetings and the Client Files. In-house publications flavor these stories while the Biographies and Employee Files add depth to the personalities encountered within these wonderful pages of history.

For those interested in the history of business, archives provide an archaeological treasure trove (Nevett and Fullerton 1988, 193) excavated with anticipation to rewrite marketing misinformation. Archives provide insights on the cultural nuances experienced by those who live during an era. As stated by Savitt, "…the writing of history requires the analysis and explanation of the causes and consequences of events with particular concern for change" (1980, 53). Yet, history is lived experience and from the modern to postmodern periods our lives increasingly derive meaning through the cacophony of the marketplace. Thus, as archival research airs voices of actors in situ, we can better interpret the socio-cultural, political and economic impacts on consumer life experiences through engagement with the marketplace.

Research was collected by the first author from the JWT archives on three visits during 1991, 1995 and 2007. During each visit, hundreds of pages were read and photocopied for filing according to relevance for future research, analysis and interpretation. In the next section we present evidence from the J. Walter Thompson Agency during the production era. Special attention is given to a JWT client case, the Scott Paper Company.

J. WALTER THOMPSON T-SQUARE APPROACH

Thomson founded the firm in 1878. From the beginning he instructed his staff to concentrate on magazine advertising because women read them. He organized "The Thompson Method" as a guide for making better ads. He urged using dynamic copy with illustrations that would sell the product before buyers got to the store (*The Thompson Blue Book on Advertising*

1904-1905, p.10, Publications File, JWT Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University).

A modernized corporate philosophy using scientific management was introduced by the fortuitous hiring of Stanley Resor (b.1879-d.1962) by Thompson in 1908. Resor was educated at Yale and had previous product experience at Procter and Gamble. In 1912 he introduced a system for account management that he called the T-Square approach (Kreshel 1990). The plan considered four basic questions: What are we selling? Whom are we selling? Where are we selling? When are we selling? (*J.W.T. Junior News Letter*, February 1936, p. 3-5, Information Center Vertical Files, JWT T-Square Advertising Planning, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University). This approach continues to guide account management in the agency today. Resor bought the agency in 1916 on Thompson's retirement and was instrumental in hiring executives educated in the tradition of Sumner's and Darwin's sociological analysis grounded in statistical research. In 1916, he also created educational forums where specialists shared research on clients' brands. These weekly lectures to copywriters, creative and account staff and clients helped assure that future brand strategies were based on shared information (Stanley Resor, *JWT News Bulletin*, No. 15, 12 September 1916, p. 5, JWT Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University).

The February 1936 issue of JWT's in-house publication, the *J.W.T. Junior News Letter*, carried a reprinted article under the caption "The Methods of the Big Agency of Today" written by Stanley Resor in 1921. Based on an original article titled "Individual Effort Had Its Day?" (*The Fourth Estate*, November 5, 1921). In his article, Resor relates the logic of the T-Square approach and discusses "radical" changes he witnessed in advertising since 1904. Along with the vastly increased amount of advertising, the roles of agency workers had become specialized. One man previously could handle the entire ad process, but by 1921 JWT created specialized departments. New editorial and art departments employed professional copywriters and art directors who focused on particular product categories. The most significant agency initiatives for research purposes were the creation of the Department of Records for storing information and the Department of Investigation where modern-style marketing and consumer research took place. The research collection process used surveys to determine the likelihood of sales for potential products and tracked advertising success through resulting sales. The research department arranged for account staff and women copywriters to go into the field acting as early "mystery shoppers" or posing as clerks to determine consumer sentiment by obtaining consumer stories. Resor's 1921 recollection continued:

> *"One of our women acted as a demonstrator for a drug product for several weeks, during which time she met face to face hundreds of users and prospects who were actually out to buy the commodity that she was demonstrating. In the source of a single investigation of another product*

116 towns were visited and 1287 interviews with consumers and 696 with dealers were obtained."(Resor 1936, 3-5).

Resor's goal was for his creative staff to "always have in mind the final effect upon the consumer whom the advertisements are intended to reach". He wanted his staff to "have first hand contact with the people who are to buy, sell or use the commodity which is being advertisied" (*J.W.T. Junior News Letter*, February 1936, p. 3-5, Information Center Vertical Files, JWT T-Square Advertising Planning, JWT Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University). In other words, early advertisers realized that consumers were people with particular characteristics representing potential markets that we now call segments and target markets (Hollander and Germain 1992).

JWT staff learned that purchasing could be inspired by a product "idea" to satisfy a need encapsulated in an ad stimulating desire. Resor hired psychologist John Watson in the 1920s to further ensure that such ideas were convincingly calculated to emotional needs. At a staff meeting talk, Watson explained how he introduced "a little common sense… I dropped the word 'psychology' and called the whole business 'behaviorism'"… [where, by observation] "you can predict your own behavior or where you can control the behavior of the other fellow to a certain extent" (Psychology of Dr. Watson, April 27, 1931, File 1931 April 7-April 28, p.1, Staff Meetings, Minutes of Representatives Meetings, Box 3, JWT Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University). The JWT agency functioned like a client's marketing department. When the agency received a new client the research staff gathered extensive history on the client. Creative tactics often incorporated client history to frame creative direction. Looking toward the future, the research that JWT conducted focused on the needs and satisfactions of clients' current and potential customers as well as on their competitors.

Table 1: Evidence of Consumer Orientation at the J. Walter Thomson Company

Function	Selected Examples of Activities /Initiatives	Date
Product Planning and Development	• Ensured that emotional needs of customers are carefully considered. • Introduced an account management system (T-Square Approach) which focused on the following questions: o What are we selling? o Whom are we selling? o Where are we selling? o When are we selling? • Weekly lectures to copywriters, creative and account staff and clients helped assure that future brand strategies were based on shared information. • Created specialized departments focusing on particular product categories	1920s 1912 1916 1921

Table 1: Evidence of Consumer Orientation at the J. Walter Thomson Company		
Function	Selected Examples of Activities /Initiatives	Date
Promotion and Advertising	• Focused on magazine advertising because women read them. • Developed copy with illustrations that would sell the product before buyers got to the store. • Incorporated client history into the ads to frame creative direction. • Had in mind the final effect upon the consumer whom the advertisements are intended to reach. • Required creative staff to have first hand contact with the people who are to buy, sell or use the commodity which is being advertised.	(1904-05)
Place (Distribution)	• The T-Square Approach system focused on the following questions: o Where are we selling? (place utility) o When are we selling? (time utility)	1912
Consumer Research	• Created a Department of Investigation where modern-style marketing and consumer research took place. Used surveys to: o Determine the likelihood of sales for potential products o Track advertising success through resulting sales. • Used field observational studies: Account staff and women copywriters acted as: o Early "mystery shoppers" or o Posing as clerks to determine consumer sentiment by obtaining consumer stories. • Used Darwin's sociological analysis grounded in statistical research. • Research focused on the needs and satisfactions of clients' current and potential customers as well as on their competitors. • Introduced the term "behaviorism" attempting to predict or control the behavior of current or potential customers.	Early 1920s

Table 1 presents selected examples of marketing activities followed by the JWT Company during the first three decades of the twentieth century. An examination of Table 1 clearly shows that "modern" marketing activities not associated with the production era, as described by popular marketing textbooks, were employed and utilized by the JWT agency in serving its clients. The focus of these activities was not the product but consumer characteristics and their needs. In an attempt to shed additional light and present further evidence into the marketing periodization misconception we follow the biography of a brand (Kopytoff 1988) approach. The case of the Scott Paper Company, a client of the JWT, is examined by focusing on advertising strategies of Scott Tissue toilet paper from 1920 to mid-1930s.

SCOTT PAPER COMPANY

As JWT acquired clients, they established files on the client histories that described the biography of each brand's history. JWT executives, artists and copywriters needed to understand the consumers' characteristics, purchase data, and significantly why they bought a brand – the value or "want satisfaction" obtained by the customer (Information Center Vertical Files, JWT T-Square History, p. 1, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University). Clients brought to the agency their own history of customer knowledge, insights on product use and satisfactions desired. Within these stories, JWT also learned valuable insight into consumer behavior.

Such insights came from Scott Paper Company, a client JWT gained in 1927, and their history of toilet paper. Executives responsible for the account reconstructed a history (prior to acquisition) that included advertisements for Scott toilet paper and its competitors. From the records that follow, we are privy to the biography of a product category that evolved for convenience and health (Information Center Vertical Files, Client Case Studies, Case History, Howard Henderson, Short History of the Scott Paper Company, np, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University). Before the advent of indoor plumbing, toilet paper was not a significant product category. Paper for personal toilet use was derived from the same paper that people used for writing and mailing envelopes that was torn from larger sheets of paper.

JWT's history file on Scott indicates that by the 1880s indoor plumbing presented a particular need for softer paper that would disintegrate as it passed through the pipes of modern plumbing. The first roll of perforated tissue in the 1870s was the invention of APW Products founder, Seth Wheeler, Sr. who also about 1905 created folded tissue. Stores were hesitant to display toilet paper and nor would publishers advertise such a personal product at that time. Clarence and Irvin Scott recognized potential profit in this product and added a toilet paper line to the paper business they founded in 1879. Their strategy however, was not to put their own name on the toilet paper but to sell it instead to merchants who would label it with their own private brand or store brand names. Scott's history continues under the subhead "<u>Scott pioneers 'the consumer concept' for tissues</u>" (underline in original). In 1896 Arthur Hoyt Scott, only son of Irvin Scott, entered the business. It soon became clear to him that the consumer, not the storekeeper, was the key to the expansion of their business. He proposed discontinuing their 2000 private brands in favor of a few 'Scott' brands, and developed this 'consumer concept':

- Make a few products of the consumer's choice and of the highest possible quality.
- Make them at the lowest possible cost.
- Inform the public about them through advertising.

(Information Center Vertical Files, Client Case Studies, Case History, Howard Henderson, Short History of the Scott Paper Company, np, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University).

Three years later Scott Paper Company bought the Waldorf brand (distinguished by its cream color until white appeared in 1950) that it was manufacturing for a merchant. Scott ultimately discontinued all other merchant labels by 1911 to focus solely on their own Bonafid, Foldum, Organdy, SnoTissue, S.P.Co., and Waldorf brands. In 1913, "'SnoTissue'" was rebranded "'ScotTissue'" (in white) and remains a favorite brand today. Beyond toilet paper, in 1907 Scott introduced health-oriented disposable paper towels to curtail classroom colds, expanded to kitchen paper towels in 1931, and soon after, to corporate and industrial markets. In every case of new product development it was the "consumer concept" that stimulated innovation (Information Center Vertical Files, Client Case Studies, Case History, Howard Henderson, Short History of the Scott Paper Company, np, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University).

Scott had three Philadelphia agencies from 1920 to 1927; Richard A. Foley Company 1920-1921, The Arrow Company during 1922, followed by F. Wallis Armstrong Company from 1923 to 1926. The first ad for ScotTissue ran in the February 1920 issue of *The Ladies' Home Journal* (p. 174) down the entire left side with the headline, "Like a Thousand Old Linen Handkerchiefs." Copy highlighted the "remarkable texture… softness and absorbency" of its "1000 perfect sheets – a rare value." Significantly, the following lines in the ad became a theme for a JWT scare campaign from the late 1920s into the 1930s (underline in original):

> There are no harsh, brittle fibres in
> ScotTissue to cause dangerous irritation.
> ScotTissue is a daily health-guard. <u>Ask your doctor</u>.

The primary focus of this first ad was to change the perception of toilet paper among consumer, merchant and publishing communities to recognize that the product category was a health advantage as well as a profitable product for their businesses. Prior to the 1920 ad, no women's magazine would carry toilet paper ads because the phrase "toilet paper" was considered "unmentionable". The ad concluded with a tag line that was continued in various forms until 1927 stating (underline in original):

> <u>Don't ask for toilet paper</u>
> <u>Ask for ScotTissue</u>
> <u>It's the proper thing to do'</u>

A quarter page ad in *The Ladies Home Journal,* February 1925 (top right p. 191) shows a roll of ScotTissue covering 75 percent of the space with the caption "Just say ScotTissue" followed by "no need for conversation".

In 1927 at age 52, Arthur Scott died and Thomas McCabe, Scott's sales manager who had joined the firm in 1916, became president. McCabe searched the top agencies that handled drug and grocery products before asking JWT to represent their account. JWT Copy Group Head, Henry Legler, admitted that the agency was hesitant to take the account because "toilet paper was not a very respectable product to advertise – we might find it embarrassing to discuss in our group meetings, particularly with women present". However, Legler noted the previous agency's ads were dull and "Mid-Victorian". The ad he referred to in their 1926 collection from *The Ladies Home Journal* was illustrated with women dressed in early 1800s garb and symbolized a brand that had lost direction. Finally, JWT agreed to take the account.

JWT executives working on the Scott account investigated "the toilet tissue market and the competition" and found that "the total toilet tissue market amounted to about $23,000,000 a year with Scott getting about one sixth of it. It was a market with tremendous sales possibilities, from two standpoints: First in educating new users. Second, in getting business away from competitors" (Minutes of Representatives' Meetings, 1930 May 7 - June 24, Group Meeting, "Scott Paper Company," May 21, 1930 (#5), p.3, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University). In a staff meeting in July 1927, Stanley Resor asked John Reber to discuss new business the agency had brought in. Reber introduced Scott Paper as a "beautiful… very nice situation" for JWT because of how carefully Scott Paper Company reconfigured their product line down to two class brands:

> *"Some years ago (many years ago) they [Scott] had twenty-eight hundred brands – not that many different kinds of paper but that many brands – and today (and for some years now) they have had only two brands, one in the better class field and one in the lower class field. There is paper made that is higher priced than their higher priced paper and lower than their lowest priced paper, but they feel that there is no better that can be made than their Scott Tissue, and also that their Waldorf is the best paper that can be made at that price with a ground wood filler. They have 100 salesmen. Their appropriation for this year is $360,000. We will begin work immediately, and will spend, I hope, about $100,000 between now and the end of this year, and next year to go very close to $400,000."* (Representatives' Meeting, Tuesday, July 26, 1927, at 9:30 A.M., p. 26, Staff Meetings 1927-1929, Box 1, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University).

The theme for the ad campaign beginning in 1928 was based on the dedication to consumer health, a focus on which Scott had built its reputation. Legler explains how JWT expanded their research into competitors' lesser quality and asked medical experts for their judgment:

> *"Our chief competition, at least 70% of it, was private label and unknown brands… generally of poor quality. Some were glazed and brittle with sharp, crackly [sic] edges; other [sic] were made from badly milled groundwood [sic] and were harsh surfaced, containing sharp particles and tiny splinters… In the*

> *belief that there might be a very definite connection between rectal trouble and toilet tissue, we sent out a questionnaire to several thousand doctors and hospitals throughout the country, asking for their opinions of toilet paper. At the same time, people from this office made interviews with prominent urologists, protologists [sic] and rectal specialists.*
>
> *Of the 591 doctors who replied to our questionnaire 84% (or over 500 doctors) said that they had found inferior toilet tissues injurious to mucous membrane."* (Minutes of Representatives' Meetings, 1930 May 7 - June 24, Group Meeting, "Scott Paper Company," May 21, 1930 (#5), p. 4-6, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University).

Thus began the campaign in 1928 focusing on consumer danger from inferior toilet paper, which JWT credits with raising the standards of the entire product category. The ad collection from the campaign demonstrates its effectiveness. The 1928 ads carried headlines saying "Doctors say: 'For your family's sake…'", "Doctors warn: 'See that your bathroom paper is safe'", "7 of New York's largest hospitals say 'Avoid harsh toilet papers". Headlines in 1929 include, ""Your own Doctor will agree 'Harsh toilet paper irritates and may cause serious injury'", "Hospital's Warn…", "Be Safe!…", "Specialist Sounds Warning against harsh toilet paper", and "Watch Out! Many cases of actual suffering and costly treatment have been caused by inferior toilet paper. 580 physicians, recently questioned agreed that 'harsh bathroom tissue is injurious'". By 1930 the headlines reach out to mothers and those in the work force: "Baby chafed? Be Careful Mother… harsh toilet tissue may cause serious infection", "School Toilet Tissue is not always safe!", "Protect your child with ScotTissues the way this mother does… see that each child, starting off to school carries a few sheets of these softer, more absorbent tissues", "Handicapped in Business… because of chronic trouble", "In nearly every household Some One is Suffering in silence from troubles caused or aggravated by harsh toilet tissue". By mid-May 1930, Legler was able to report a survey among subscribers to a woman's magazine revealed:

> *97% recognized the health factor in toilet tissue. 90% bought toilet tissue by brands; 70% of those who bought by brand specified ScotTissue or Waldorf... the product is rapidly being recognized as a sort of Campbell's soup of the toilet tissue industry. It doesn't give the profit of the private label, but public demand is so strong that stores have simply got to carry it.* (Minutes of Representatives' Meetings, 1930 May 7 - June 24, Group Meeting, "Scott Paper Company," May 21, 1930 (#5), p. 9, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University)

In the May 21st talk (p.11), Legler explained that superior sales for Scott's two brands resulted from retailers using Scott's display and discounting their brands at point of sale. The list price in the ads indicates two rolls of ScotTissue for 25 cents and three rolls of Waldorf for 20 cents. It was however, common practice for retailers to sell three rolls of ScotTissue for 25 cents and four rolls of Waldorf for 19 cents which brand management and agency condoned. A unique sales support was Scott's display rack for toilet paper at point of purchase which, for one grocer, increased sales over one hundred percent. The only problem was that competition appropriated the display space. Olsen (2003) discovered similar competitors' use of a "Money Tree" stand her agency developed for Warner's Bra to display their bras in "upstairs" department stores in the 1970s. With Scott's display rack it was the grocers' brands that replaced Scott's.

In a 1931 staff meeting, Legler defends the new approach when JWT's ads first drew criticism. He said:

> *It's true, in the Scott Tissue campaign, we show dramatic illustrations picturing people who are either suffering from rectal trouble or have just learned that an operation is necessary. The difference is that the average person has no idea that harsh toilet tissue can cause a condition of this kind. It takes a dramatic illustration to shock this fact into them ("The Use of the Negative Copy Appeal", Staff Meeting, September 1, 1931, General Talks on Copy by Mr. Legler, JWT Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University).*

By 1932, the minutes of a creative staff meeting reveal that complaints were coming in from the American Medical Association about Scott's toilet paper campaign making claims presumably from doctors that might not be legitimately backed up by all the facts. Legler, again speaking for the account, says that:

> *Possibly our campaign was a little too sensational in its treatment. But the facts themselves were sensational. At least it stirred things up considerably in the medical profession. And if those responsible for public health really take an interest in toilet tissue from now on, it will mean the rapid elimination of the cheaply made unsafe brands* (Creative Staff Meeting, September 28, 1932, p. 6, JWT Archives, (Representatives' Meeting, Tuesday, July 26, 1927, at 9:30 A.M., p. 26, Staff Meetings 1927-1929, Box 1, J. Walter Thompson Company Archives, Hartman Center for Sales, Advertising & Marketing History, Special Collections Library, Duke University).

The copywriters, art directors and account executives were acting on research initiatives in the T-Square approach, interpreting how the consumer would respond to their ads. The ScotTissue ads with alarming headlines and excruciating pictures made their appeal thanks to implementing Dr. John Watson's advice to highlight a "product idea". His contribution to the agency and to their campaigns was to consider how a stimulus creates a reaction – a consumer response. In 1935, he gave a speech to an advertising club in Montreal where he explained, "The IDEA is what makes advertising go. It must be a single simple idea that touches both human need and human emotion… Only EMOTIONAL IDEAS get under people's skin and bring action" (John B. Watson, "Influencing the Mind of Another", Marketing History, JWT Archives, Special Collections Library, Duke University, emphasis in original).

CONCLUSION

Using primary data obtained from JWT archives we find a consumer focus in the production era. During the turn of the nineteenth century Scott Paper Company and J. Walter Thompson Company realized that consumers were essential to their marketing strategies. The evidence from the Scott Paper Company case contradicts marketing's evolutionary schema proposed by Keith (1960). The record clearly shows that Scott Paper Company recognized the needs of consumers with changes occurring in indoor plumbing in the nineteenth century. JWT executives elaborated a consumer benefit for Scott's brands expressed by JWT's T-Square approach in the early twentieth century.

Table 2: Evidence of Consumer Orientation at the Scott Paper Company

Function	Selected Examples of Activities /Initiatives	Date
Product Planning and Development	• Analyzed advertisements for Scott and its competitors • Reacted to a technological change in one of the environmental forces • Streamlined the product line and developed the following concept o Make a few products of the consumer's choice and of the highest possible quality. o Make them at the lowest possible cost. o Inform the public about them through advertising. Acquired competitive brands and introduced product extensions into the product line mix	1923 1880 1896 1907
Promotion and Advertising	Theme of ad campaign focused on o Educating consumer overcoming consumer fears o Using experts (doctors) as advocates for the product o Switching the emphasis from natural product characteristics to product benefits.	1920s
Place (Distribution)	Channel development focused on o Considering retailers' needs o Reducing/Eliminating channel resistance o Persuading retailers to carry the product	1920s
Consumer Research	• Measured consumer response to the ads • Utilized surveys of magazine subscribers to assess consumers' perceptions of the brand	1920s
Branding, Market Development and Positioning	Acquired competitive brands Discontinued merchant brands Re-branded SnoTissue Brand Development o Emphasized the brand name o Encouraged more usage o Used doctors as advocates of the brand • Positioning o Highlighted benefits of the product by emphasizing health and convenience	1899 1911 1913 1927 1925 1925 1928 1920s

The activities and other initiatives presented in Table 1 and Table 2 demonstrate that JWT and Scott Paper Company utilized “modern” marketing techniques to appeal to their customers. It is evident from the Scott Paper case, that the Scott tissue product was treated not as a commodity, but by focusing on the product’s natural characteristics it was rather a bundle of benefits that satisfied consumers’ needs. Ad executives clearly understood that their brands provided unique consumer satisfactions long before the marketing concept appears in the 1950s. The strategies depicted in this paper suggest a revision is due to introduce the consumer concept earlier in time and revise periodization in marketing literature.

The findings are limited by an observation of only one company history. However, many company histories in the JWT archives also reveal early consumer focus. In accordance with Hollander (1986), Fullerton (1988), Hollander et.al., (2005), and Jones and Richardson (2007) all of whom hypothesize marketing’s three-era schema is incorrect, the archival data speaks for itself to reveal an earlier consumer focus in marketing history. Future research using JWT’s company histories will expand our data base. As suggested by Jones (1998), an alternative approach to better understand the evolution of the marketing concept is to develop biographies of important corporate players who employed the marketing concept in early campaigns.

In conclusion, the marketing concept solely as a post-1950s phenomenon is perhaps a convenient "amnesia" because it is so widely perpetuated (Tadajewski and Saren 2008). The present study adds its voice to others who question marketing's sequential periodization (Hollander 1986; Hollander et al., 2005; Fullerton, 1988; Jones and Richardson, 2007). The marketing periodization needs revision in accordance with marketing historians’ observations that locate consumer focused modern marketing practices much earlier in time.

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THE EFFECTS OF SOURCE CHOICE ON WORD-OF-MOUTH COMMUNICATION INFLUENCE

DeAnna S. Kempf, Middle Tennessee State University

ABSTRACT

Past research suggests that consumers who have greater perceived control over a situation are more likely to evaluate that situation in a favorable manner. In the current study, this theoretical prediction is extended to the domain of Word-of-Mouth Communication (WOMC) about products. Specifically, the results of the study suggest that consumers who receive WOMC information that is the result of a choice process will judge the communicator to be more trustworthy and themselves to be more expert at processing that information. Further, consumers who are allowed choice in the WOMC source rate the information coming from that source as being more useful in evaluating the brand, compared to consumers who did not experience a choice process. Consumers who choose their source rely more heavily on the WOMC information when forming brand judgments and attitudes.

INTRODUCTION

Decades of consumer research has shown Word-of-Mouth Communication (WOMC) to be a powerful influence on consumers' brand attitudes, judgments, and purchase intentions. It is generally more influential than advertising due to its higher credibility and more interactive nature (e.g., Herr, Kardes, & Kim, 1991; Katz & Lazarsfeld, 1955, and Liu, 2006 among many others.) Accordingly, marketers are highly motivated to understand and exploit this powerful information source (e.g., Godes & Mayzlin, 2004).

Word-of-Mouth Communication can be generated in many different ways. For example, a consumer may actively seek out product advice from an acquaintance they perceive to be an expert (solicited WOMC). He/she may overhear two unknown consumers discussing a product, store, or service, or he may be given unsolicited (or even unwanted) product information from someone. He/she may read product reviews on a website from complete strangers. It is this organic nature of WOMC that makes it powerful, but also makes it a challenging topic to study. It is clear that these different processes may produce WOMC that is highly variant in its perceived information value and its influence on the consumer. A major goal of the current study is to examine how a choice process leading to WOMC may differ from WOMC coming from a source that was not chosen by the consumer. Another contribution of this study is to extend Kempf & Smith's (1998) trial diagnosticity framework from a product trial context to a WOMC context. These authors found that the power of a product trial in affecting brand attitudes depends on its perceived diagnosticity (information value), perceived validity, and the consumer's perceptions of his/her expertise at processing the trial information. We will use these same three constructs to study the information power of WOMC.

Background Literature

Research in psychology (e.g., Deci & Ryan, 1985; Averill, 1973) and consumer behavior (e.g., Hui & Bateson, 1991) suggests that people evaluate an experience differently depending on the degree of perceived control they have with respect to the situation. Specifically, past research has shown that individuals having greater control over an experience were more likely to evaluate that experience favorably. Schutz (1967) suggests that a greater feeling of control aids individuals in having satisfactory interactions with their environment. Control, defined as the need to demonstrate one's competence, superiority, and mastery over the environment, is described by Hui & Bateson (1991) as a fundamental driving human force. Based on this notion, Hui & Bateson (1991) proposed, tested, and found empirical support for the idea that consumers rate a service encounter more favorably when they perceive that they have more control over the situation. This finding appears to be consistent with several studies in psychology showing perceived control to have a positive impact on the psychological state of an individual (Szpiler & Epstein, 1976), task performance (Burger, 1987), and physiological well being (Langer & Rodin, 1976). Mills & Krantz (1979) performed an experiment on blood donors in which they manipulated perceived choice by allowing donors to choose which arm they would have blood drawn from (or not), and found that the donors who were allowed to choose had less unpleasant reactions to the experience. One explanation for these findings is that individuals simply derive greater satisfaction from situations when they believe they are able to exert some influence (Bateson, 1985).

CONCEPTUAL FRAMEWORK AND HYPOTHESES

In the current study, we investigate the effects of perceived control, as operationalized by perceived choice, in the context of WOMC. The theory and literature in the area of perceived control and choice suggest that consumers who receive WOMC information from a person they have freely chosen will react differently to that information compared to someone who has simply been given WOMC with no choice process involved.

Hui and Bateson (1991) propose that consumer choice (i.e., the opportunity for a consumer to choose their environment) is a key dimension of perceived control. This is based on Averill's (1973) contention that *decisional* control is directly related to the amount of perceived control an individual has over a situation. Hui & Bateson (1991) found that consumers who had a stronger sense of perceived control (operationalized by giving them the power to choose to stay in the situation or leave it) had more positive emotional and behavioral responses to the service encounter. Another marketing study that reported similar finding is Kempf & Laczniak (2005). These authors found that when subjects chose a product to try (as opposed to being assigned a product), the resulting product trial was rated as more diagnostic, more valid, and the subject felt more expert at judging the trial. That study also found that the brand featured in the trial was evaluated more positively when the trial resulted from a choice process.

Also supporting the idea that choice will affect WOMC information processing is the mere ownership effect (Beggan, 1992). By experiencing a choice process, it is likely that consumers will feel a greater sense of “ownership” of the item (in this case, the source of WOMC information), compared to a consumer who was merely given WOMC information without choosing the source. This, in turn, will make them view the source more positively. Based on these prior findings and theory surrounding perceived control as it is affected by consumer choice, we expect subjects who were allowed to choose their source of WOMC to rate that information source more positively in terms of perceived source trustworthiness and perceived source knowledge.

H1: Compared to a no-choice situation, consumers who have the opportunity to choose the WOMC source (communicator) will rate the WOMC communicator as having higher:

a. perceived source trustworthiness, and
b. perceived source knowledge/expertise.

Because the source characteristics in H1a and b above are expected to be more positively evaluated in a free choice situation, we also expect that the information itself provided by the WOMC source will likewise be more positively evaluated. To test this idea, we use the construct of diagnosticity proposed by Kempf & Smith (1998) in their study of the information value of a product trial. In that article, they proposed three types of trial cognitions that influence the power of a product trial as an information source – trial validity, perceived expertise, and trial diagnosticity. These constructs can be used to assess the information power of any type of product information source, including WOMC. Product information can (and will) be judged as to its validity and diagnosticity, and the consumer will judge their own ability to interpret the information (perceived expertise).

In the current study, we investigate the idea that perceived control will have an effect on consumers' perceptions of WOMC as a product information source, as measured by the cognitions described immediately above (validity, diagnosticity, and perceived expertise.) In turn, these cognitions (assuming they are positive in nature) will make consumers more likely to be influenced by the WOMC in their brand judgments and attitudes.

Supporting this notion, there is empirical evidence in the literature that giving consumers greater perceived control over information or a processing task affects their views of the task and of their own performance in the task. Bateson (1985) and Deci & Ryan (1985) suggest that perceptions of greater control may lead individuals to put forth a greater effort to optimize their decisions and, similarly, to extend a greater effort to complete those decisional tasks. Applying this to the context of WOMC information processing, individuals who choose the consumer from whom they receive information should put forth a greater effort to interpret that information. They are expected to process it more deeply and effortfully than those who were simply assigned a WOMC source. This deeper processing, in turn, may lead to perceptions that the information is more diagnostic or useful. Further, individuals experiencing greater decisional control or choice over the situation may view the information to be more valid and are likely to view themselves as being more expert at processing the information, simply because of the greater effort and attention they devoted to it. This prediction is supported by Tafarodi, Milne, & Smith (1999), who found that individuals rated their own performance on a task more highly when they possessed greater perceived choice over the task's parameters.

Similarly, Jellison & Harvey (1973) found a positive correlation between perceived choice and perceived competence. Subjects who engaged in a choice process related to a task felt more competent at performing the task compared to those who did not choose any parameters of the task. The authors hypothesized that engaging in the choice process gave the subjects the opportunity (and motivation) to manipulate, compare, and analyze the information in the task, thus giving them a greater sense of competence. We make a similar prediction here regarding the effect of WOMC source choice on consumers' perceived expertise at processing the WOMC information.

The theory of perceived control and the associated past empirical findings described in the studies above collectively suggest the following hypotheses:

H2: *WOMC diagnosticity will be higher for consumers who have the opportunity to choose the WOMC source (communicator), compared to consumers who did not have free choice of source.*

H3: *Perceived expertise will be higher for consumers who have the opportunity to choose the WOMC source, compared to consumers who did not have free choice of source.*

H4: *Perceived WOMC validity will be higher for consumers who have the opportunity to choose the WOMC source, compared to consumers who did not have free choice of source.*

The hypotheses above suggest a stronger and more positive reaction to WOMC information when free choice is involved in selecting the WOMC source. Given this, and assuming that the WOMC provides positive information about the brand, it follows that consumers in a free choice situation will ultimately evaluate the target brand more favorably than consumers who were not allowed to choose the source of the WOMC information.

H5: *The overall evaluation of a brand (as indicated by expectancy value -- $\sum b_i c_i e_i$ and brand attitude) following the receipt of WOMC will be higher for consumers who freely chose the source of the WOMC information.*

METHOD

To assess the effects of choice on consumers' perceptions of, and reactions to WOMC, an experiment was conducted. Source choice, the independent variable, was manipulated at two levels. In one group, subjects were given the opportunity to choose among four potential WOMC sources, based on a short description of each source applicable to his/her qualifications and expertise. In the other (non-choice) group, subjects were simply randomly assigned one of the WOMC sources after reading the descriptions of the four individuals. Therefore, the fact that they did not get to choose should have been salient to them. The sample used for the study consisted of 78 undergraduate business students who received class credit for their participation. Students were considered an appropriate sample given that they are a major target segment for the stimulus product used in this study -- a retail PC store.

Experimental Procedure

Subjects were randomly assigned to one of the two conditions: choice or non-choice. In both conditions, subjects viewed a print ad for a fictitious personal computer retail store called *Phase II Computers*. The ad described the store as offering late model, high quality PCs purchased from large businesses, refurbished and upgraded where needed, and then offered for sale at the store. The PCs came with a one year warranty with free tech support during the warranty period. After seeing the print ad, subjects filled out ad involvement scales, ad attitude scales, and brand attitude scales. The purpose of the ad was to give subjects a fictitious product (store) to react to in the later WOMC phase of the experiment.

After the ad exposure and ad-related measures, subjects were instructed to assume that they were currently in the market for a PC and are interested in learning more about *Phase II Computers*. They were told that the store already existed in other cities and had been in business for several years. They were told that they would be seeing reviews and feedback from real consumers in those cities who had had experience with *Phase II*.

Subjects were shown short descriptions of four (fictitious) consumers who they were told had personal experience with *Phase II*. These communicators included Mark, a 34 year old marketing executive who had just recently purchased a PC, and had done extensive research before doing so; Sarah (38), an Information Systems specialist who was an extremely knowledgeable computer user in both her personal and professional life; John (41), an accountant and consultant with extensive computer experience, and Anna (23), a college student majoring in Information Systems who works part time doing website development for clients. All four of the communicators were created to be reasonable sources of product information in terms of experience, knowledge, and expertise with PCs. This is desirable because Jellison & Harvey (1973) found that the sense of perceived choice in a situation was increased when there is a small difference in attractiveness between the options and when the chooser is uncertain about the attractiveness of the outcomes associated with the various options.

In the choice group, subjects were asked to check a box with the chosen individual's name marked clearly on their questionnaire, walk to the front of the room and show the experimental administrator who they chose. They were then given a card with the communicator's written review on it. The cards were pulled from a small index card box clearly marked with the WOMC communicator's name on it. There were boxes with each of the four individuals' names on them to support the experimental guise that the WOMC from each of the four individuals was unique.

In the non-choice group, the same four communicator descriptions were used, but then on a following page, subjects were told that they would be given information provided by just one of the communicators. Subjects were randomly assigned one of the four sources -- no choice process was involved. To make the non-choice manipulation more salient, the names of all four communicators were shown again on that page, but the checkbox for only one of the names was pre-marked with a large X. The subject was told to bring their questionnaire up to the front of the room just as described in the choice condition above.

Subjects took the index card with the WOMC back to their seats, read it at their own pace, and then proceeded on with the questionnaire containing the relevant dependent variables such as WOMC diagnosticity, brand attitudes and beliefs, purchase intentions, etc.

The WOMC information was identical in all conditions (regardless of choice group or chosen communicator). It was positive in nature, recounting the consumer's specific experience buying a reconditioned PC from *Phase II*. The positive statement ended with the sentence, "Overall, I'd recommend *Phase II Computers* without any hesitation."

Measures

Subjects' cognitive structure or expectancy value from the brand ($\sum b_i c_i e_i$) was measured using Fishbein & Ajzen's (1975) multi-attribute model, with the addition of belief confidence (see Kempf & Smith, 1998). This expanded measure of expectancy value includes brand belief strength (b_i) for each attribute, belief confidence (c_i) and a measure of the value consumers place on each attribute (e_i). It was important to include the confidence construct because the manipulation is expected to particularly affect confidence in evaluation. Brand belief strength was measured by asking subjects, "How likely do you believe it is that Phase II has Attribute X?" for each attribute. A seven-point scale was used for these questions, with endpoints labeled "Very Unlikely" and "Very Likely" (with the midpoint labeled as "Even Chance"). Belief confidence was measured with a two-item scale for each product attribute. Subjects were asked to report how certain/confident they were in the belief rating they reported. The attribute evaluations were measured by asking subjects how they would evaluate a brand that possessed each of the salient attributes (in individual questions for each attribute). Responses were recorded on a bipolar scale with endpoints labeled "Extremely bad" (-3) and "Extremely good" (+3).

The salient attributes for which beliefs were measured were Knowledgeable, helpful salespeople, Low prices, Wide selection of brands, Quality customer service, and Good reputation. Brand attitude was measured with a three-item scale with endpoints Bad-Good, Dislike – Like, and Unfavorable – Favorable (Cronbach's Alpha = .95) .

Similar to Kempf & Smith (1998)'s measure of perceived trial diagnosticity, WOMC diagnosticity was assessed by asking the respondents: "Overall, how helpful did you feel the information you received was in allowing you to carefully evaluate the new computer business?" Responses were recorded on a 1-9 scale with the endpoints labeled "Not helpful at all" and "Extremely helpful," and the midpoint was labeled "Somewhat helpful." The second item for diagnosticity contained the the word "useful" instead of "helpful." WOMC validity was measured with two items: "Did you feel that this person's information represented a fair evaluation of the store?" and "Did you feel that this person's information was a valid assessment of *Phase II Computers*?"

Perceived expertise was measured with the single item: "How confident did you feel in your ability to judge the quality of the information you received from this person?" The endpoints of the 1-9 scale were labeled "Not confident at all" and "Extremely confident," and the midpoint was labeled "Moderately confident" (adapted from Kempf & Smith, 1998).

Source trustworthiness and source knowledge were each measured with five-item semantic differential scales (Ohanian, 1990). Source trustworthiness was measured with the items: Dishonest – Honest, Reliable – Unreliable, Sincere – Insincere, Undependable – Dependable, and Untrustworthy – Trustworthy (Cronbach's Alpha = .86). Source knowledge was measured with the items: Not an Expert – Expert, Unqualified – Qualified, Knowledgeable-Unknowledgeable, and Inexperienced – Experienced (Cronbach's Alpha = .91). All reverse-scaled items were recoded prior to analysis.

RESULTS

Manipulation Check

To determine whether the choice manipulation was successful at instilling significant differences in the level of perceived control between the two experimental groups, a three-item measure of perceived choice was collected from all subjects. These questions asked for the level of agreement/disagreement (1-9 scale) with the following statements: "I feel I was given a free choice as to which of the individuals I could receive information from," "I selected the person to receive information from of my own free will," and "I felt like I had full 'say so' about which person I got to hear from." This scale had a coefficient alpha of .98, indicating high internal reliability.

The results of this manipulation showed highly significant differences between the choice/no choice groups (choice group mean = 8.50, no choice group mean = 2.10, t_{75}=20.37, p<.0001), indicating a successful manipulation.

Hypotheses Tests

To test H1, a simple t-test was performed comparing perceived source trustworthiness and source knowledge/expertise between the Choice and the Non-choice groups. The results are shown in Table 1. H1a was supported as the mean perceived source trustworthiness rating in the Choice group was significantly larger than the mean for the Non-choice group. H1b was not supported because the means were not significantly different between the two groups.

As can be seen in Table 1; H2, H3, and H5 are supported. The means in the Choice group were significantly higher than the means for the Non-choice group for WOMC diagnosticity, perceived expertise, and overall brand evaluations (Expectancy value and brand attitude), respectively. However the mean difference was not statistically significant for WOMC validity at the .05 level, thus H4 was not supported.

Table 1: Mean Comparisons and Significance Tests Choice vs. Non-choice Groups

Variable:	Choice Group	Non-choice Group	t-statistic and Significance (one-tailed)
Source Trustworthiness (H1a)	5.58	5.04	*t_{61} = 2.20, p<.02
Perceived Source Knowledge (H1b)	5.20	4.96	t_{75} = 0.88, p<.19
WOMC Diagnosticity (H2)	7.25	6.54	*t_{62} = 1.92, p<.03
Perceived Expertise (H3)	7.10	6.33	t_{75} = 2.01, p<.02
WOMC Validity (H4)	6.99	6.39	*t_{57} = 1.54, p<.06
Expectancy Value – $\sum b_i\, c_i\, e_i$ (H5)	333.29	274.42	t_{75} = 1.97, p<.03
Brand Attitude (H5)	1.85	1.34	*t_{56} = 2.09, p<.02

* Satterthwaite Adjustment was used to adjust the degrees of freedom for unequal variances between the two groups.

DISCUSSION AND IMPLICATIONS

In general, it is clear that perceived control, as operationalized by offering consumers their free choice of a WOMC source (among four options) had a significant impact on those consumers' perceptions of the WOMC information and consequently, their WOMC-based brand attitude and brand expectancy value. Specifically, consumers who chose the source from whom they would receive WOMC rated that information source as more trustworthy, and the information they received from the source as more diagnostic in evaluating the brand. They also expressed higher evaluations of their own expertise at using the information.

The results of this experiment successfully extend the domain of past studies involving product trial to a WOMC setting. Consistent with the Kempf & Laczniak (2005) product trial study, we find support for the general notion that consumers who believe they have some level of perceived control or choice over the WOMC information they receive will evaluate that information as being more diagnostic, and they will perceive themselves to be more expert in evaluating that information than those who did not have as much control.

Further, our results provide evidence that consumers who have the opportunity to choose their WOMC source perceive that source as being more trustworthy, though not necessarily more knowledgeable compared to a non-choice situation. To our knowledge, this relationship has not been empirically demonstrated before. This study also represents an important extension of theory proposed and tested by Hui & Bateson (1991) regarding the effects of choice on the pre-trial evaluation of a retail store concept.

Given the strong interest in WOMC in recent years, both by academic researchers and by marketing practitioners trying to understand this powerful information source, as well as harness its power for their own benefit, the results of this study are significant. Consumers receive information from other consumers in a number of different ways – from online customer reviews posted by strangers to face-to-face WOMC from friends, acquaintances, and even strangers. Some websites have reviewers post information about themselves to help readers decide which reviews to attend to, and which ones they may want to ignore. For instance, Amazon.com allows reviewers to be rated by readers, giving consumers the power to search only the top-rated reviewers across the site if they wish. Reviewers are also encouraged to post their profile, often giving their qualifications to judge particular product categories. The current study suggests that allowing consumers to carefully choose the reviewers might make the resulting reviews more influential.

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USING RFM DATA TO OPTIMIZE DIRECT MARKETING CAMPAIGNS: A LINEAR PROGRAMMING APPROACH

Arben Asllani, The University of Tennessee at Chattanooga
Diane Halstead, The University of Tennessee at Chattanooga

ABSTRACT

The direct marketing framework that incorporates the recency, frequency, and monetary value (RFM) of customers' previous purchases is a useful analytical tool for companies that want to fine-tune their market segmentation strategies, design more effective database programs, improve customer relationship management, and allocate marketing resources more efficiently. The current research offers an optimization model that helps determine whether a company should continue or curtail its marketing spending on select customer segments given various budget constraints. The proposed linear programming model identifies the customer segments (based on RFM profile) that should be targeted in order to maximize profitability. At the same time, the method helps identify those RFM segments which are not worthy of pursuing either due to unprofitability or due to an insufficient campaign budget. The model is illustrated with a numerical example.
Keywords: RFM; direct marketing; linear programming; customer lifetime value

INTRODUCTION

An organization's long-term viability requires a focus on the profitability of each customer within that organization (Forbes, 2007). Customer lifetime value (CLV), the net present value of cash flows expected during a customer's tenure with a firm, can therefore be a valuable marketing metric to evaluate (Blattberg, Malthouse, & Neslin, 2009; Pfeifer & Carraway, 2000; Venkatesan, Kumar, & Bohling 2007). CLV is also often used as the basis of customer relationship management (CRM) decisions, including service level delivery (Zeithaml, Bitner, & Gremler, 2009; Zeithaml, Rust, & Lemon, 2001; Jackson, 2007). For example, customer profitability might be used to determine whether a service policy exception is made for a key account or whether a credit card customer's credit limit or interest rates are increased (Aeron, Bhaskar, Sundararajan, Kumar, & Moorthy, 2008). At its core, CLV guides a firm's acquisition and retention strategies (Blattberg et al., 2009).

Estimating CLV accurately can be difficult, however, and is sometimes beyond the ability of many firms (Stahl, Matzler, & Hinterhuber, 2003; Vogel, Evanschitzky, & Ramaseshan, 2008). Even the predictions of the winning model from a recent CLV modeling competition were inaccurate by more than 500 percent, for example (Blattberg et al., 2009). An approach is needed, therefore, that allows fairly simple prediction of a customer's long-term profitability potential while simultaneously providing marketers with effective CRM decision input.

One variant of the CLV estimation models is the RFM framework used in direct marketing in which the probability of customers' future purchases is based on the recency (R), frequency (F), and monetary value (M) of their previous transactions. These RFM probabilities are then used to categorize customers according to their profit potential. Customers with the highest profit potential would then be the possible targets of a company's direct marketing campaign. The RFM approach offers a potential solution to the problems associated with predicting CLV and gives direct marketers input on customer profitability and relationship management issues.

The research presented here offers a linear programming (LP) approach that combines data provided by RFM analysis alongside budgeting data for a given campaign. The model can help direct marketers determine whether to continue or curtail their relationship with a given RFM customer segment. A novel characteristic of this model is the budget constraints. Theoretically, when a company has an unlimited marketing budget, managers can afford to reach all their customers, even those who have low RFM scores. This approach would minimize Type I error, which occurs when a company does not contact a customer who could have potentially provided additional revenue and profits. Such a strategy is clearly not practical, however, because organizations typically operate under annual marketing budget constraints.

Such a strategy maximizes Type II error as well. A Type II error occurs when the company reaches a customer who is not yet ready to purchase (Venkatesan & Kumar, 2004). The LP model proposed here establishes a balance between these two errors by identifying both those RFM segments that should be reached and those RFM segments which are not worthy of pursuing because they are not profitable or because of marketing budget constraints. When faced with budget limitations, marketing managers are forced to prioritize their promotional spending strategies toward customers who will provide the highest growth in cash flows and profits. A contribution of this research is that RFM data is incorporated into an LP approach into a single model for all customers who are potential targets of a direct marketing campaign.

The paper is organized as follows. First, a brief overview of CLV and RFM models is provided. The next section discusses the modeling framework and presents the mathematical formulation of customer relationships. The empirical application of the model is then presented in which the objective is to maximize profits from potential customer purchases without exceeding the budget constraints. Three model variations are illustrated using purchasing data from over 2,300 customers from a sample from a CDNOW dataset: a recency only model, a recency and frequency model, and a full RFM model. Finally, conclusions and implications of the model are discussed.

THEORETICAL BACKGROUND: CLV, MCMS, AND RFM MODELS

CLV is a central concept in the CRM literature and is generally determined to be a function of four elements: 1) the expected duration of the customer relationship with the firm, 2) the expected revenues generated by the customer during the duration of the relationship, 3) the expected costs of marketing to the customer during that timeframe, and 4) the discount rate (Blattberg et al., 2009). Several marketing variables have been shown to have a positive effect on CLV, including customer satisfaction, marketing efforts, cross-buying, and multichannel purchasing (Blattberg et al., 2009).

CLV and Markov Chain Models (MCMs)

CLV can be estimated on the individual customer level or at the aggregate level, i.e., the total value gained from all the firm's customers (Berger & Nasr, 1998; Rust, Lemon, & Zeithaml, 2004; Kumar, Ramani, & Bohling, 2004). Using an individual CLV estimation approach involves predicting customer retention and migration (Ching, Ng, & So, 2004; Pfeifer & Carraway, 2000). Customer retention models assume that once a customer is lost, the firm's relationship with the customer is over, i.e., the customer is lost permanently. Customer migration refers to situations in which customer non-response may not necessarily indicate relationship termination (Pfeifer & Carraway, 2000). MCM models are flexible mathematical models in that they can address both customer retention and migration. That is, they are probabilistic models in that they explicitly account for the uncertainty of customers' future behavior, and they can apply to both current customers and future prospective customers as well.

The theory of MCMs is used to help direct marketing managers optimize their relationships with individual customers. Pfeifer and Carraway (2000) illustrate the relationship between MCMs and the RFM framework and note that one property of MCMs requires that future prospects for the customer relationship depend only on the current state of the relationship. This represents a challenge in constructing an RFM-based MCM since monetary value categories may violate such a property. That is, monetary value categories may be non-Markovian by nature. Pfeifer and Carraway (2000) suggest that the monetary value category should be based either on the single last purchase amount or the cumulative total of all previous purchase amounts so that it better suits Markov chain modeling.

RFM Models

As noted earlier, one of the most widely developed MCM models is the RFM (recency, frequency, and monetary value) framework used in direct marketing in which the probability of customers' future purchases is estimated to be a function of the recency, frequency, and monetary value of their previous transactions. These RFM probabilities are used to categorize customers according to profitability potential, and they are subsequently selected (or not selected) for future direct marketing investments based on the aforementioned profit potential. Recency refers to the time of a customer's most recent purchase. Frequency is defined as the number of a customer's past purchases, and monetary value is the average purchase amount per customer transaction (Fader, Hardie, & Lee, 2005). It should be noted that some inconsistency exists in the literature regarding the conceptualization of monetary value in that some define it as an average spend per transaction, essentially equivalent to M/F, while others view it as the total amount spent by a customer on all purchases over a specified time period (Fader et al., 2005; Blattberg et al., 2009; Rhee & McIntyre, 2009). Recency is considered especially important because a relatively long period of purchase inactivity can signal to the firm that the customer has ended the relationship (Dwyer, 1989).

The RFM approach is often used as a promotional decision-making tool in which "promotional spending is allocated on the basis of people's amount of purchases and only to a lesser degree on the basis of their lifetime of duration" (Reinartz & Kumar, 2000). The level of promotional spending is high (low) for high (low) revenue customers. Thus, companies use RFM analysis to determine whether and how to invest in their direct marketing customers (Venkatesan et al., 2007). At the same time, the three attributes are not always equally weighted. Firms tend to assign maximum importance to recency, with lesser importance attached to monetary value, and the least to frequency (Venkatesan et al., 2007; Reinartz & Kumar, 2000).

RFM has been available for many years as an analytical technique for marketing campaigns. Although more sophisticated methods have been developed recently, RFM continues to be used because of its simplicity (McCarty & Hastak, 2007). Many data mining algorithms are based on the RFM approach. Direct marketing campaigns, in particular, have become more efficient because of the use of such data mining techniques that allow marketers to better segment and manage their customer databases and to generate more effective and cost efficient promotional strategies that maximize profits derived from customers' responses. For example, marketing managers may launch a new discount pricing campaign to reach those customers who have low recency values but relatively high frequency and monetary values. Similarly, an organization could launch an up-selling campaign to reach those customers who have high recency and frequency values but low monetary values. Alternatively, the department might launch a cross-selling campaign to reach those customers who have high recency and monetary values but low frequency values.

There have been studies that use methods other than RFM analysis to evaluate the success of customer selection during a marketing campaign and to estimate the future value of customers (Venkatesan et al., 2007). For example, techniques exist for evaluating the financial return from particular marketing expenditures such as advertising, direct mail, and sales promotion (e.g., return on equity) (Rust et al., 2004). There are also studies that take RFM beyond its "traditional" direct marketing approach. For example, Elsner, Krafft, and Huchzermeier (2003) provide a dynamic multilevel model heuristic which combines recency, frequency, and monetary value segmentation with a chi-square automatic detection interaction algorithm to determine the optimal frequency of catalog mailings for a company in the mail order business, helping marketers to predict when customers should receive reactivation packages.

When presenting the top ten strategies that will be implemented by companies during 2010, a leading information technology research and advisory company predicted that "*optimization and other analytical tools will be empowered by the right information delivered at the right time through customer relationship management (CRM) or other applications*" (Gartner, 2009). Enabled by the data recorded in CRM systems, RFM analysis will likely continue to be at the center of this "analytical" trend. The following section proposes the framework for a direct marketing decision model that incorporates linear programming and RFM analysis.

The proposed model uses linear programming and combines data from an RFM analysis alongside marketing budgeting data for a given direct marketing campaign. The model can therefore help marketing decision makers determine whether to continue spending on certain customer segments or whether to curtail its marketing investment in a given RFM segment. A novel characteristic of this RFM approach is the marketing budget constraints that are built into the model. This approach is a realistic one in that direct marketing campaigns, like most marketing programs, typically have annual spending limits that managers cannot exceed.

LP and RFM analysis were previously utilized in Bhaskar et al., (2009). Their study used RFM analysis for personalized promotions for multiplex customers, incorporated business constraints, and provided useful insights that helped the multiplex implement an effective loyalty program. However, the algorithm in the Bhaskar et al., (2009) research separates RFM from LP: RFM is used for non-recent customers, and LP is used for current customers. A contribution of this research is that RFM data is incorporated into an LP approach into a single model for all customers who are potential targets of a direct marketing campaign.

MATHMATICAL FORMULATION OF CUSTOMER RELATIONSHIPS

In this section, a 0-1 LP formulation of the problem is provided. As stated before, the objective is to maximize profits from potential customer purchases while not exceeding the budget constraints. There is a large number of software programs designed to solve LP models. Considering the availability of the software to marketing practitioners, Microsoft Excel's Solver Add-in was selected as the tool to solve and analyze the problem.

Notations for the Optimization Models

i = $1 \ldots R$ index used to identify the group of customers in a given recency category;
j = $1 \ldots F$ index used to identify the group of customers in a given frequency category;

k = $1 \ldots M$ index used to identify the group of customers in a given monetary category;
V = Expected revenue from a customer's purchase if frequency/monetary value are unknown;
V_j = Expected revenue from a customer's purchase if the customer belongs to frequency group j and monetary value is unknown;
V_{jk} = Expected revenue from a customer's purchase if the customer belongs to frequency group j and monetary group k;
p_i = probability that a customer of recency i makes a purchases;
p_{ij} = probability that a customer of recency i and frequency j makes a purchase;
p_{ijk} = probability that a customer of recency i, frequency j, monetary group k makes a purchase;
N_i = Number of customers who are presently in recency i;
N_{ij} = Number of customers who are presently in recency i and frequency j;
N_{ijk} = Number of customers who are presently in recency i, frequency j, and monetary group k;
C = Average cost to reach a customer during the marketing campaign;
B = Available budget for the marketing campaign;

Integer LP Model Formulation for the Recency Case

Let the decision variable for this case be a 0-1 unknown variable as follows:

x_i = 1 if customers in recency i are reached through the marketing campaign;
0, otherwise;

Using the above notations, a 0-1 mixed integer LP formulation is presented:

Maximize:

$$Z_r = \sum_{i=1}^{R} N_i (p_i V - C) x_i \tag{1}$$

subject to:

$$\sum_{i=1}^{R} N_i C x_i \leq B \tag{2}$$

$$x_i = \{0,1\} \qquad i = 1 \ldots R \tag{3}$$

Equation (1) is the objective function. It maximizes the expected profit (Z_r) of the marketing campaign. As previously stated, a customer in a state of recency i has a p_i chance of purchasing and a $(1- p_i)$ chance of not purchasing. When purchasing, the profit from a customer is calculated as *(V - C)*. When not purchasing, the expected profit is simply *(-C)*. As such, the expected value of the profit from a single customer in state i is:

$$p_i(V - C) + (1 - p_i)(-C) \qquad (4)$$

This can be simplified as:

$$p_i V - C \qquad (5)$$

Since there are N_i customers in the recency i, the expected profit from this group of customers is:

$$N_i(p_i V - C) \qquad (6)$$

As such, (1) indicates the sum of profits for all groups of customers for which a marketing decision to advertise to them ($x_i=1$) is made. Equation (2) assures that the budget B for this marketing campaign is not exceeded. The left side of the equation represents the actual cost of the campaign, which is calculated as the sum of campaign costs for each group i of customers. Equation (3) represents the binary constraints for the decision variables x_i.

Integer LP Model Formulation for the Recency and Frequency Case

In this section, we add *frequency* as a new dimension in our 0-1 LP model. The objective, again, is to maximize the profits from potential customer purchases while not exceeding the budget constraints.

Let the decision variable for this case be a 0-1 unknown variable as follows:

x_{ij} = 1 if customers in recency *I;* frequency j are reached in the marketing campaign;
0 otherwise;

The 0-1 mixed integer LP formulation is presented for the Recency and Frequency Case:

Maximize:

$$Z_{rf} = \sum_{i=1}^{R} \sum_{j=1}^{F} N_{ij}(p_{ij} V_j - C) x_{ij} \qquad (7)$$

subject to:

$$\sum_{i=1}^{R}\sum_{j=1}^{F} N_{ij} C x_{ij} \leq B \tag{8}$$

$$x_{ij} = \{0,1\} \qquad i = 1 \ldots R \qquad j=1 \ldots F \tag{9}$$

Equation (7) is the objective function which maximizes the expected profit (Z_{rf}) of the marketing campaign. As previously stated, a customer in a state of recency i and frequency j has a p_{ij} chance of purchasing and a $(1- p_{ij})$ chance of not purchasing. When purchasing, the profit from a customer is calculated as $(V_j - C)$. When not purchasing, the expected profit is simply $(-C)$. As such, the expected value of the profit from a single customer in state ij is:

$$p_{ij}(V_j - C) + (1 - p_{ij})(-C) \tag{10}$$

This can be simplified as:

$$p_{ij} V_j - C \tag{11}$$

Since there are N_{ij} customers with recency i and frequency j, the expected profit from this group of customers is:

$$N_{ij}(p_{ij} V_j - C) \tag{12}$$

As such, (7) indicates the sum of profits for all groups of customers for which a marketing decision to reach them ($x_{ij}=1$) is made. Equation (8) assures that the budget B for this marketing campaign is not exceeded. The left side of the equation represents the actual cost of the campaign, which is calculated as the sum of campaign costs for each group i of customers. Equation (9) represents the binary constraints for the decision variables x_{ij}.

Integer LP Model Formulation for the Recency, Frequency, and Monetary Value Case

In this section, the LP model is completed by adding the third dimension of the standard RFM framework: *monetary value*. The objective remains the same—to maximize the profit from potential customer purchases while not exceeding the budget constraints.

Let the decision variable for this case be a 0-1 unknown variable as follows:

x_{ijk} = 1 if customers in recency i, frequency j, and monetary group k are reached;
0, otherwise;

Adding the monetary value category will modify the objective function as follows:

Maximize:

$$Z_{rfm} = \sum_{i=1}^{R}\sum_{j=1}^{F}\sum_{k=1}^{M} N_{ijk}(p_{ijk}V_{jk} - C)x_{ijk} \tag{13}$$

subject to:

$$\sum_{i=1}^{R}\sum_{j=1}^{F}\sum_{k=1}^{M} N_{ijk}Cx_{ijk} \leq B \tag{14}$$

$$x_{ijk} = \{0,1\} \qquad i = 1 \ldots R \qquad j=1 \ldots F \qquad k=1 \ldots M \tag{15}$$

Equation (13) is the objective function for the RFM LP model. It maximizes the expected profit (Z_{rfm}) of the marketing campaign. As previously stated, a customer in a state of recency i, frequency j, and monetary k has a p_{ijk} chance of purchasing and $(1- p_{ijk})$ chance of not purchasing. When purchasing, the profit from a customer is calculated as $(V_{jk} - C)$. When not purchasing, the expected profit is simply $(-C)$. As such, the expected value of the profit from a single customer in state ijk is:

$$p_{ijk}(V_{jk} - C) + (1 - p_{ijk})(-C) \tag{16}$$

which can be simplified as:

$$p_{ijk}V_{jk} - C \tag{17}$$

Since there are N_{ijk} customers with recency i, frequency j, and monetary k, the expected profit from this group of customers is:

$$N_{ijk}(p_{ijk}V_{jk} - C) \tag{18}$$

Equation (13) indicates the sum of profits for all groups of customers for which a marketing decision to reach them ($x_{ijk}=1$) is made. Equation (14) assures that the budget B for this marketing campaign is not exceeded. The left side of the equation represents the actual cost of the campaign which is calculated as the sum of campaign costs for each group i of customers. Equation (15) represents the binary constraints for the decision variables x_{ijk}.

Empirical Example

In order to illustrate the models, a sample of a CDNOW dataset, as used in Fader et al. (2005) is utilized. The sample has purchasing data for 2,357 customers and contains a total of 6,696 records. Each record contains the customer's ID, the transaction date, and the dollar value of the transaction. Fader et al. (2005) used this dataset to illustrate how Excel can be employed to automate the calculation process when grouping customers into RFM segments. The template and the data provided are applied here to illustrate the three different LP models: 1) a Recency model, 2) a combined Recency and Frequency model, and 3) a combined Recency, Frequency, and Monetary Value Model.

Applying Integer LP Model for the Recency Case

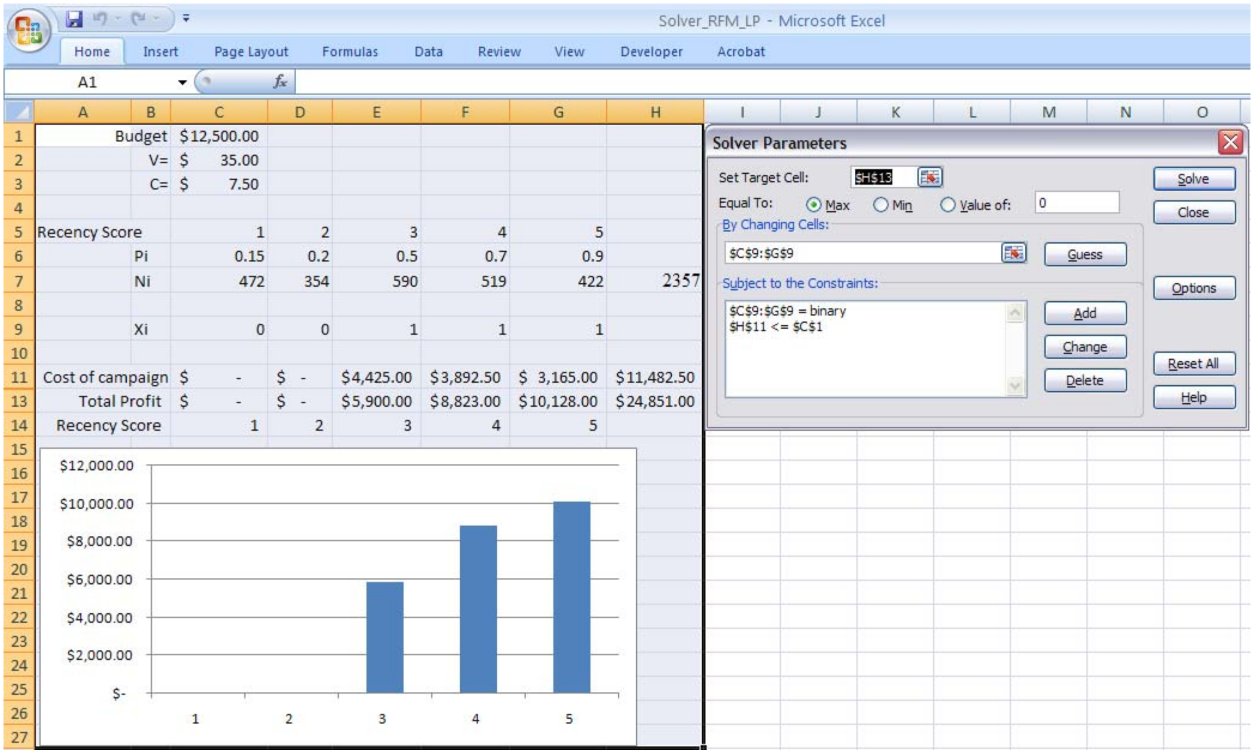
This case is relevant for companies which do not have accurate or complete records on the frequency or monetary value of their customers' purchases. This case can also be used for direct marketing campaigns where recency is the only value that matters (e.g., when customers who respond to the campaign will buy only one product or service at a given price, one time).

The model is applied as follows. First, customers are put in five groups where group 1 represents customers with the least recent purchases and group 5 represents those with the most recent transactions. Second, the number of customers that belongs to each group is calculated. This step can be accomplished with a pivot table. Pivot tables can also be used to calculate the number n_{ip}, which indicates the number of customers in recency i who actually make a purchase during the next six months. Assuming that CDNOW launches a promotional campaign every six months, the probability that a customer in group i will purchase is calculated as:

$$p_i = \frac{n_{ip}}{N_i} \tag{19}$$

As indicated in Figure 1, given a campaign budget of B= \$12,500, a cost to reach a customer of C= \$7.50, and the average revenue from the purchasing customer of V=\$35, the company should only select customers of recency 3, 4, and 5 for future promotional efforts.

Figure 1: Optimal Solution for the Recency Model



Applying Integer LP Model for the Recency and Frequency Case

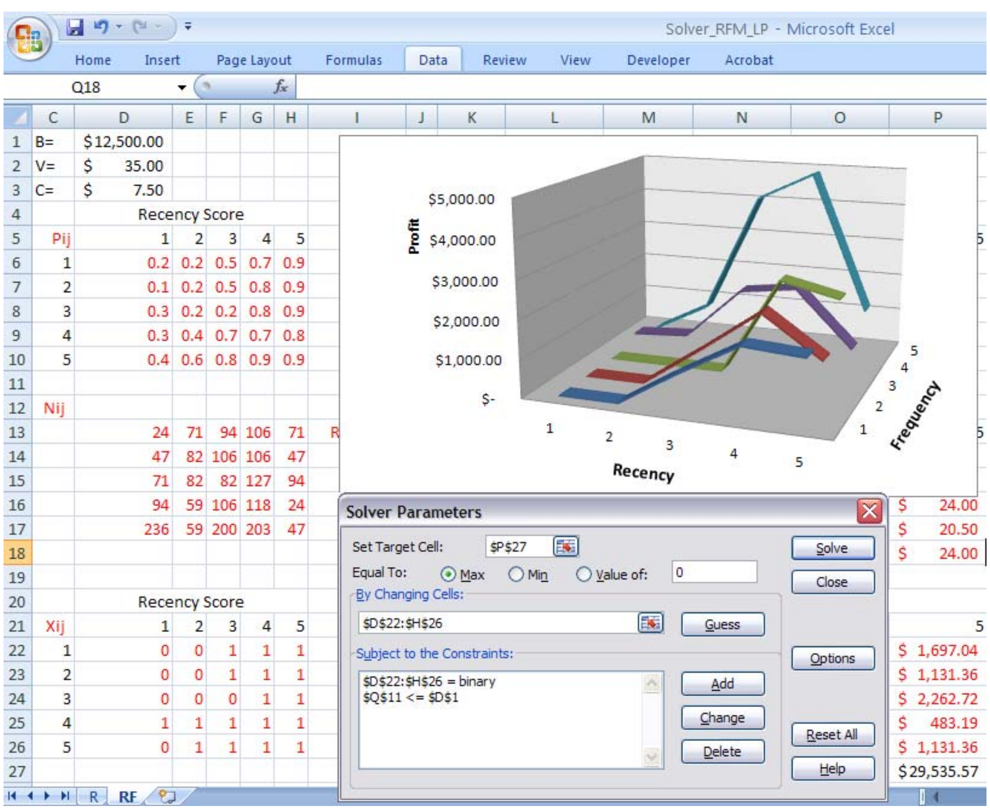
This case is relevant to companies where recency and frequency are the only significant values in their direct marketing campaign. In this situation, customers are first organized into 25 groups, with each group G_{ij} containing customers who belong to recency value i (1, 2…, 5) and frequency value j (1, 2…, 5). Companies are interested in determining which customer groups should be targeted and which groups should not be reached. As was the case previously, the number of customers in each group is calculated using a pivot table. Figure 2 indicates how the 2,357 customers are distributed in each group. Next is n_{ijp}, which indicates the number of customers in recency *i and* frequency *j* who will actually purchase during the next six months. If the number of customers in group G_{ij} is N_{ij}, then the probability that a customer in this group will purchase is calculated as:

$$p_{ij} = \frac{n_{ijp}}{N_{ij}} \qquad (20)$$

Using the same budget, cost to reach a customer, and average revenue from a purchase as in the recency model, the results demonstrated in Figure 2 indicate that the company should only target the following groups of customers: G_{31}, G_{41}, G_{51}, G_{32}, G_{42}, G_{52}, G_{43}, G_{53}, G_{14}, G_{24}, G_{34}, G_{44}, G_{54}, G_{25}, G_{35}, G_{45}, and G_{55} (where G_{ij} represents customer groups of recency *i* and frequency *j*). In other words, the company should target all customers of recency 5 and 4 with its direct marketing campaign, and select groups of customers of a lower recency. The graph inside the Excel spreadsheet shown below indicates visually the profitability of various customer groups as a function of recency and frequency.

These results indicate that recency is a slightly better predictor of segment profitability. In 14 of 15 cases, the direct marketing company would maximize its profits at all frequency levels for recency 4 and 5 (10 cases), and in four out of five cases for recency 3 (all except G_{33} are profitable). When looking at the same scenario for frequency, however, only 11 of 15 groups are profitable (i.e., at frequencies 3, 4, and 5). Only two groups are profitable at frequency 3 (recency 4 and 5), and nine out of 10 groups are maximizing profits at frequency 4 and 5 (all except G_{15}). These results somewhat supports previous research which argued that recency is the most important variable in the RFM framework (Venkatesan et al., 2007; Reinartz & Kumar, 2000).

Figure 2: Optimal Solution for the Recency and Frequency Model



Applying Integer LP Model for the Recency, Frequency, and Monetary Value Case

Finally, the case for companies with customer data on the recency, frequency, and monetary value of customers' previous purchases is illustrated. Using the same data subset from CDNOW, customers are in groups G_{ijk}, which are characterized by *recency* value *i*, *frequency* value *j*, and *monetary* value *k*. The number of customers in each group is calculated using a pivot table. Similarly, the number of customers in recency *i,* frequency *j*, and monetary value *k* who actually makes purchases during the next six months is calculated (n_{ijkp}). If the number of customers in group G_{ijk} is N_{ijk}, then the probability that a customer in this group will purchase is calculated as:

$$p_{ij} = \frac{n_{ijkp}}{N_{ijk}} \qquad (21)$$

It is difficult to represent the results visually because the model has four dimensions: *recency, frequency, monetary value*, and *profit*. A series of graphs is therefore provided. Figure 3 shows the results of the LP solution when the monetary values are 1, 2, and 3. For monetary values 1 and 2 (M=1, 2), the company should not target any customer segment, so these two solutions are combined into a single graph. The Solver solution indicates that customers with monetary value 3 should be targeted if recency is greater than 4 and frequency is over 3.

Figure 3: Optimal Solution for the Recency, Frequency, and Monetary Value Model (M=1, 2, 3)

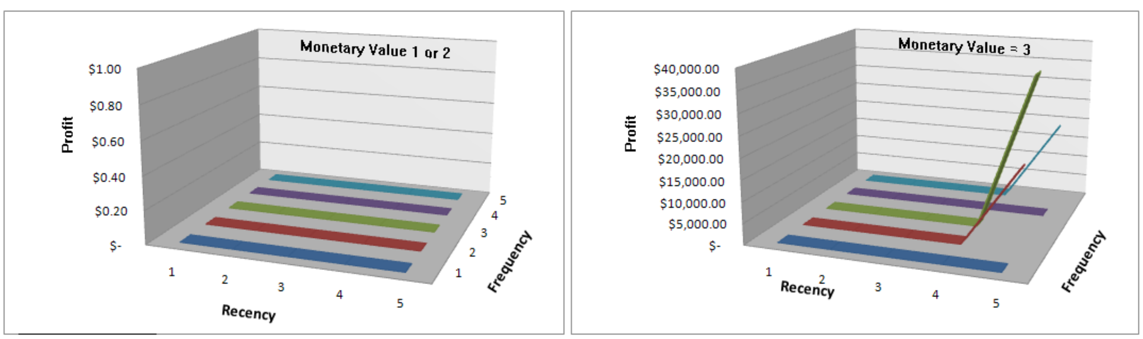


Figure 4 indicates the results for monetary values 4 and 5. As shown, the company should allocate its direct marketing resources toward all the customers in those monetary value segments under the condition that those segments also have relatively high values for recency and frequency.

Figure 4: Optimal Solution for the Recency, Frequency, and Monetary Value Model (M=4, 5)

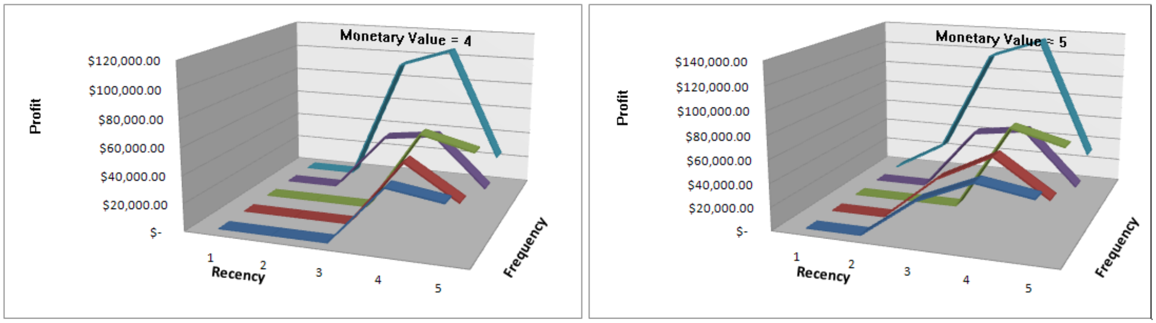
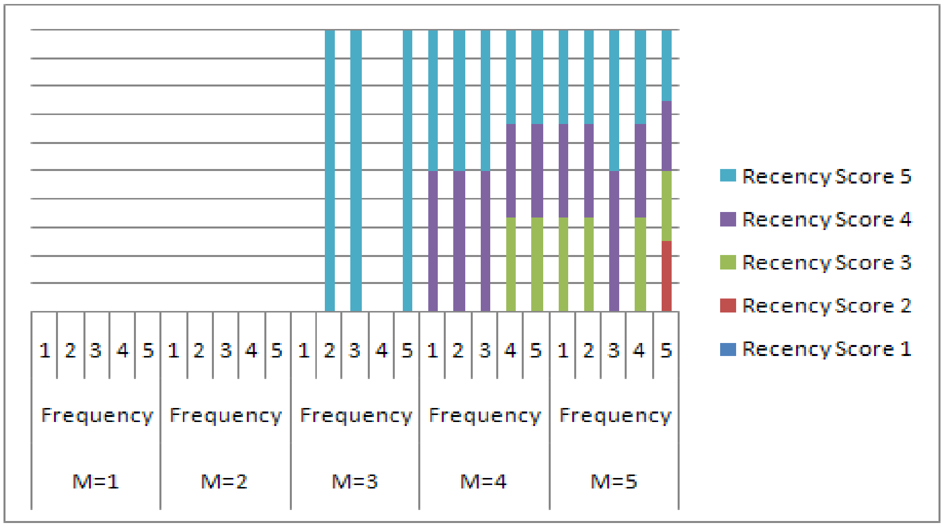


Figure 5 provides a summary of the optimal solution for the full RFM model. This figure indicates the segments that are profitable for the company. The future promotional campaign must exclude customers with monetary values of M=1 and M=2 as these segments are clearly unprofitable at any recency and/or frequency level. For monetary value M=3, the company should target only customers with a recency score of 5 due to the high probability of response. In this cluster, segments of frequency 2, 3, and 5 are profitable. Customers in the monetary segment M=4 and frequency 1, 2, and 3 must be targeted only if they have recency scores of 4 or 5. Customers in the same monetary segment (M=4) and frequency 4 and 5 can be reached even if their recency score drops to as low as 3. Finally, customers in the monetary segment M=5 should be targeted regardless of frequency score as long as they have a recency scores of 4 or 5. For this group of customers, the recency score may even be dropped to 2 if the frequency score is 5. If the customers in segment M=5 have a recency of 3, then only those with frequencies of 1, 2, 4, or 5 will be profitable (the frequency 3 segment will be unprofitable).

As Figure 5 reveals, the full RFM model indicates that the segments that have monetary values 4 and 5 are consistently the most profitable segments overall in that they are profitable at any frequency and at multiple recency values. Lower monetary values do not lead to profitable segments even when recency and frequency scores are high, however. This appears to somewhat contradict previous research claiming that recency is the most important variable of the RFM framework (Venkatesan et al., 2007; Reinartz & Kumar, 2000). It appears that, when all three purchase history variables are incorporated into the model (recency, frequency, and monetary value), some shifting in emphasis from recency to monetary value occurs. This represents an interesting topic for discussion.

Figure 5: Decision Variables for the Optimal Solution for the RFM Model



CONCLUSIONS AND RECOMMENDATIONS

Chief marketing officers have been obsessively watching the bottom line and gauging their return on investment for every spending decision, with many being forced to reduce budgets in recent years (Wong, 2009). At the same time, in 2009 the direct marketing industry was responsible for more than half of all U.S. advertising expenditures, spending just over \$149.3 billion last year and generating almost \$1.8 trillion in incremental sales (Direct Marketing Association [DMA], 2010). Direct marketers also employed 1.4 million people in the U.S. in 2009, with another 8.4 million additional jobs indirectly supported by direct marketing sales (DMA, 2010). Thus, despite recent economic pressures, firms large and small are recognizing the effective and growing role that direct marketing plays in a company's overall marketing arsenal.

No organization has unlimited marketing resources, however, so managers are forced to prioritize promotional spending decisions. Given the traditionally small response rates in many direct marketing campaigns (e.g., 1.65% for direct mail prospect lists to 4.41% for outbound telemarketing house lists), spending scarce resources to reach customers who are not ready to purchase (a Type II error) is clearly inefficient (Farrante, 2009; Venkatesan & Kumar, 2004). The LP model proposed here establishes a balance between Type I (missing customers who are potentially profitable) and Type II errors by identifying RFM segments that should be reached and RFM segments that are not worthy of pursuing because they are unprofitable or because of budget constraints. By indicating which customer segments will be most profitable (given certain marketing costs to reach a customer and total marketing budget constraints), an LP approach applied to RFM data can, in a single model, provide direct marketing companies with optimum decision-making capabilities regarding future promotional investments. Depending on a customer segment's profit maximization potential, a direct marketing firm can determine whether to continue its promotional spending in an attempt to generate future sales, or whether it should curtail spending and allocate those marketing resources to other, more profitable customer targets.

The analysis presented here provides the optimal solutions for three variations of the RFM model: a recency model, a recency and frequency model, and a full RFM model. The optimal solution for the recency model suggests that the company should only select customers of recency 3, 4, and 5 for future promotional efforts. The optimal solution in the recency and frequency model indicates that the company should target all customers of recency 4 and 5, and only select groups of customers of a lower recency. The optimal solution for the full RFM model indicates that any future promotional campaign should exclude all customers with monetary values of M=1 and M=2 as these segments are clearly unprofitable at any recency and/or frequency level. For monetary value M=3, the company should target only customers with a recency score of 5 due to the high probability of response. In this cluster, segments of frequency 2, 3, and 5 are profitable. Customers in the monetary segment M=4 and frequency 1, 2, and 3 must be targeted only if they have a recency score of 4 or 5. Customers in the monetary segment M=5 should be targeted regardless of frequency score as long as they have a recency score of 4 or 5. Even with recency scores as low as 3, four of the five segments in the M=5 groups are profitable (where frequency is 1, 2, 4, or 5). Some of the findings supported earlier research on the importance of recency as a direct marketing variable, whereas the full RFM model tested here suggested that greater importance may need to be afforded to monetary value, at least when the reality of budget constraints are considered (Venkatesan et al., 2007; Reinartz & Kumar, 2000). This represents a potentially interesting area of future research.

The study has several limitations, all of which provide avenues for ongoing research. First, some have raised the issue of whether RFM can accurately predict future behavior or profitability given that RFM frameworks represent past or historical behavior (Blattberg et al., 2009; Rhee & McIntyre, 2009). Of course, uncertainty in predicting behavior is inherent in any consumer decision model, and this example is no exception. Accuracy in prediction will always be a potential limitation when forecasting is based on historical data. In addition, the current model is limited to a six month time frame, whereas Venkatesan et al. (2007) note that three years is generally considered a good horizon for estimates of CLV and for CRM decisions such as customer selection. While this research does not estimate CLV, future applications of an LP approach might go beyond six months. The static nature of this model could be perceived as a potential limitation, although it does have the advantage of simplicity and ease of use for most organizations (as compared to CLV calculations).

This study made no assumptions about the nature of the costs used in the RFM model. Yet ultimately, assumptions regarding costs have an impact on CLV, and therefore may impact any RFM model as well. For example, if only variable costs of serving a customer are considered (i.e., marginal costing) as compared to full costs (with overhead allocation), the calculation of CLV could be quite different. Blattberg, Kim, and Neslin (2008) argue for marginal costing since full costing raises costs and can lead to the rejection of some customers (customers who would increase profits if they were targeted). Blattberg et al. (2009) also support the argument for marginal costing, but note that both full costing and marginal costing applications have been found in the literature. Again, these cost issues relate primarily to the prediction of CLV rather than to RFM analysis, but they do suggest that careful determination of costs is necessary. Future RFM research should take these potential limitations into account in order to continually improve the utility and reliability of this analytical method.

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SKIN TONE AS THE SIGNIFIER OF RACE: THE EFFECT OF CONSUMER ETHNIC IDENTITY ON TARGETED MARKETING

Yuvay Jeanine Meyers, Howard University

ABSTRACT

Although there has been significant research regarding ethnically targeted marketing and the portrayals of ethnic minorities in Advertising, the central focus has been on categorizing race as a physiologically homogeneous group without considering other variables such as skin color. When targeting the Black consumer, the role that the visual identifiers of race play has been omitted from extensive examination. Using the consumer's ethnic identity as a framework for this study, the reception of advertisements featuring Black models of different skin tones was tested in this research. The specific outcome measures of advertising effectiveness examined in this study were attitude towards the ad (A_{ad}), attitude towards the product (A_{prod}), attitude towards the model (A_{mod}), and purchase intent (PI). After the analysis of the data collected in this study, it can be stated that the ethnic identity of a Black consumer does play a significant role in how Black models are received in advertisements based upon their skin color. Black study participants that were stronger in ethnic identification felt more positively towards darker skinned models than those Black study participants that were weak in ethnic identification. This research suggests that examining skin tone within race may provide a more accurate insight into the effect that ethnicity plays on visual reception of ethnic marketing. The findings from this study will help marketers to further understand the dynamic present when targeting Black consumers with ads featuring Black models.

INTRODUCTION

In spite of the fact that images and portrayals of African Americans have been extensively studied in advertising research, the common variable in those studies has been race without accounting for variance that may result from skin tone differences within race (Bailey 2006; Cox 1970; Dominick and Greenberg 1970; Kassarjian 1969; Shuey, King, and Griffith 1953; Taylor and Lee 1995). As minority spending power and social interactions of different racial groups in America have increased over time, advertisers have increasingly been concerned with reaching minority ethnic groups through visual inclusion. With minority purchasing power increasing (Selig 2010), research in this area is more important than ever before. However, many companies were initially leery of offending the White majority that was their consumer base (Surlin 1977). In a 1953 study (Shuey, King, and Griffith), only 0.6% of ads contained African

Americans. By 1980 (Humphrey and Schuman 1984), that frequency had increased to approximately 5.7%, indicating that the country was becoming more comfortable with the use of Blacks in advertisements. Researchers took interest in this phenomenon of using ethnic faces in ads and desired to gain greater insight into both how Blacks in ads were received and the roles that they played in these ads. The studies illuminated the potential impact and effectiveness of these portrayals. However, in these studies, skin tone was rarely addressed.

In other fields, such a psychology and sociology, skin tone as a factor of race and racial identity has been examined. Skin tone, defined as the color of a person's skin, has been acknowledged as a specific variable at the root of racially related issues. It has been correlated with feelings of self worth, attractiveness, self control, satisfaction, and with quality of life (Keith and Thompson 2003; Bond and Cash 1992; Boyd-Franklin 1991; Cash and Duncan 1984; Chambers, et al 1994; Okazawa-Rey, Robinson, and Ward 1987). The study of skin tone has also led to a focus on colorism, which is the process of discrimination that gives privilege to people of a lighter-skin tone over their dark-skinned counterparts (Hunter 2005). In general, African American's tend to feel more favorable towards Black models with lighter a skin tone (Meyers 2008).This phenomenon is not exclusive to African Americans because colorism is concerned with actual skin tone, as opposed to racial or ethnic identity. Research done by Shyon Baumann (2008) has shown that people within our culture, regardless of race, have a set of ideals about how people should ideally look, including judgments regarding skin color. Lightness and darkness of skin tone have specific meanings attached to them and we subconsciously relate those meanings to those we encounter. This construct of race has yet to be examined by advertising literature.

Black consumers, generally, feel positively towards seeing black model in advertisements and strong ethnic identifiers feel more positively towards a model who looks more like themselves (Green 1999). The research on ethnic identity indicates that one's level of ethnic identity may dictate his/her preference for and judgments about their group (Phinney 1992). In terms of skin color, this stream of research suggests that Blacks who identify strongly with their ethnicity will feel more positively towards darker models than will Blacks who identify less with their ethnicity. This study will test the linkage between Black consumers and how that consumer's ethnic identification effects the reception of advertisements featuring Black models of different skin tones in a marketing context. The findings from this study will help marketers to further understand the dynamics present when targeting Black consumers with ads featuring Black models.

LITERATURE REVIEW

In the marketing communications field, there has been a lengthy stream of research regarding the depictions of African Americans in advertising and other forms of marketing communications (Bailey 2006; Cox 1970; Dominick and Greenberg 1970; Kassarjian 1969;

Shuey, King, and Griffith 1953; Taylor and Lee 1995). The number of African Americans seen in advertisements, although slightly under the percentage of Whites, has been steadily increasing (Taylor and Lee 1995; Mastro and Stern 2003). The changing beauty standards of advertisement models can be attributed to the shifting demographics, values of American society, as well as the increased expectations of American consumers being presented with relatable images (Williams, Qualls, and Grier 1995). Between 2010 and 2015, African-American buying power in the United States is expected to increase 25 percent, rising from $957 billion to $1.2 trillion (Selig 2010). Comprising 12.9% of the American population (Census 2000), this is a market that is important to businesses that hope to capture expenditure dollars of American consumers. As minority buying power grows, so too will the need for advertising that speaks directly to consumers of varying ethnicities.

At the onset of the trend towards using ethnic models, one of the biggest fears faced by marketers was whether appeasing the minority consumers by featuring ethnically diverse models would alienate the White majority audience. Advertising executives were concerned that using minorities in commercials would keep White consumers from connecting with ads featuring Black models instead of the status quo White model (Green 1999). The effect of targeted messaging on the unintended groups has also been researched in order to provide insight into resulting attitude formation (Aaker, Brumbraugh, and Grier 2000). Most researchers have found that White consumers do not react negatively to Black models in ads (Barban & Cundiff 1964; Barban 1969; Guest 1970; Block 1972; Schlinger & Plummer 1972; Bush, Gwinner, & Solomon 1974; Choudhury & Schmid 1974; Solomon, Bush, and Hair 1974; Szybillo & Jacoby 1974; Whittler 1991). Using ethnic models would seem to be a positive option, since the general audience would not reject these ads. And as a bonus to retailers targeting the African American market, Black consumers tend to have higher recall of ads featuring Black models (Whittler 1991).

With this understanding of the positive effect of Blacks viewing ads featuring Black models, the primary concern of this study will be to examine the role that the skin tone, an under-examined variable of race, of Black models in American advertisements targeting African American consumers has on a few key marketing communication goals, specifically taking note of the consumer's level of ethnic identity. The marketing communication goals measured in this study are attitude towards the ad, attitude towards the product, attitude towards the model and purchase intent. The mediating factor that will be used to categorize the Black consumer in this study will be their reported level of ethnic identification.

Ethnic identity is the way a person sees themselves as a member of a group that is a subset of the larger society. A person's ethnic identity is important because it dictates point of view and is likely to play an important role in how received information is processed (Green 1999). This also translates to consumer based decisions. Researchers have previously made the connection between ethnic identification and consumer marketplace behavior (Desphande, Hoyer, and Donthu 1986; Donthu and Cherian 1992; Hirschman 1981; Webster 1994). And it has been stated that a consumer's level of ethnic identification may have a significant effect on their evaluation of an advertisement (Cui 1997).

Within an ethnic group, however, there will be varying levels of this identification. In a study done by Corliss Green (1999), African-Americans were examined as a heterogeneous group taking into consideration that their evaluation of ads may be influenced by their level of ethnic identification. It was found in this study that strong ethnic identifiers do feel more positively toward ads that feature Black models while weak identifiers feel more positively toward ads that featured White models. According to this researcher, the rationale for these findings is based upon whether the Black consumer identified more closely with their ethnic identity or identified more closely with the dominant American culture.

Ethnic identity is the aspect of a person's self concept that is centered on their knowledge of membership in an ethnically based social group together with the significance attached to that membership (Tajfel 1981). Minorities tend to feel particularly attached to their ethnic identity due to the fact that race and ethnicity are highly salient to these groups and highly evident to others. However, as the number of minorities in the United States increases, the majority is in turn becoming a minority. This situation may lead to the issue of ethnic identity becoming a salient issue for both the minority groups as well as the current White majority (Phinney 1992).

Given this framework, it seems reasonable to assume that this variable, ethnic identity, has the ability to affect the reception of advertisements that feature African American models. With this in mind, the following hypothesis addresses the framework of ethnic identity as potential mediating factor of the study's outcome when singling out Black participants.

Hypothesis 1: Black study participants that are strong in ethnic identification will feel more positively towards a model with "dark" skin tone than those Black study participants that are weak in ethnic identification.

In terms of the resulting affect on consumer reception, the second hypothesis addresses the effect that skin tone plays on the response to targeted advertisements by a Black audience.

Hypothesis 2: Based upon the skin tone of the model seen in the ad, Blacks will respond more positively to the model with "light" skin tone on the measures of attitude towards the ad, attitude towards the product, attitude towards the model, and purchase intent.

METHODOLOGY

The execution of this study was in the form of an online survey. This format was ideal to meet the needs of this study because the self reported data allowed for insight into the mind of the consumers.

Skin tone served as the main independent variable of interest in this analysis. This variable is examined as a more direct factor of race and racially based issues in advertising. Given the subjective nature of analyzing skin tone, the measurements of skin tone were given as the bi-polar adjectives of “light” and “dark.” Narrowing the adjectives to two options was in hopes of avoiding a catch-all compartment of “medium” as the skin tone classification.

The four major dependent variables involved in this study are attitude toward the ad, attitude toward the product, attitude toward the model, and purchase intention. These outcome measures are of great importance to marketers due to their indication of consumer acceptance of the message. Since advertising is a paid for method of mass mediation, understanding these outcome variables also validates the money used for product and brand communication efforts.

To operationalize and access the dependent variable, three advertisements were shown to the participants. One of these ads served as the study stimulus and the other two served as foils or “dummy ads” to help disguise the purpose of the study. The stimulus ad featured one of two models, a “light” and a “dark” version of the same African American female whose skin tone has been digitally manipulated.

The first section of the survey asked respondents questions related to the participants attitude towards the ad. This section featured a scale that is made up of a number of bi-polar adjectives that are geared at measuring the affective component of the subjects’ attitude. The second section asked respondents about their attitude towards the product. The format of this section was a seven item, bi-polar statement scale to measure the consumer’s evaluation of the product. The third section asked respondents about their attitude towards the model. Since the two dummy ads did not feature models, the questions were manipulated to fit the ad presented. The fourth section asked questions related to purchase intent based upon the ad. Tested and approved marketing scales were use. The ones selected were recommended for the determination of attitude towards the ad, the product, the model, and purchase intent by the American Marketing Association Marketing Scales publication (Bruner, Hensel, and James 2005). The fifth section examined the ethnic identity of the respondent using the Multigroup Ethnic Identity Measure Scale (Phinney 1992). The final section asked for general demographic information from the respondents such as age, gender, ethnicity and school.

In order to measure the major construct of ethnic identity, a subscale of the Multigroup Ethnic Identity Measure Scale (Phinney 1992) was employed. The MEIM scale addresses the general aspects of ethnic identity by focusing on components that are common across all ethnic groups: self identification as a group member, a sense of belonging, behaviors unique to that group, and a feeling of pride due to group achievement (Phinney 1990). Three subscales were developed to address these components.

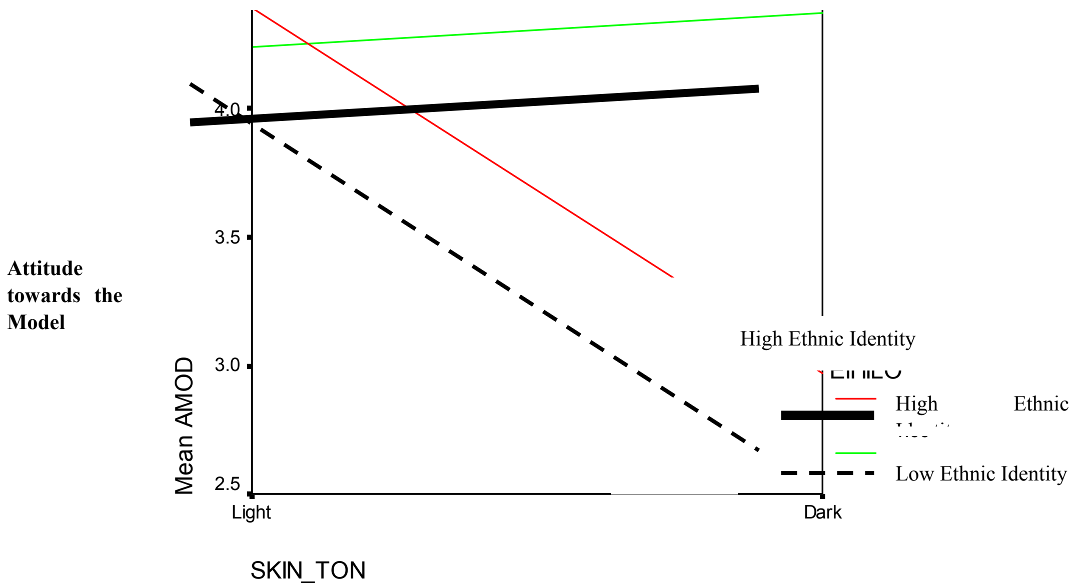
The subscale of the MEIM scale called "Affirmation and Belonging" focuses on the key aspect of ethnic identity that has been included in most previous studies in the area which is the feeling of belonging to an ethnic group and the feelings that a group member has towards that group (Phinney 1992). Statements like "I am happy that I am a member of the group I belong to" are presented to the respondent and they are asked whether they agree or disagree on a four point differential. This subscale is a five question scale that has a reported reliability of 0.86 (Phinney 1992). This is the scale that was employed in this study. Please see Appendix A: Study Questionnaire for full survey used in this study.

The participant recruitment goal of this study was approximately 480 subjects: 240 from a student sample at a large southwestern state university and the other 240 from a student sample at a small historically black university in the same southwestern city. The goal was to have two samples that will be rich in both the number of White and Black subjects. Since both schools lack diversity in terms of those two races, both subject pools were investigated to make up for this shortfall. In this study, only the African American participants' responses are examined.

FINDINGS

To examine the results of this study in relation to the Hypothesis 1, strong ethnic identity was operationalized as an ethnic identity score that falls above the mean for Black participants (mean =3.715). There was an interesting interaction found when examining whether Blacks that are stong in ethnic identity (mean above 3.715) present a more positive attitude towards the dark model than Blacks that are weak in ethnic identity (below 3.715). There were 157 Black participants in this study, of which only 48 qualified as having weak ethnic identity. Of these participants, 106 saw the "light" ad and 99 saw the "dark" ad. In Figure 1: Graph of Interaction between Skin Tone and Ethnic Identity shown below, you can see the clear distinction between attitudes towards the model based upon the level of ethnic identification. Those respondents that were high in ethnic identification felt fairly similar about the model regardless of skin tone. Those respondents that were low in ethnic identification felt despairingly different about the model based on skin tone. In this case, there was a clear preference for the model with lighter skin tone over the model with darker skin tone.

Figure 1: Graph of Interaction between Skin Tone and Ethnic



Model's Skin Tone

When an ANOVA was conducted to determine whether there is a significant interaction between the skin tone of the model, the ethnic identity of the Black participants and the resulting attitude towards the model, significance was found in the interaction effects of these variables. The outcome of the test indicates that a significant difference exists between skin tone and attitude towards the model [F (1,201) = 6.469, p= 0.012]. The outcome of the test also indicates that a significant difference exists between ethnic identity and attitude towards the model [F (1,201) = 6.003, p= 0.015]. The interaction effect found in these factors shows that there is a connection between ethnic identity and the skin tone of a black model and their effect on a consumer's attitude towards the model [F (1,201) = 9.237, p= 0. 003]. Since a statistically significant interaction was found, it can be stated that Black study participants that were stronger in ethnic identification felt more positively towards the model with "dark" skin tone than those Black study participants that were weak in ethnic identification. These finding provides evidence supporting the Hypothesis 1.

Based upon the skin tone of the model seen in the ad, significant main effects were found when examining the interaction between the ethnicity of the respondent and the skin tone of the model and this interaction's affect on all four of the dependent variables: attitude towards the ad, attitude towards the product, attitude towards the model, and purchase intent. In other words, attitude towards the ad [F(1,447) = 3.556, p= 0.002], attitude towards the product [F(1,447) = 8.535, p< 0.000], attitude towards the model [F(1,447) = 7.793, p< 0.000], and purchase intent [F(1,447) = 5.609, p< 0.000] are all affected by both the consumer's self reported ethnicity and the skin tone of the Black model in the ad. Therefore, hypothesis 2 is supported by these findings. Please see Table 1 for a summation of the hypotheses and findings.

Table 1: Summary of Hypotheses and Findings		
Hypotheses	Findings	Supported by Study
Hypothesis 1:	Black study participants that are strong in ethnic identification will feel more positively towards a model with "dark" skin tone than those Black study participants that are weak in ethnic identification.	Yes. The interaction effect found in these factors shows that there is a connection between ethnic identity and the skin tone of a black model and their effect on a consumer's attitude towards the model $[F\ (1{,}201) = 9.237,\ p= 0.\ 003]$
Hypothesis 2:	Based upon the skin tone of the model seen in the ad, Blacks will respond more positively to the model with "light" skin tone on the measures of attitude towards the ad, attitude towards the product, attitude towards the model, and purchase intent.	Yes. Significant main effects were found when examining the interaction between the ethnicity of the respondent and the skin tone of the model and this interaction's affect on all four of the dependent variables Attitude towards ad $[F(1{,}447) = 3.556,\ p= 0.002]$ Attitude towards product $[F(1{,}447) = 8.535,\ p< 0.000]$ Attitude towards model $[F(1{,}447) = 7.793,\ p< 0.000]$ Purchase intent $[F(1{,}447) = 5.609,\ p< 0.000]$

PRACTICAL IMPLICATIONS

Although this study solely examined the African American population, this issue of colorism and its effect on consumer behavior can be seen around the world. Skin lightening is a multi-billion dollar business that serves millions of people around the world annually (Hunter 2007). Consumers are going to extremes to lighten their skin color with methods that include laser treatments, bleaching, skin creams, and chemical peels, many of which are hazardous to the health and utilize dangerous ingredients such as mercury and hydroquinone. This industry is thriving even with the potential risk associated with the procedures. In Southeast Asia, light skin tone is associated with economic status. In Africa and Latin America, it is associated with social status. Regardless of the motivation, globally, there seems to be a pronounced preference for lighter skin tone. This study helps to shine light on the preference of consumers towards images of the ideal self, highlights the need for moralistic evaluation of advertising efforts by companies in order to be maintain corporate responsibility, and provides a real case example of this phenomenon in the African American market.

By no means does this research suggest that Black models used in advertisements should all be of a lighter skin tone. All of the Black respondents felt favorably towards the Black model regardless of her skin color. More accurately, this research points to a social bias towards darker skin tones that should not be perpetuated by media. Blacks feel favorably towards Black models, but the preference is towards the lighter skinned models with the moderating factor of ethnic identity closing the gap between preferences in skin tone. Companies should help promote diversity and social growth by featuring Black models in targeted advertising of a multitude of skin tones. Instead of continuing the current trend of using more ethnically ambiguous models (La Ferla, 2003), companies would be both successful in their advertising outcomes by utilizing Black models of varied skin color and also socially responsible in their attempt to showcase the array of Black skin tones.

The findings from this particular study provide interesting insight to marketers who are targeting African Americans. Although there has been an increase in the use of ethnically ambiguous models in recent advertising strategy (La Ferla, 2003), when specifically targeting the African American market in racially defined media, this new creative mandate may not be necessary. For example, it can be inferred that most of the African American readership of Ebony Magazine has a defined identification for their ethnicity. According to the hypothesis of this study, the use of darker skinned Black models would be more positively received by these readers than African Americans who are not as highly identified. In summation, targeted marketing featuring Black models of darker skin tone will be seen as favorable by the intended audience.

Globally, it would be ideal for companies to remain cognizant of the theory that consumers tend to favor advertisements that feature models who look like them. Although it is easier to appeal to the consumer's ideal self, companies should display corporate responsibility by working to avoid perpetuation of images that potentially affect the consumer negatively. Media imagery should reflect society. That means that beauty should not be mandated by one image of color, size, or any other attribute that is an impossible standard for the audience. And according to this study, companies can still be effective in their marketing effort, especially when using targeted marketing, where the audience is in touch with their targeted identity.

STUDY LIMITATIONS

One of the most apparent limitations of this study comes from the creation of the stimuli. There are inherent issues that arise when attempting to digitally manipulate the skin tone of a person in an image. First, from a mechanical viewpoint, software used to alter the colors in an image has difficulty automatically adjust for the subtle nuances that occur in the natural skin tone of a Black person. All of the many pixels that make up the skin of a model in an image vary in color. Adjusting for desired color and accounting for lighting reflecting from the skin is complicated and often will not appear as natural as a non-manipulated image.

There are also facial phenotypes that often go along with certain skin tones. In Blacks, darker skin is often associated with larger and wider features, while lighter skin is more often associated with smaller, narrower features. With the skin tone alteration of a Black person in an image, there is the risk of "creating" a person that looks unnatural. While developing the stimuli of this study, it was a conscious decision not to make the "light" model extremely light or the "dark" model extremely dark in order to account for her physical features seeming unmatched to her color. This limitation appears to have played a major role in this study as the manipulation check show the model's being fairly close in skin tone ratings. This translates into the subjects feeling that the model was neither extremely "light" nor extremely "dark" in color.

In order to avoid a catch-all category of color classification, two extremes, "light" and "dark" were used to represent disparity in Black skin tone. Given the wide spectrum of colors that ethnically Black individuals come in, this possible limitation was considered prior to the start of the study. After consideration, this decision was deemed less of a limitation and more of a necessity in order to make generalizations about color disparity.

Also, this study solely examined the effects of the given variables under the constraints of one model, of one gender. Although there is research that states skin tone is not as critical of an attribute for men in terms of attractiveness, this may or may not translate to a male model's role as an endorser of a product. For instance, the negative stereotypes associated with darker skinned, Black males may transfer into how the average consumer views a dark skinned, Black male model as an endorser of a product.

CONCLUSION

In closing, this stream of research has the ability to fuel research initiatives on the effect skin tone plays in the reception of advertisements. There is more work, however, that needs to be done to fully understand the effect this variable has as a circumscriber of race. In this particular study, it was shown that ethnic identification has a significant effect on how an African American consumer feels about a Black model in an advertisement based on that model’s skin tone. This in turn can effect how this consumer responds to targeted marketing effort. As a starting point, this provides the basis for future research regarding how the visual element of target marketing can be manipulated to meet the ultimate preferences of the audience.

Turning attention towards future research, when targeting African Americans, another interesting variable that would add to the knowledge of the role that skin tone plays in the reception of an ad featuring a Black model is the skin tone of the Black consumer. This would be a difficult variable to identify given that skin tone is subjective. It would require determining whether that variable should be self reported or recorded by an interviewer. Both of these methods of data collections would be subject to scrutiny. The reliability of that self report would be questionable because there is no way to validate that the self report of all of the participants was accurate. On the other hand, with trained interviewers taking note of the subjects' skin tones, a scale of color must be identified and agreed upon. Color classification is not the same for everyone; it is affected by culture and language (Franklin et al, 2008). With color being severely subjective, it may be difficult to get consensus on the description applied to each subject.

Future research in this stream should also extend to other cultural groups. The phenomenon of skin tone bias has been reported in other ethnic groups (Herring 2003). In America, Hispanics and Asian ethnic groups would benefit from a replication of this study. As discussed globally, people of color around the globe and their reception of ads based up the models skin town should also be analyzed. Using models from other ethnicities could help to determine how consumers, both within and outside of their group, respond to the spectrum of color that may be represented as a targeted endorser from that group. Consumer Behaviorists should strive to fully understand the affect that we as marketers have on consumers and how our targeted efforts are in turn received based upon the variable of skin tone.

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APPENDIX A: STUDY QUESTIONNAIRE

Demographics

What is your age?
What is your gender?
What school do you attend?

Attitude towards the Ad

I dislike the ad / I like the ad
I react unfavorably to the ad / I react favorably to the ad
I feel negative toward the ad / I feel positive toward the ad
This ad is bad / This ad is good

Attitude towards the Product

This is a bad product / This is a good product
I dislike the product / I like the product
I feel negative toward the product / I feel positive toward the product
This product is awful / This product is nice
This product is unpleasant / This product is pleasant
This product is unattractive / This product is attractive
I approve of this product / I disapprove of this product

Attitude towards the Model

Relative to other female models seen in advertising, this model's beauty makes her
Much less noticeable
Much more noticeable

Compared to other female models I normally see in advertisements, this model's beauty is
Far below average
Far above average

This model's superior beauty would stand out among other models in a magazine
Strongly disagree
Strongly agree

Questions to replace Ad towards Model in dummy ads
Relative to other (scenic) images seen in advertising, this scenic image is
Much less noticeable
Much more noticeable

Compared to other (scenic) images I normally see in advertisements, this scenic image is
Far below average
Far above average

This (scenic) image's superior beauty would stand out among other (scenic) images in a magazine
Strongly disagree
Strongly agree

Purchase Intent

Would you like to try this product?
Yes
No

Would you buy this product if you happened to see it in a store?
Yes
No

Would you actively seek out this product in a store to purchase it?
Yes
No

Ethnic Identity

1 = Strongly disagree 2 = Somewhat disagree 3 = Somewhat agree 4 = Strongly agree

I am happy that I am a member of the group I belong to.
I have a strong sense of belonging to my own ethnic group.
I have a lot of pride in my ethnic group and its accomplishments.
I feel a strong attachment towards my own ethnic group.
I feel good about my culture or ethnic background.

My ethnicity is
Asian or Asian American
Black or African American
Hispanic or Latino
White, Caucasian, European, not Hispanic
American Indian
Mixed; parents are from two different groups
Other

My father's ethnicity is (use numbers above)

My mother's ethnicity is (use numbers above)

EXPLORING PERSONAL SELLING AS A CAREER OPTION: A CASE STUDY OF THE PERCEPTIONS OF AFRICAN-AMERICAN STUDENTS

John E. Spillan, University of North Carolina at Pembroke
Jeff W. Totten, McNeese State University
Manmohan D. Chaubey, Penn State University DuBois

ABSTRACT

An understanding of the perceptions of students towards personal selling is an important area of study. Personal selling is a critical marketing activity that accounts for a major portion of the revenue generation for any company. Those who sell the products are the life blood of the organization. The sales profession is the major source of revenue and stability for any organization. Absent the ability to sell products and services, a company is in serious jeopardy of losing its competitive edge and its worth as a company. Personal selling is represented at many levels in a company and in various business dealings. Recruiting future sales professionals is vital to the continued success and sustainability of business entities.

The findings in this exploratory study demonstrated that the overall sales career perception scale is a valid and reliable measure of African-American students' ideas of sales as a career. We have demonstrated in this case study that there are different perceptions among students, the potential salespeople of the future, and who they are as individuals. Specifically we found out that there is no significant difference in African-American male or female students' perception of the profession, aside from interest in selling as a career and two perception statements, where men and women had significant differences of opinion.

INTRODUCTION

Companies need to build a talented sales force to successfully compete in the marketplace. University graduates provide a rich source for recruiting for entry level sales positions (Terpstra and Sarathy, 1997). Many university graduates start their careers in the sales field and, therefore, there has been a continued interest in measuring students' perceptions of the sales field as a career direction. Stevens and Macintosh (2002-2003) indicate that companies, recruiters and the universities are all interested in this issue (p. 23). A company's interest is fueled by the fact that college students make up a large and attractive pool of job candidates. The recruiters are interested in it because they would like to know the reasons why students are, or are not, attracted to careers in sales. University professors want to know the role that education plays in shaping students' attitudes and perceptions of sales as a career. Considerable research has been conducted to help understand U.S. students' perceptions of personal selling. Historically, students' perceptions of those who practice personal selling have not been positive. It is likely that the negative impression of selling is rooted in anecdotes, stories, novels, stage productions and mass media (Lysonski and Durvasula, 1998).

There is scant research on the attitudes of African-American students toward personal selling. The companies may want to create a diverse sales force as part of their human resource policy. They may want their sales force to reflect the diversity in their market or to meet their goal for diversity in their workforce. The purpose of this study is to identify attitudes and interests of African-American students in the professional selling career. How strongly are the African-American students interested in sales careers? What factors affect their attitudes and interest in personal selling as a career? This study investigates these issues using data from one public state university. It also looks at whether there are any differences in the attitude towards a sales career by gender, class rank or having family members in sales profession of the African-American students.

LITERATURE REVIEW

According to Martin (2005), Caucasian (white) males tend to dominate the field of professional selling (p. 285). Despite the diversity goals of companies, less than five percent of all sales force members, excluding retail positions, are held by African-Americans (Lucas 1996). DelVecchio and Honeycutt (2000) in a study of African-American and white students found that African-American students perceive sales career options as offering a great many important attributes. However, even with these higher ratings, African-American students did not find sales careers attractive. African-American students may well have a negative perception of a sales career for different reasons than those of Caucasian students. Lucas (1996) found trade press indicating that the African-American community takes a dim view of the sales jobs and does not encourage children to pursue sales careers. Alican Kavas (2003) found that students at a historically Black university held a negative image of personal selling as a career option though few differences between business and non-business majors or between men and women students were identified (p. 36). However, DelVecchio and Honeycutt (2000) found no difference between African-American and Caucasian students with regard to their interest in several different sales careers (pp. 49-50). In a follow-up study, DelVecchio and Honeycutt (2002) concluded that "racial group membership does not affect the importance of salary, autonomy, or education in evaluating sales careers (p. 59)."

Some information suggests that African-American college students are averse to engage in careers that do not completely use their educational investment (Lucas, 1996). The extent to which certain characteristics differentially affect African-American and white students' perception of the sales career, has not been fully addressed. It appears that African-Americans seek jobs that use their college education and that education is employed to overcome barriers

(DelVecchio and Honeycutt, 2002). Studies explicitly suggest that African-Americans draw on their educational attainment to surmount barriers in public sector employment more frequently than private sector occupations such as sales careers (Cohen, 1993). These findings suggest that there might be ethnic differences regarding the role of education in career preferences.

Honeycutt and Ford (1995) noted that the educational level of a candidate is an important criterion for companies hiring personnel for global sales forces. Therefore it is important to know the beliefs and perceptions students attach to personal selling. If these notions are negative, this is likely to be reflected in their career inclinations regarding personal selling; as such a firm wishing to recruit educated candidates may be challenged in finding qualified and enthusiastic students for these positions (Lysonski and Durvasula, 1998). Marketing educators have suggested developing a better understanding of the attitudes of students about the selling profession (Luthy, 2006; Lysonski and Durvasula, 1998; Sohail and Bradmore, 2003).

Both men and women are involved in personal selling. Studies on gender differences in students in perception and interest in selling have mixed results. Amin, Hayajneh, and Nwakanma (1995) found that all students held a negative view of sales job, but there were no differences by sex. Cook and Hartman (1986) found no gender based differences in the students' ratings of sales job attributes, but female students held a more negative view on a career in sales. Muehling and Weeks (1988), on the other hand, found female students more favorably disposed towards personal selling that the male students.

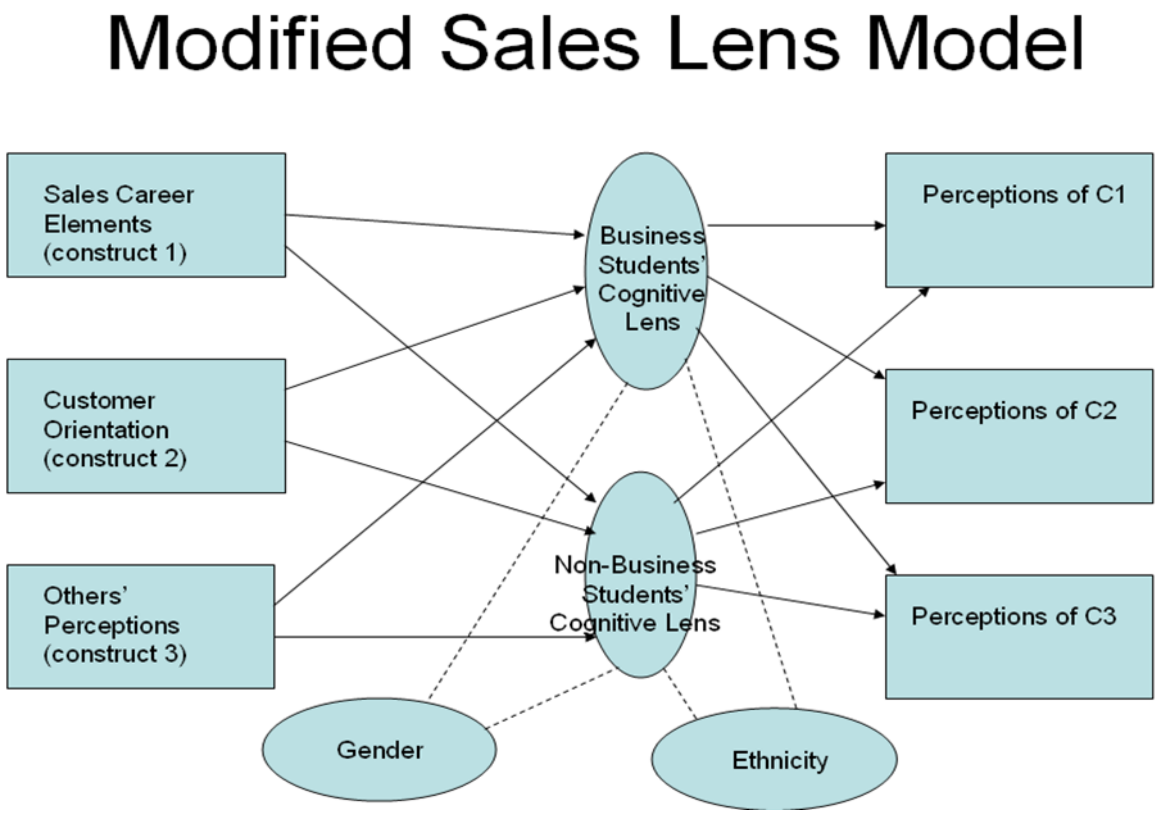
CONCEPTUAL FRAMEWORK

The Marketing Lens Model (MLM), applied by Dennis Bristow and his research group to personal selling careers in two recent studies (Bristow, Gulati, and Amyx, 2006; Bristow, et al. 2006), is the conceptual framework applied to this study. Bristow (1998) constructed the MLM framework from Brunswik's (1952) Lens Model in psychological theory. This theory focused on how the perception of one's environment (in this case, the salesperson) is influenced by one's experiences, expectations, and knowledge.

In the intervening time, Kavas (2003) modified a series of attitudinal statements for use in his study of African-American students' attitudes toward personal selling. He found 13 attitudinal statements that had been consistently used in research over the past 35-45 years (*The American Salesman,* 1958; Paul and Worthing, 1970; Dubinsky, 1980; Dubinsky and O'Connor, 1993; Lagace and Longfellow, 1989). Kavas then added three other statements, making a total of 16 attitudinal statements recommended by Lucas (1996) to make a complete questionnaire.

Upon our comparison, Kavas' attitudinal statements match up, though imperfectly, with three of Bristow, et al. (2006)'s four components: elements of a sales career (RQ1), customer orientation of the salesperson (RQ3), and others' perceptions of salespeople (RQ4). We propose that gender and ethnicity affect the cognitive lens through which both business and non-business students perceive the sales profession as a possible career path in an earlier study (see Spillan, Totten, and Ziemnowicz (2007) and Figure 1).

Figure 1: Modified Sales Lens Model



HYPOTHESES

As we explore and analyze the literature on personal selling, we find that there are certain factors that affect people's entry into the field of personal selling. Three of those are part of our investigation and have a major impact on decisions regarding whether a student enters the profession of personal selling.

Both men and women are involved in personal selling. Historically, most salespeople have been men. However, over the last 25 years this has changed, as women entered the field (Fugate, Decker, and Brewer 1988). Because of the fact that women have entered the sales field and are viewed as being important human resources in that profession, and since we are focusing only on African-American students, we posit that:

H_1 *There is no significant difference between African-American males and females with regard to their desire to work in sales.*

Second, tradition is strong in many families. Often children will choose to follow in the footsteps of their parents or relatives in terms of career paths. Numerous examples can be presented where sons and daughters have pursued the same professional sales careers as their mothers, fathers, or other relatives. However, Sojka, et al. (2000) found that previous sales exposure through family members (as well as internships) did not affect perceptions of sales careers (p. 59). Despite their result and assuming African-Americans are no different in terms of this tradition, we believe that:

H_2 *There is a significant difference between African-American students who have family ties to professional selling and those without family ties, in their desire to work in sales, with desire being stronger for those with family ties to selling.*

The perception of personal selling by a student may be formed or affected by what they study in their sales and marketing classes. Non-business majors may have a different perspective than those who have been exposed to a knowledge base about the selling profession. Non-business majors, not being exposed to the field in the classroom, may still subscribe to the stereotypical view of the sales profession held by the African-American community. As such we state that:

H_3 *There is a significant difference between business and non-business African-American students in their desire to work in the sales profession, with desire being stronger for business students.*

Our proposed model mentions the influence of ethnicity on students' perceptions and there should be a hypothesis related to this influence. However, a limitation is that data for this study was collected only from African-American students at a diverse, public, regional university (as recommended by Kavas, 2003), thus prohibiting the testing of a hypothesis of no difference. [Other ethnicities accounted for such a small portion of the university's population that we decided to limit the ethnic groups to one.]

RESEARCH METHODOLOGY AND DESIGN

Data for this paper was collected from African-American students through a self-administered survey, obtained directly from Dr. Kavas (2003) via e-mail. The meaning and definition of personal selling was explained in the instruction part of the survey. The first part

(Part A) of the survey required the students to state three thoughts that came to mind about sales people. Next to these thoughts, the students were asked to evaluate these thoughts as positive, neutral or negative. The second part (Part B) requested that the students indicate whether after graduation they would be interested in selling as a career. The possible answers for this question ranged from definitely would (5) to definitely would not (1). The third part of the survey consisted of the 16 attitudinal statements developed by Kavas (2003), using a five-point Likert type scale with anchors of strongly disagree (5) and strongly agree (1). The fourth part of the survey related to questions associated with socio-demographic characteristics of the respondents.

Data was collected among African-American business students who had taken various marketing courses, including the personal selling course. A colleague of a co-author distributed the surveys to African-American students in marketing classes, in student campus organizations, during advising sessions, and at campus-wide minority social get-togethers sponsored by the university. The respondents were able to complete the survey in about 15 minutes. A total of 146 African-American respondents completed the survey.

DATA ANALYSIS AND FINDINGS

Table 1 provides a list of the attitudinal statements along with responses, and the demographic profile of the respondents. Respondents tended to be women (64.6%), sophomores (28.3%) or seniors (35.9%), and business majors (55.6%). Just over half of the respondents (51.1%) indicated that they had family members involved in sales.

Cross-tabulations and chi square analyses were conducted to look for statistically significant differences (at $\alpha \leq .05$) among the demographic variables and with the open-ended thoughts. Several notable differences were found. Male students tended to have family members with careers in sales while female students did not have such family members. This may lead to a more positive perception of sales careers among male students than among female students. Male students also tended to be general business, management or marketing majors, while female students tended to be accounting, finance or non-business majors. Business majors tended to have family members involved in sales careers which may also lead to a positive view toward personal selling among them.

The three thought statements written by students provide a glimpse of how they view sales people. As indicated in Table 1, more than 40% of the open-ended thoughts generated by the respondents were positive. Table 1 also presents the results of students' ratings of the 16 attributes of the sales job. Students tended to disagree with these perceptions of sales jobs: "uninteresting/no challenge" and "no need for creativity." Students tended to agree with these perceptions: "much traveling" and "personality is crucial." For the remaining 12 attitudinal statements, students tended to be uncertain about the extent of their agreement or disagreement with these descriptions, as means ranged between 2.5 and 3.5.

Table 1: Descriptive Statistics					
Interest & Attitudinal Statements		Mean*		SD	N
Interest in a selling job after graduation		2.77		1.418	142
I associate a job in personal selling with:					
Frustration		2.87		1.314	146
Insincerity and deceit		3.04		1.275	146
Low status and low prestige		3.36		1.307	146
Much traveling		2.12		0.964	144
Salespeople being “money hungry”		2.76		1.289	143
Low job security		3.04		1.214	146
High pressure forcing people to buy unwanted goods		2.63		1.312	145
“Just a job” not a “career”		3.23		1.200	145
Uninteresting/no challenge		3.52		1.214	145
No need for creativity		3.76		1.235	143
Personality is crucial		1.71		1.003	146
Too little monetary reward		3.23		1.109	142
Interferes with home life		3.01		1.086	146
“Easy to get” job		3.06		1.053	145
Inappropriate career option		3.39		1.144	145
Difficult to advance into upper management positions		3.23		1.153	145
Open-Ended/Demographics	Top	%	Next	%	N
Thoughts #1 (+ = positive, n = neutral, - = negative)	+	44.4	-	40.8	142
Thoughts #2	+	42.3	-	38.7	137
Thoughts #3	+	41.6	-	33.7	101
Gender	Female	64.6	Male	35.4	144
Class Rank	Senior	35.9	Soph.	28.3	145
Student Major (Business or Non-Business)	Bus.	55.6	N-B	44.4	144
Family in Sales	Yes	51.1	No	48.9	137
* Five-point rating scale where 5 = “Definitely *would* like” (Interest) or 5 = “Strongly Disagree” (16 statements).					

In general, the male students in the sample had positive thought statements (all three statements) compared to those of female students. The female students made negative (first statement) or negative or neutral (second and third statements). The students' evaluations of their thought statements were analyzed using the chi-square test. Statistically, the first thought about sales was rated to be negative for women while positive for men ($\alpha = .029$); the second thought tended to be negative or neutral for women, while positive for men ($\alpha = .018$); and the third thought tended to be negative or neutral for women versus positive for men ($\alpha = .032$). All three thoughts tended to be significantly positive for business majors while being negative (first thought $\alpha = .000$) or negative and neutral (second thought $\alpha = .000$ and third thought $\alpha = .001$) for non-business majors. Regarding family ties to sales, the first thought tended to be positive for students with family members involved in sales while negative for those without family in sales ($\alpha = .000$). The second thought tended to be positive or neutral for those with family in sales and negative for those with no members in sales ($\alpha = .000$). The third thought was not significant at $\alpha \leq .05$. It appears that those African-American students who do not have family members in sales tend to have negative first/second thoughts about the profession.

Independent T-tests and ANOVA

Three significant differences were identified with regard to gender. Men were somewhat more interested in a sales career after graduation than were women ($t = 3.20$, $\alpha = .002$, 3.27 vs. 2.48). Therefore, we reject Hypothesis 1 of no difference between genders. Men tended to agree more with the statement: "I associate a job in personal selling with much traveling" ($t = -2.943$, $\alpha = .004$, 1.82 vs. 2.30). Women tended to agree more with: "I associate a job in personal selling with high pressure forcing people to buy unwanted goods" ($t = 2.608$, $\alpha = .01$, 2.41 vs. 3.0).

As indicated in Table 2, students with family ties to professional sales careers were more interested in sales careers themselves than students who did not have such family ties. Therefore, we do not reject Hypothesis 2; family sales career history has a favorable impact on student interest in selling as a career. Furthermore, students with family ties to selling tended to disagree more with these statements/perceptions: insincerity and deceit, low status and low prestige, low job security, "just a job" not a "career," uninteresting/no challenge, no need for creativity, too little monetary reward, interferes with home life, "easy to get" job, inappropriate career option, and difficult to advance into upper management positions. Students with no family ties tended to agree more with these perceptions: frustration, salespeople being "money hungry," and high pressure forcing people to buy unwanted goods.

Finally, with regard to the third hypothesis, business majors were more interested in selling as a career after graduation than were non-business majors (see Table 3). Hypothesis 3 is therefore not rejected; there is a significant difference between business and non-business students, with the former having more interest in a sales career than the latter. Furthermore, business majors tended to disagree with the same 11 statements/perceptions that students with family ties to selling did, and non-business majors tended to agree with the same three perceptions that those without family ties also agreed with (see Table 3).

Table 2: Independent t Tests & Family Ties to Selling

Items	Family Ties: Yes (Mean)#	Family Ties: No (Mean)	Levene's Test		t-value	Sig.
			F-value	Sig.		
Interest in sales career	3.46	1.97	2.446	.120	7.040	.000
Frustration	3.44	2.22	2.532	.114	5.998	.000
Insincerity	3.46	2.63	0.087	.768	4.001	.000
Low status	3.89	2.78	7.926	.006*	5.431	.000
"Money hungry"	3.07	2.43	0.215	.644	2.912	.004
Low job security	3.46	2.57	0.029	.865	4.512	.000
High pressure	3.11	2.09	11.628	.001*	4.859	.000
"Just a job"	3.67	2.71	4.827	.030*	4.949	.000
Uninteresting	4.03	2.94	22.728	.000*	5.810	.000
No need for creativity	4.30	3.14	33.297	.000*	6.025	.000
Too little monetary reward	3.68	2.76	5.098	.026*	5.211	.000
Interferes with home life	3.49	2.49	0.767	.383	5.872	.000
"Easy to get" job	3.32	2.76	2.066	.153	3.124	.002
Inappropriate	3.84	2.93	15.513	.000*	4.954	.000
Difficult to advance	3.67	2.78	10.478	.002*	4.837	.000

Five-point rating scale where 5 = "Definitely *would* like" (Interest) or 5 = "Strongly Disagree" (16 statements); * Levene's test for variance equality is significant (cannot assume equal variances).

Principal Components Analysis

The sixteen items in Kavas' scale were subjected to principal components analysis (PCA) using SPSS version 14. Prior to performing PCA the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.30 and above. The Kaier-Meyer-Olkin Measure of Sampling Adequacy value was .912, exceeding the recommended value of .6 (Pallant, 2005, p. 182). In addition, Bartlett's Test of Sphericity was significant at p = .000; therefore, factor analysis was supported.

Table 3: Independent t-Tests & Major						
Items	Business Major (Mean)#	Non-business Major (Mean)	Levene's Test(F Value)	Levene's Test (Sig.)	t-value	Sig.
Interest in sales career	3.40	1.98	2.312	.131	6.677	.000
Frustration	3.24	2.39	0.001	.977	4.023	.000
Insincerity	3.46	2.55	2.566	.111	4.580	.000
Low status	3.81	2.78	5.628	.019*	4.968	.000
"Money hungry"	3.25	2.13	0.346	.557	5.601	.000
Low job security	3.46	2.53	2.128	.147	4.907	.000
High pressure	3.13	2.00	7.137	.008*	5.632	.000
"Just a job"	3.68	2.64	4.295	.040*	5.613	.000
Uninteresting	4.10	2.76	10.250	.002*	7.533	.000
No need for creativity	4.29	3.06	30.304	.000*	6.317	.000
Too little monetary reward	3.65	2.70	2.624	.108	5.581	.000
Interferes with home life	3.39	2.53	0.044	.834	5.054	.000
"Easy to get" job	3.30	2.73	1.296	.257	3.314	.001
Inappropriate	3.80	2.87	10.618	.001*	5.037	.000
Difficult to advance	3.64	2.73	5.958	.016*	4.899	.000
# Five-point rating scale where 5 = "Definitely *would* like" (Interest) or 5 = "Strongly Disagree" (16 statements); * Levene's test for variance equality is significant (cannot assume equal variances).						

Principal components analysis resulted in the extraction of two factors, both with eigenvalues greater than 1, and explaining 58.0% and 9.6% of the variance respectively. An inspection of the scree plot supported the presence of two components. The Varimax rotation produced two factors that explained 67.625% of the variance. Table 4 sets forth the specific description of these factors and their loading values.

While the Cronbach's Alpha reliability coefficient for the first component, Negative Stereotype of Salespeople, was very good at .9605, the coefficient for the other component was below the acceptable .7 level (Pallant, 2005, p. 92). Factor 2, Job Realities, had a coefficient of .504. The reliability test could not recommend item deletion; therefore, Factor 2 remained weak.

Even though the professional selling career presents opportunities to earn high levels of income, there remains among African-American students the notion that selling is a negative profession. African-American students also perceive that a sales career involves long hours of travel and having the right personality for the job, which may or may not be correct or true all of the time.

Table 4: Two-Factor Analysis Results		
Factor Descriptions	Loading	Variance %
Factor 1 – Negative Stereotype of Salespeople		58.022
Too little monetary reward	.881	
Low status and low prestige	.854	
Difficult to advance into upper management	.850	
Frustration	.838	
Insincerity and deceit	.832	
"Just a job" not a career	.826	
Inappropriate career option	.825	
High pressure forcing people to buy unwanted goods	.817	
Low job security	.809	
Uninteresting/no challenge	.807	
No need for creativity	.791	
Salespeople being "money hungry"	.787	
Interferes with home life	.786	
"Easy to get" job	.667	
Factor 2 – Job Realities		9.603
Much traveling	.849	
Personality crucial	.750	
Total Variance explained by two factors		67.625 %

CONCLUSIONS

The results of this study have demonstrated, through the identification of two factors, that the overall sales career perception scale is a valid and a reliable measure of African-American students' perception of sales as a career. We know that people have differing perceptions of sales as a professional career. We have demonstrated in this study that difference perceptions exist among students. Specifically we found out that there is no significant difference in African-American male or female students' perception of the profession. However they differ on their interest in selling as a career and also on two thought statements, where men and women had significant differences of opinion. That is an important finding because it means that both genders believe essentially that the same ideas exist among professionals in the selling field. The proposed gender influence linkage in the model (Hypothesis 1) is not supported.

African-American students who have family members affiliated with the sales profession also had some major differences in opinion on several factors (see Table 2). This suggests that the influence of selling from ideas about the job presented in family discussions may have affected their thinking about this profession, unlike the findings of Sojka, et al. (2000). The results support Hypothesis 2 that there is a significant difference between African-American students who have family ties to professional selling and those without family ties, in their desire to work in sales, with desire being stronger for those with family ties to selling.

Perceptions do differ by student major (see Table 3). Based upon our data analysis, Hypothesis 3 is not rejected and that there is a significant difference between business and non-business students, with the former having more interest in a sales career than the latter. The proposed model lens of major (business or non-business) does appear to modify perceptions of characteristics and other factors relating to sales as a career choice.

LIMITATIONS & FUTURE RESEARCH

One major limitation of this study is the small sample size. As noted in the hypothesis section, our proposed model mentioned the influence of ethnicity on students' perceptions; however, data for this study was collected only from African-American students. Also, the time frame for the data collection was longer than anticipated, which may have introduced time-based biases.

The framework used in this study can and should be used to replicate it in settings with more diversity in student population. This will permit testing of differences in attitudes and perceptions across gender and ethnicity.

In addition, designing a similar study across many universities would allow researchers to study whether student perceptions vary geographically. Use of a larger and diverse sample, covering multiple campuses will allow us to better study the perceptions of students toward personal selling as a career option. It will also enable the researcher to study differences by a student's field of study, class status or family background. Any significant difference by class status may point to the effect of education and exposure to, or lack thereof, sales and marketing classes.

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MARKETING A UNIVERSITY-AFFILIATED APPLIED RESEARCH CENTER: AN APPLICATION INVOLVING HULL-SPENCE BEHAVIORAL THEORY

Adee Athiyaman, Western Illinois University

ABSTRACT

This paper demonstrates a market-segmentation and targeting methodology that would benefit business-to-business marketers. Specifically, the method highlights how published, secondary data can be used to construct an aggregate choice model for segmentation purposes. Then, it highlights how Hull-Spence behavioral theory can be employed to target the segments. An online experiment confirms the effectiveness of the approach in achieving communication objectives.

INTRODUCTION

In this age of strategic networks (Gulati et al. 2000), it has become common for universities to work with businesses on issues such as new product development, technology, and marketing (Fischer, 2009; Blumenstyk, 2010). The current status of university-industry partnerships in research can be gleaned from Table 1. As shown in the Table, R&D expenditures in universities and colleges, during the year 2008, amounted to $51.9 billion. Of this, $12.5 billion (24%) was spent on applied research. On average, businesses contribute $3 billion annually to applied research at universities.

To cater to the research needs of the industry in Western Illinois, SE Iowa and NE Missouri (see Appendix 1 for a listing of the counties in the geographical area), a medium-size university in the Midwest has created an applied research center called I^2. Specifically, the center aims to help businesses plan new products; gauge competitors' actions; penetrate new markets, and manage brand equity. This paper highlights the market segmentation and targeting activities of the center. One of the salient features of this research is the reliance on published, secondary data to construct I^2's marketing program. It is hoped that the methodology highlighted in the paper would be of interest to business-to-business (b2b) firms wanting to engage in market segmentation and targeting.

Table 1: R&D Expenditures at Universities and Colleges: 2003–08 (Millions of Current Dollars)						
Source of Funds and Character of Work	2003	2004	2005	2006	2007	2008
All R&D expenditures	40,100	43,258	45,799	47,751	49,554	51,909
Source of funds						
Federal Govt.	24,771	27,644	29,209	30,129	30,458	31,231
State and local Govt.	2,647	2,879	2,940	2,962	3,143	3,418
Industry	2,162	2,129	2,291	2,402	2,680	2,870
Institutional funds	7,664	7,753	8,266	9,062	9,748	10,435
Other	2,857	2,852	3,093	3,196	3,525	3,954
Type of work						
Basic research	30,121	31,968	34,368	36,096	37,842	39,408
Applied research	9,979	11,290	11,432	11,656	11,712	12,501
SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges: FY 2008.						

MARKET SEGMENTATION

Market segmentation is a strategy of resource allocation given a heterogeneous customer population (Kerin et al. 2009; Wedel & Kamakura 2000). In the study area, we have a number of healthcare, government, retail, manufacturing, and hospitality businesses (Appendix 2). Since these businesses would be in different stages of their life cycle, their need for applied research would vary. For example, a start-up may like to "explore" the market potential for its new product whereas a mature firm may want to "confirm" the optimality of its marketing mix (cf. the Dorfman-Steiner theorem (Leeflang et al. 2000)).

It is also possible that the need for applied research could be latent or unfelt for some firms. Since creating primary demand for applied research is beyond the scope of I^2, we focus on businesses that possess the need for applied research. Specifically, we assume that past research usage is the best predictor of current and future usage, and conceptualize firms that use research services as the potential market.

To segment the potential market, we utilize the argument that applied research requires extensive manager-researcher interaction (Deshpande & Zaltman 1984). This interaction is expected to cultivate in the manager an overall evaluation or attitude towards the research supplier (Gawronski & Bodebhausen 2006). We label this attitude "supplier loyalty" and utilize it as the basis for segmenting existing users of research services.

To elaborate, supplier loyalty implies the strength of preference for a particular supplier (Wind & Thomas 1994). If we segment existing research users into supplier-loyalty categories, then marketing efforts could be directed at research users who are likely to "switch" from their existing supplier and utilize research support from I^2. More specifically, we define two groups of customers: brand loyal, and switchable. As the name implies, the brand loyal cluster would exhibit a higher probability of purchasing from their existing research supplier; most often a single supplier. In contrast, the switchable group would be utilizing two or more suppliers.

METHODOLOGY

We calibrate a mathematical model to help us understand the customer's (firm) probability of research-supplier loyalty. Organizational variables are used as predictors and a disaggregate choice model is used to estimate one set of parameters for the population. Since little or no research has addressed the organizational correlates of outside, consultants use (Belkhodja, Amara, Landry & Ouimet 2007), research by Crabtree, Gomolka, and Blakney (1995) was used to construct the predictors (Table 2).

Data for the study was assembled in multiple stages. First, firms which provide management and technical consulting services (NAICS 5416) in the study area were identified from chamber-of-commerce web sites. Then, the websites of these "consulting" firms were searched to locate their clients. Finally, the "client-firms" websites were content-analyzed to construct indicators of organizational variables shown in Table 2.

Table 2: Variables And Their Operational Definitions

Variable	Operational Definition
Firm Size	Ordinal variable coded 1 to represent small firms that have ≤ 5 employees; 2 to capture medium businesses with 6 to 100 employees, and 3 for large firms with > 100 employees.
Work experience of the CEO	Number of years of experience in one or more industries.
Educational attainment of the CEO	Highest qualification of firm personnel coded as follows: some college = 13 years of study; professional certificate = 15 years of study; bachelor's degree =16 years; master's degree 17 years, and PhD = 20.
Management specialists	Number of accounting, management, and marketing specialists employed by the firm.
Technical specialists	Number of engineering and other technical personnel in the firm.
Geographical location of the firm	Nominal variable coded 1 to indicate counties in Illinois, 2 to represent counties in Iowa, and 3 to denote Missouri counties.
Supplier loyalty	Indicator or nominal variable to represent the number of research suppliers for the firm. Coded, 0 = 2 or more suppliers, and 1 = 1 supplier.

As mentioned earlier, the mathematical model that is presented in this paper is a stochastic model. The model assumes that a decision maker will select an option (for instance, a research supplier) that she considers the most desirable. In line with terminology used in discrete choice theory, we posit that each decision maker (i = 1, 2, …., i) has a "research-supplier" choice set {Ci} of size j_i. Let U_{ij} be the unobserved utility of supplier "j" to decision maker "i" which is posited to be some function of organizational variables x_j. Mathematically:

$$U_{ij} = U(x_j).$$

It is important to note that U_{ij} cannot be measured accurately because of problems such as omitted variables and measurement errors. Therefore, we assume that U_{ij} is made up of two elements: one deterministic, V_{ij} which is a function of x_j, and another stochastic, e_{ij} which captures all misspecifications associated with the model. Formally,

$$U_{ij} = V_{ij} + e_{ij}$$
$$\text{where, } V_{ij} = f(x_j)$$

We employ maximum likelihood procedures to assess the influence of x_j on V_{ij}. In other words, the likelihood of the probabilistic model of the form $V_{ij} = f(x_j)$ should be maximized with respect to the parameters to obtain their estimates. The probability model is derived as follows.

Let P_{ij} = the probability that decision maker "i" chooses supplier-option "j" conditional on knowing each $V_{ij} = A_j$ where A_j is some known value and $j \in \{Ci\}$. That is,

$$P_{ij} = \text{Prob}(U_{ij} > U_{ik} \mid V_{ij} = A_j, k \in \{Ci\}, \forall\, k \neq j)$$

For a binary choice situation, simple manipulations yield:

$$\text{Prob}\ (U_{ij} > U_{ik})$$

$$= \text{Prob}\ (V_{ij} + e_{ij} > V_{ik} + e_{ik})$$
$$= \text{Prob}\ (e_{ij} - e_{ik} > V_{ik} - V_{ij})$$
$$= \text{Prob}\ (e_{ik} - e_{ij} < V_{ij} - V_{ik})$$

If we assume that the errors are distributed normally with mean "0" and variance σ^2, then

Vij-Vik

$$\text{Prob}\ (U_{ij} > U_{ik}) = \int_{-\infty} 1/[(2\pi)^{1/2}\sigma]\ \exp\ (-1/2\ [(e_{ik} - e_{ij}) / \sigma]^2\ \delta\ (e_{ik} - e_{ij})$$

which can be rewritten as:

$$\phi\ [(V_{ij} - V_{ik}) / \sigma]$$

where ϕ [ ] denotes the standardized cumulative normal distribution.

We assume that V_{ij} are linear combinations: $\beta' x_j$, where β' is a row vector of parameters.

This results in: $\phi\ [(\beta' x_{ij} - \beta' x_{ik}) / \sigma]$

Again, assuming binary choice, the probability of decision maker "i" choosing supplier-option "k" can be obtained as follows:

$$\text{Prob}_{(ik)} = 1 - \phi\ [(\beta'\ (x_{ij} - x_{ik})) / \sigma]$$

The likelihood function for the probability model is:

$$L = \Pi_n\ \phi\ \{[(\beta'\ (x_{ij} - x_{ik})\}^j\ .\ \{1 - \phi\ (\beta'\ (x_{ij} - x_{ik}))\}^k$$

where, n = number of respondents, j = option 1 and k = option 2; j and k will take on a value of the supplier loyalty variable (see Table 2).

Simplifying using "ln" results in:

$$\Sigma_n\ (j)\ \ln\ [\phi\ (\beta' x)] + (k)\ \ln\ [1 - \phi\ (\beta' x)]\ \text{where}\ x = x_{ij} - x_{ik}$$

Then we find the maximum of "ln L" by differentiating with respect to β_s and setting the resulting derivatives to "0" to solve for β_s. Specifically,

$$\frac{\delta \ln L}{\delta \beta_i} = \Sigma_n\ j / [\phi\ (\beta' x)]\ .[\delta\ \phi\ (\beta' x) / \delta\beta_i] + k / [1 - [\phi\ (\beta' x)]\ .[\delta\ [1 - \phi\ (\beta' x)] / \delta\beta_i] = 0$$

(refers to the "i^{th}" β)

Note that the above Probit model is related to Logit based on the the property $\beta_{Logit} = 1.7\ \beta_{Probit}$ (Long 1997). The Central Limit Theorem justifies the use of Probit in this paper since the number of observations employed to calibrate the model totals 184.

RESULTS

The Internet search identified 647 users of research services; the client-firms for the 28 research firms in the market area (Appendix 3). A statistical clustering of the client-firms' NAICS codes using the agglomerative Ward's method resulted in three clusters: manufacturing businesses (18% of the firms), service businesses (55%), and 27% "mixed" tourism businesses, that is producers of goods and services consumed both by residents and visitors (Ryan and Page 2000).

However, not all businesses in these clusters had web presence. For instance, a financial service firm in Clinton, Iowa, and a manufacturing firm in Rock Island, IL, had no publicly-listed web sites. In all, 23 firms did not have publicly-listed web sites. Of the 624 businesses with web sites, only 184 provided information on all the variables of interest highlighted in Table 2. In terms of the three clusters discussed above, the 184 firms were distributed as follows: 14% manufacturing firms, 64% service firms, and the remaining 22%, mixed tourism firms.

Table 3 presents the descriptive statistics of the variables used in the choice model. Table 4 highlights the "partial" effects of each organizational variable on changes in the firms' utility for supplier loyalty or technically, using only one research supplier.

Table 3: Descriptive Statistics

Variable	Level Of Measurement	Descriptive Statistics
Firm Size	Ordinal	Median = 2; Range = 2
CEO's work experience (Yrs)	Ratio	Mean = 21; Std. Dev = 11.6
Educational attainment of the CEO	Ratio	Mean = 13; Std. Dev = 1.9
Management specialists	Ratio	Mean = 17; Std. Dev = 11.69
Technical specialists	Ratio	Mean = 11; Std. Dev = 2.59
Geographical location	Nominal	Mode = 1 (Illinois)

Consider the first variable in Table 4: the alternative specific constant. This variable has a value of "1" for supplier loyalty and "0" for usage of two or more research suppliers. The alternative-specific constant denotes the expectation or mean of $e_{ik} - e_{ij}$: that is, the utility of supplier loyalty from that of using two or more research suppliers, when all else is equal. In Table 4, the coefficient estimate for alternative-specific constant (β_o) is 15.188. This reflects a relative preference for single research supplier.

Now consider the organizational variables in Table 4. If we assume that each of these variables has the same marginal utility for the two supplier-loyalty categories, then, all else being equal, the smaller the client-firm, the higher is its loyalty to the research supplier. The predictive power of the model is examined below:

ln L (0) = -126.846. This is the value of the log likelihood function when all the parameters are zero. Put simply, this is a naïve model in which the choice probabilities are assumed to be ½ for each of the two supplier loyalty categories.

ln L (c) = -58.828 is the value of the log likelihood function when only an alternative specific constant is modeled. This process of modeling choice implies that the choice probability of supplier loyalty equals the fraction of the firms staying with one research supplier (.89).

ln L (β) = -1.83 is the maximum value of the log likelihood function for the choice model we have formulated in Table 4.

-2[ln L (0) – ln L (β)] = 250.032 is a statistic used to test the null hypothesis that βs = 0. It is asymptotically distributed as χ^2 with seven degrees of freedom. Since the value of χ^2 at seven degrees of freedom is 18.47, we can reject the null hypothesis at the 0.01 level.

ρ^2, defined as 1 – (ln L (β) / ln L (0)) is similar to R^2 used in regression. Here, its value is .96. This suggests that the model is a probable representation of reality, and that managerial implications can be deduced from the choice model.

Table 4: Estimated Partial Effects of Organizational Variables on Supplier Loyalty

Variable	Coefficient	Std. Error	Prob|T|Òx
Alternative specific constant	15.188	5.6	.00
Firm size	-3.795	.961	.00
CEO's work experience	.041	.033	.22
Highest qualification of employees	-.196	.235	.40
Management specialists	.006	.525	.9
Technical specialists	-.552	1.004	.58
Geographical location	None of the categories were significant		

DISCUSSION

The differences between the probabilities of the two supplier loyalty categories were analyzed using statistical procedures given in Gensch (1984). The null hypothesis of no difference between the two probabilities was accepted for 42 firms (23%, Appendix 4). Put another way, these 42 firms are likely to "switch" research suppliers. Of these, 79% employ more than 100 people. This confirms the choice model's prediction that large firms are likely to source research from more than one provider. How do we influence these firms to consider I^2 for research service? Hull-Spence Behavioral Theory (HSBT) provides the guidelines (Rossiter and Foxall 2008).

We begin our marketing task with the assumption that the CEOs of the potential client-firms would be the decider and purchaser of research service. The variables that would initiate the desired behavior in the CEO, that is, commission I^2 for applied research, include:

(i) Stimulus intensity dynamism: It deals with the CEO's internal response to the stimulus or cue that initiate behavior. The encoding specificity principle (Tulving, 1983) suggests that successful retrieval of brand name (for example, I^2) depends on achieving a match between the information encoded at the time of learning and the information that is available at the time of retrieval. Often, CEOs in need of applied research (cue) would mentally recall one or more research supplier (Barnes Report 2010). In other words, the retrieval of brand name would follow the cue → brand sequence. Therefore, marketing communications for I^2 should associate category cue (for example, need to make better economic decisions) to I^2 brand name and logo. Note that in marketing communications terminology, this procedure would be described as category-cue prompted brand name recall (brand awareness).

(ii) Generalized drive: Generalized drive or arousal energizes the CEO to overtly respond or commission an applied research project. This arousal is dependent on a variety of highly intense "external" and "internal" stimuli. For example, economic recession, a stimulus in the external environment, coupled with a strong "internal" urge to beat the competition (need for achievement (McClelland et al. 1953)), may drive the CEO to commission market research to better understand competition. This task may be assigned to the supplier that the CEO has dealt with before. Stated differently, the target market will form a preference for a "new brand" only at a low drive level; high drive favors use of previously used research supplier(s). Hence, it is essential to ensure that marketing communications from I^2 doesn't arouse the CEO too much: a low-arousal stimulus (for example, marketing communication) is needed to place I^2 in the CEO's research-supplier consideration set (Lilien & Rangaswamy 2004).

(iii) Habit strength: Unlike generalized drive, habit strength is specific to a particular brand. This concept equates with the brand attitude concept discussed by Rossiter and Percy (1997). Brand attitude is defined as the buyer's evaluation of the brand with respect to its perceived ability to meet a currently relevant motivation (East 1997). To elicit positive attitude towards I^2, we focus on the set of benefits thought to be important, deliverable, and unique for I^2 (Rossiter & Percey 1997). Deshpande and Zaltman (1984) posit that managers consider "technical quality of research" to be a salient determinant of satisfaction with the research provider. This expectation can easily be met by I^2 since its researchers have expertise in business and economic research. As regards the uniqueness of I^2, it is its association with with the Midwest university that differentiates it from the rest of the consulting firms.

(iv) Incentive motivation: This concept denotes the anticipated reinforcement or punishment for engaging in an act or behavior. Incentive motivation is often conceptualized as an antecedent to habit strength. For example, functioning in turbulent economic times may result in the CEO learning that the research-support activities of I^2 could help succeed in difficult economic times. To create this learning among the client firms, I^2 should broadcast a message such as the one given below:

> "Your business or organization needs to make optimal decisions during turbulent times. We provide tailor-made solutions to your business and economic development needs".

(v) Reaction potential: Also called behavioral intention (Fishbein & Ajzen 1975), this variable alerts us to plausible "inhibitors" of behavior that may prevent the CEO from commissioning I^2 to conduct research. As an example, consider the scenario where the CEO, after receiving and browsing through a number of direct mail advertisements, develops fatigue while reading them and eventually experience "mental tiredness" as soon as she receives another piece of direct mail. In this situation, sending an I^2 brochure by mail to the CEO will result in I^2 being ignored by the CEO. The point is that steps should be taken to safeguard against these conditioned inhibitions.

In summary, the principles of HSBT suggest the following tactics for marketing I^2 (Table 5):

(1) Brand awareness is based on category-cue prompted brand name recall, therefore associate organizations' need to make better business decisions with I^2 brand name and logo.

(2) Print advertisements for I^2 should be constructed and placed in a manner that creates low arousal level for the audience. Extant research in consumer behavior suggests that blue color in the environment elicits low-arousal levels in subjects (Bellizi & Hite 2006). Hence, an I^2 brochure should be designed with a blue background. Next, based on the reasoning that email generates low arousal than snail mail (Hanna et al. 2006; also see discussions about reaction potential above), the brochure should be emailed to potential clients.

(3) Create positive attitude towards I^2 by highlighting the quality of its product, the skills of its researchers, and its "unique" association with the university. Again, the I^2 brochure should highlight the type and quality of its products, the methodological

skills of its researchers, and includes the logos of the university to demonstrate that it is part of these organizations.

Table 5: Marketing Tactics for I^2		
HSBT Variable and Definition	Postulate / Principle	Implication For I^2
Stimulus intensity dynamism: Subject's internal response to the stimulus that initiates behavior.	Successful retrieval of brand name depends on achieving a match between the information encoded at the time of learning and the information that is available at the time of retrieval.	Associate the category cue, "need to make better business decisions" with I^2 brand name and logo.
Generalized drive: Enables the subject to consider the purchase of a brand.	High drive favors consideration of previously used brand.	Create an I^2 sales brochure using blue color. Then email the brochure to potential clients.
Habit strength: Overall evaluation of a brand (brand attitude).	To create brand attitude, focus on the set of benefits thought to be important, deliverable, and unique for the brand.	Highlight the technical quality of research conducted by I^2. Also, emphasize its associations with IIRA and WIU.
Incentive motivation: Anticipated reinforcement or punishment for engaging in an act or behavior.	For high risk or high cost purchases, highlight the link between the customer's emotion and the brand.	Advertisements should state that businesses operating in turbulent environments need I^2's market intelligence to succeed in the marketplace.
Reaction potential: Subject's intention to engage in an act.	Purchase inhibition could nullify the relationship between intention and behavior.	Do not mail the I^2 brochure to clients: conditioned fatigue to direct mail may influence the CEO to ignore the brochure.

IMPLEMENTATION

During the week of April 12, 2010, the brochure shown in Appendix 5 was emailed to all of the 42 firms categorized by the choice model as "switchers" (Appendix 4). Furthermore, in order to demonstrate the superiority of the segmentation methodology employed in the paper, a random sample of 42 "supplier loyal" firms were also emailed a brochure (Appendix 6). An email inviting the firms to explore the I^2 web site resulted in the responses given in Table 6.

Table 6: Website Browsing Behavior of Switchers and Loyals: Measured the Day after the I^2 Brochure was E-Mailed out to the Segments			
Variable	Definition	Browsing Behavior	
		Switchers	Loyals
Visits	Number of unique visitors to the website	23	5
Page views number	The number of pages that were requested in all visits	21.5	8
Time on site	Average number of minutes people stayed on the website	3 minutes	.5

Note that the I^2 website is predominantly a news website: it provides content such as working papers to inform managers about business-research applications. Hence, the performance indicators given in Table 6 are relevant measures for the "information" objective. They show how effective our segmentation and targeting approach is. In addition, we received email inquiries from two businesses, classified as switchers, wanting to explore the benefits of working on applied research projects with I^2.

CONCLUSION

This paper demonstrates how the Internet can be used to assemble data relevant for industrial or b2b marketing. A major benefit of the segmentation methodology employed in the paper is that it requires no primary data. It took approximately 50 hours to trawl the web sites of interest and construct the data matrix. It is hoped that this low-cost methodology to customer targeting would help small and medium businesses to maximize the effectiveness of their marketing programs.

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Appendix 1: Study Area	
State	County
Illinois	Adams
	Fulton
	Henry
	Knox
	Lee
	McDonough
	Peoria
	Pike
	Rock Island
	Warren
	Whiteside
Iowa	Clinton
	Des Moines
	Lee
	Muscatine
	Scott
Missouri	Lewis
	Marion
	Pike

Appendix 2: INdustries And Establishments In The Study Area		
Naics Code	Description	2008 Establishments
11	Agriculture, forestry, fishing and hunting	211
21	Mining	31
22	Utilities	51
23	Construction	1,946
31-33	Manufacturing	918
42	Wholesale trade	1,284
44-45	Retail trade	2,401
48-49	Transportation and warehousing	1,303
51	Information	284
52	Finance and insurance	1,097
53	Real estate and rental and leasing	593
54	Professional and technical services	1,438
55	Management of companies and enterprises	60
56	Administrative and waste services	865
61	Educational services	134
62	Health care and social assistance	1,443
71	Arts, entertainment, and recreation	276
72	Accommodation and food services	1,619
81	Other services, except public administration	1,801
90	Government	3,911
Source: EMSI Data - 1st Quarter 2010		

Appendix 3: Research Firms in the Study Area and Sources of Intelligence about Them	
Research Firm	Source Of Information
F.A.C. Marketing	http://growburlington.com
Poole Advertising	http://www.hannibalchamber.org
Nehlsen Communications	http://www.iowaqcchamber.com/
Adesign, Inc	http://www.iowaqcchamber.com/
Vernon Research Group	http://www.iowaqcchamber.com/
Mission Creative	http://www.iowaqcchamber.com/
One Stop Marketing	http://www.morrisonchamber.com
Central States Media	http://www.peoriachamber.org
Clark Marketing	http://www.peoriachamber.org
Converse Marketing	http://www.peoriachamber.org
DLA Creative	http://www.peoriachamber.org
Kennard Communications	http://www.peoriachamber.org
LMA Consulting	http://www.peoriachamber.org
Pudik	http://www.peoriachamber.org
RSM McGladrey	http://www.peoriachamber.org
Simantel	http://www.peoriachamber.org
Deverman Advertising, Inc.	http://www.peoriachamber.org
McDaniels Marketing Communications	http://www.peoriachamber.org
Business Builders	http://www.peoriachamber.org
AdForce	http://www.quincychamber.org/
Lusage Marketing	http://www.quincychamber.org/
Media Development of Quincy, Inc	http://www.quincychamber.org/
Reed Promotional Media	http://www.quincychamber.org/
Rokusek Design, Inc	http://www.quincychamber.org/
Group O	www.quadcitychamber.com
Hanson Watson Associates	www.quadcitychamber.com

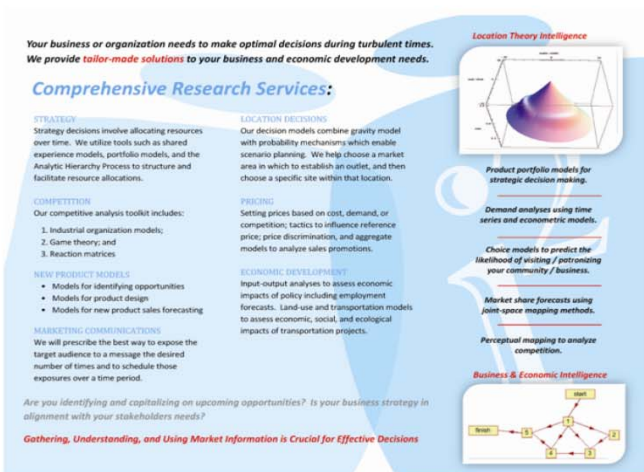
Appendix 3: Research Firms in the Study Area and Sources of Intelligence about Them	
Research Firm	Source Of Information
Media Link, Inc	www.quadcitychamber.com
Silver Oaks	www.quadcitychamber.com
Valpak Direct Marketing	www.quadcitychamber.com
Results Integrated Marketing	www.quadcitychamber.com
The Ad Group	www.quadcitychamber.com

Appendix 4: Firms That Could "Switch" Research Suppliers			
FIRM	PROB. SL_1	PROB. SL_0	Z SCORE (H_0: SL_1=SL_0)
Access	0.92887	0.07113	1.21321075
Sourcing & Supply	0.58644	0.41356	0.244526167
Rco	0.71206	0.28794	0.599886846
B Construction	0.87243	0.12757	1.053550212
B Hospital	0.62778	0.37222	0.361471004
Eye Associates	0.92887	0.07113	1.21321075
B Mortgage	0.92887	0.07113	1.21321075
Pillar	0.57933	0.42067	0.224413013
Kitchens	0.92887	0.07113	1.21321075
Chemical, Inc	0.58237	0.41763	0.23301273
Stone	0.62778	0.37222	0.361471004
Edge	0.58644	0.41356	0.244526167
C College	0.62778	0.37222	0.361471004
P Schools	0.87243	0.12757	1.053550212
R Hospital	0.87243	0.12757	1.053550212
Administration	0.67013	0.32987	0.481272984
Earth	0.92887	0.07113	1.21321075

Appendix 4: Firms That Could “Switch” Research Suppliers			
FIRM	PROB. SL_1	PROB. SL_0	Z SCORE (H_0: SL_1=SL_0)
H Bank	0.50544	0.49456	0.015388967
H Racing	0.92887	0.07113	1.21321075
IT	0.92887	0.07113	1.21321075
C College	0.58644	0.41356	0.244526167
Contracting Company, Inc	0.68242	0.31758	0.516039604
TV Station	0.33895	0.66105	-0.455586987
Savings Bank	0.62778	0.37222	0.361471004
Restaurants, Inc	0.58237	0.41763	0.23301273
Medical Center	0.57933	0.42067	0.224413013
Transit	0.47097	0.52903	-0.082121641
Bank	0.68242	0.31758	0.516039604
College	0.57933	0.42067	0.224413013
Baseball	0.57933	0.42067	0.224413013
Civic Center	0.43057	0.56943	-0.196407355
County Hospital	0.87243	0.12757	1.053550212
City Mallards	0.68242	0.31758	0.516039604
Elementary Schools	0.62778	0.37222	0.361471004
Development	0.68242	0.31758	0.516039604
Lene's	0.92887	0.07113	1.21321075
S Group	0.58237	0.41763	0.23301273
S Communications	0.62778	0.37222	0.361471004
Partnership	0.57933	0.42067	0.224413013
Cable	0.87243	0.12757	1.053550212
Union	0.62778	0.37222	0.361471004
Radio station	0.58644	0.41356	0.244526167
Note: For confidentiality purposes, only part of the firm-name is listed.			

Appendix 4: Firms That Could "Switch" Research Suppliers			
FIRM	PROB. SL_1	PROB. SL_0	Z SCORE (H_0: SL_1=SL_0)
SL_i = Supplier loyalty categories as defined in Table 2; Type 1 error rate for the statistical test was set at α =0.10; Critical z = 1.28			

APPENDIX 5: THE I^2 BROCHURE



Appendix 6: Supplier-Loyal Firms			
FIRM	PROB. SL_1	PROB. SL_0	Z SCORE (H_0: SL_1=SL_0)
Insurance Agency, Inc.	1	0	1.414427157
National	0.67013	0.32987	0.481272984
Diagnostics	0.97848	0.02152	1.353550212
Technology Services	0.97114	0.02886	1.332786421
Education	0.99672	0.00328	1.405148515
Zales	0.99951	0.00049	1.413041018
Dental Care	0.98685	0.01315	1.377227723
Diocese of Peoria	0.97848	0.02152	1.353550212
Construction	0.99964	0.00036	1.413408769
Chamber of Commerce	1	0	1.414427157
Engineering Corporation	0.98685	0.01315	1.377227723
Ice Cream	0.97108	0.02892	1.33261669
Jewelry	0.99672	0.00328	1.405148515
Wear	1	0	1.414427157
Downtown	0.99902	0.00098	1.41165488
Orchards	0.99902	0.00098	1.41165488
Consulting LLC	0.99951	0.00049	1.413041018
Builders	0.95801	0.04199	1.295643564
Greg	0.99828	0.00172	1.409561528
Clinic	0.99099	0.00901	1.38893918
Rehabilitation Center	0.99672	0.00328	1.405148515
Illinois Institute	0.97848	0.02152	1.353550212
Plastic Surgery	0.97848	0.02152	1.353550212
Funeral Home	0.99672	0.00328	1.405148515
M Originals	0.99993	7E-05	1.414229137
Painting & Decorating	0.98685	0.01315	1.377227723

Appendix 6: Supplier-Loyal Firms

FIRM	PROB. SL_1	PROB. SL_0	Z SCORE (H_0: SL_1=SL_0)
Dental Associates	1	0	1.414427157
Museum	0.99672	0.00328	1.405148515
Credit Union	0.95801	0.04199	1.295643564
Surgery	0.99672	0.00328	1.405148515
P Foundation	0.99933	0.00067	1.412531825
P Orchestra	0.98176	0.01824	1.362828854
QC Connection	0.98965	0.01035	1.385148515
Bank & Trust	1	0	1.414427157
Gallery	0.98685	0.01315	1.377227723
Printer	0.999	0.001	1.411598303
Florist	0.99976	0.00024	1.413748232
Taste of H	0.99672	0.00328	1.405148515
The Doctors	0.9844	0.0156	1.37029703
Car dealership	0.99724	0.00276	1.406619519
Twain	0.99672	0.00328	1.405148515
Corners	0.98965	0.01035	1.385148515

Note: For confidentiality purposes, only part of the firm-name is listed.
SL_i = Supplier loyalty categories as defined in Table 2;
Type 1 error rate for the statistical test was set at α =0.10; Critical z = 1.28.