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Ismet Anitsal
Editor
Tennessee Tech University

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ASYMMETRIC MARKET REACTION TO NEW PRODUCT ANNOUNCEMENTS: AN EXPLORATORY STUDY

Vivek S. Natarajan, Lamar University
Gurumurthy Kalyanaram, GK Associates
James Munch, Wright State University

ABSTRACT

New product development is an important aspect of a firm's strategy. It has major implications for the performance of the firm. This exploratory study looks at the reaction of the stock market to announcement of new product decisions by the firms- development of new products, launch of new products, delay in the launch of new products and exiting the market by employing a prospect theory approach. We posit that the market will react positively to product announcements and entries and react sharply and negatively to product withdrawals and exits. Empirical results and implications are discussed.

INTRODUCTION

Innovation and new product development are important strategic activities for a firm. Given the dynamic changes in the marketplace, innovations have become critical. Academic research on new product development has been interdisciplinary, and this research is in that tradition drawing upon insights from marketing, economics, finance, and strategy. The focus of this study is announcements of new product decisions. This study evaluates reaction of the market to announcement of various types of new product decisions- development of new products, launch of new products, delay in the launch of new products and exiting the market.

This exploratory study sought to answer primarily the following research question: How does the market react to announcement of new product decisions? Secondarily, we looked at asymmetry in the market reaction to positive and negative announcements.

Towards this, we build our research model based on Prospect Theory (Kahneman & Tversky, 1979). We postulated that consumers will react sharply and negatively to product withdrawals and exits, and positively to product announcements and entries. We postulated an asymmetry in consumer reaction: negative reaction will be sharper than the positive reaction. Since market is after all an aggregation of the consumers, we postulate the similar directional results for the market.

To test this theory, we conducted an exploratory empirical study. We built a model and examined the market value of the firm after it made announcements regarding new products. The market valuation was measured using event study methodology (Fama, Fisher, Jensen, & Roll, 1969; Brown & Warner, 1980, 1985).

LITERATURE REVIEW

The financial consequences of new product announcements have been a fertile area of research in the literature. New Product announcements have a positive impact on firm's value (Chaney & Devinney, 1991; Bayus, Erickson, & Jacobson, 2003; Pauwels, Silva-Risso, Srinivasan, & Hanssens, 2004). Further, product withdrawals have a negative impact on share holder's wealth (Davidson III & Worrell, 1992). Product delays lead to a decrease in market value (Hendricks & Singhal, 1997; Ahmed, Gardella, & Nanda, 2002; Sharma & Lacey, 2004).

The theoretical basis for our research model is the Nobel Prize winning prospect theory (Kahneman & Tversky, 1979). This theory is an examination of expected utility theory as a descriptive model of decision making under risk, and development of an alternative model. This theory posits the following. People underestimate outcomes that are merely probable in comparison with outcomes that are obtained with certainty. This tendency, called the certainty effect, contributes to risk aversion in choices involving sure gains and to risk seeking in choices involving sure losses. They generally discard components that are shared by all prospects under consideration. This tendency, called the isolation effect, leads to inconsistent preferences when the same choice is presented in different forms. Value is assigned to gains and losses rather than to final assets. Probabilities are replaced by decision weights. The following terms follow from the theory.

1. Reference level dependence: An individual views consequences (monetary or other) in terms of changes from the *reference level*, which is usually that individual's *status quo*.
2. Gain and loss functions: The gain function is concave (risk-averse) and loss function is convex (risk-seeking.)
3. Loss aversion: The resulting value function is steeper for losses than for gains; losing $100 produces more pain than gaining $100 produces pleasure. This loss aversion has been investigated in a number of empirical studies across business disciplines.

There is asymmetric reaction at the individual/ consumer level to price increases and price decreases (Kalyanaram & Little, 1994). Consumers react more sharply to price increases (losses) than price decreases (gains). This is consistent with prospect theory. Hence, we frequently observe nibble price increases and deep discount prices. Asymmetry in market valuation was observed in the context of pharmaceutical industry (Sharma & Lacey, 2004).

Prospect theory has also been applied in the context of asset prices (Barberis, Huang, & Santos, 2001). The study investigates asset prices in an economy where investors derive direct utility not only from consumption but also from fluctuations in the value of their financial wealth. The theoretical model is based on prospect theory principles, and on experimental evidence on how prior outcomes affect risky choice. The findings are:

1. Investors are loss averse over these fluctuations, and the degree of loss aversion depends on their prior investment performance.
2. The framework also helps in explaining the high mean, excess volatility, and predictability of stock returns, as well as their low correlation with consumption growth.

RESEARCH QUESTION

Can the individual level reactions/effects be aggregated? We think that it this is an empirical (and experimental) question. Thus, the key research question is

How does the market react to new product announcements?

We investigate the market reaction for four classes of announcements:

Test market/initial entry

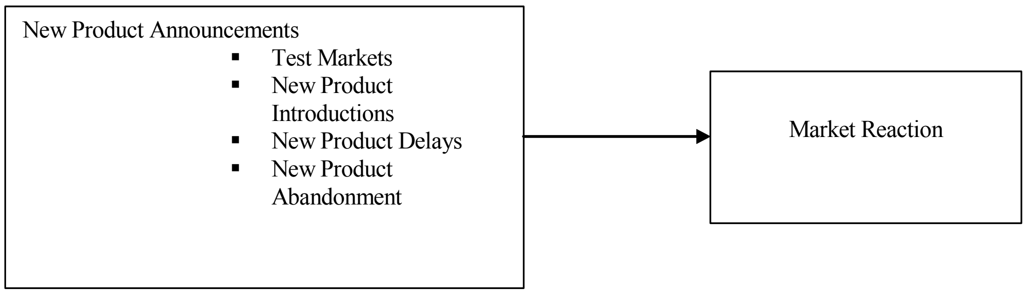
1. National Launch
2. Delays
3. Exits

Based on prior research (Chaney & Devinney, 1991; Davidson III & Worrell, 1992; Hendricks & Singhal, 1997; Ahmed, Gardella, & Nanda, 2002) and theoretical framework (Kahneman & Tversky, 1979; Sharma & Lacey, 2004), the study posits the following results:

1. Market reacts negatively to delays and/or abandonment of new products
2. Market reacts positively to new product launch (test market and national launch) announcements
3. The negative reaction by the market is sharper than the positive reaction

These are visually summarized in Figure I.

Figure 1: Research Model



DATA COLLECTION

The data for the calibration and estimation of the model came from multiple archival sources. The announcements relating to new product development were obtained from the Lexis-Nexis database. The data relating to the stock prices came from the CRSP (Center for Research in Security Prices) database maintained by the University of Chicago. The study employed WRDS (Wharton Research Data Services) as the common interface to access CRSP database.

EVENT STUDY METHODOLOGY

Event Study Methodology (Fama, Fisher, Jensen, & Roll, 1969) was employed to calculate the market value of the firm following the announcement of new products decisions. Figure II provides a flowchart that summarizes the sequence of steps involved in the event study. Each of the steps is briefly explained below.

Identification of Event of Interest

The event of interest in this study is defined as announcements related to new products. The announcements were categorized into one of two categories – delays and/or abandonment of new products and product launches. The first category included delays in launching new products, cutbacks in investments, and product abandonment announcements. In order to avoid the confounding of product abandonment due to product life cycle issues, only those abandonment decisions that would take place within a short time (i.e. less than a year) of being launched were included in the study. The second category included announcements of new products during tradeshows and the test marketing of new products, and press releases and stories relating to the next generation of technology products and new product related investments, which also included launch of new products and/or extension of a newly launched product into new markets. These announcements were collected using the Lexis/Nexis database. The announcements are summarized in Table I.

Definition of Event Window:

This is an important step as a precise definition of the event window is essential in order to make the event study methodology meaningful (Brown & Warner, 1985; Fornell, Mithas, Morgeson, & Krishnan, 2006). Shorter windows yield more precise estimation as they minimize the possibility of confounding events. The choice of event windows depends upon the phenomenon under investigation. The recommended window sizes are small as information regarding new products would be absorbed very fast by the market (Chaney & Devinney, 1991; McWilliams & Siegel, 1997). This study employed a three-day event window (-1 to + 1) consistent with prior studies in the literature (Lane & Jacobson, 1995; Hendricks & Singhal, 1997; Gilley, Worrell, Davidson III, & El-Jelly, 2000). The study also employed five-day and seven-day windows ((Chaney & Devinney, 1991; Fornell, Mithas, Sabherwal & Sabherwal, 2005; Morgeson, & Krishnan, 2006) to test the sensitivity of the results. The longer event windows helped in assessing the robustness of results as they would help in accounting for leakage of information to the market.

TABLE 1: TYPES OF ANNOUNCEMENTS	
	Category I Announcements of:
1.	Delays
2.	Cutting back on investments
3.	Product abandonment
4.	Withdrawal from the market
	Category II Announcements of:
1.	New product investments
2.	Test Market
3.	Product launches

Selection of Firms

All the announcements regarding new products would be examined. In order to prevent confounding, one needs to employ controls (MacKinlay, 1997). Thus the firm related announcements were examined in order to remove all announcements that were not related to new products. These announcements were obtained from the Company website. The window chosen was five days before and after the event (Fornell, Mithas, Morgeson, & Krishnan, 2006). Any new product related announcement that had a confounding event in this ten day window was eliminated from the sample.

Prediction of Normal Returns

In order to predict the normal returns, the standard normal model was employed. The calculation of the normal model is explained in the following steps:

The market rate of return was estimated by employing the market model (Brown and Warner 1985). The market model is a linear relationship between the return on a stock and the return on the market portfolio over a given period of time. The market model is of the form:

$$Rit == \alpha\ i + \beta i\ Rmt + \epsilon it \text{ where}$$

Rit == Rate of Return on the common stock of the ith firm on day t
$\alpha\ i$ == Intercept
βi == Slope Parameters
ϵit == Disturbance Term

The estimation period was a period of 255 days with a noise period of 10 days prior to the event.

The market rate of return Rit for firm i for day t was calculated as:

$$Rit == \alpha\ t + \beta i\ Rmt + \epsilon it$$

Computing Abnormal Returns

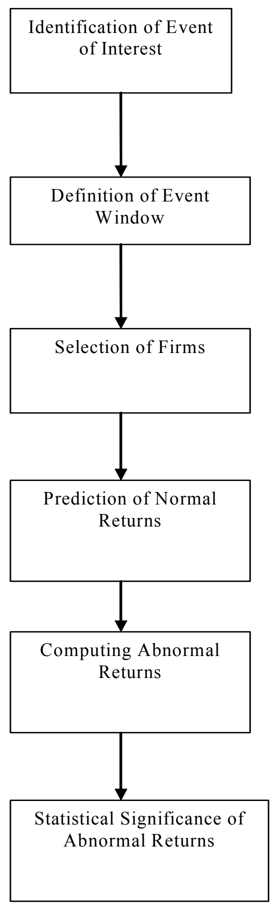
The abnormal return for the common stock of the firm I for day t is calculated as

$$ARit == Rit - (\alpha\ t + \beta i\ Rmt).$$

The Cumulative Abnormal Returns over a sample of N firms are computed as follows:

$$CART1, T2 = t = T1, T2\ \Sigma\ ARit$$

FIGURE II: FLOWCHART OF STEPS INVOLVED IN AN EVENT STUDY



Source:(Brown & Warner, 1980, 1985; Fama, Fisher, Jensen, & Roll, 1969; MacKinlay, 1997; McWilliams & Siegel, 1997)

Statistical Significance of Abnormal Returns

T-statistics were used to test the significance of the cumulative abnormal returns. Following (Sabherwal and Sabherwal 2005), the variance of the cumulative abnormal returns was calculated as:

Mean of CAR using the formula: Mean CAR = 1/N (t = T1, T2 Σ ARit)

Variance of CAR using the formula

Variance (CART1, T2) == 1/N2 (t = T1, T2 Σ σet2)

where N is the sample size and σet is the variance of the Mean CAR.

A one tailed t-test was used to test for the significance of the cumulative abnormal returns,

t= Mean of CART1, T2 / Square Root (Variance (CART1, T2))

RESULTS

The results are summarized in Table II. In the case of the new product delays and exit condition, the returns for all three event windows were negative and statistically significant. Thus, there is strong support for Hypothesis 1. Next, this study analyzed the market reactions for the new product launch and test market condition. A summary of market reactions to both the new product launch announcements and test market announcements for one-day (Day Zero), three-day and five-day windows is provided. The cumulative abnormal returns in a one-day window were positive and statistically significant. However, the returns in a three-day window and a five-day window were not positive. This leads to a possibility that all new product launch announcements are not viewed positively. Thus, there is moderate support for Hypotheses 2. Further, when the study looked at the results of the market reaction to product launch announcements and test market announcements versus market reaction to new product delays and exit condition, it finds that the impact of new product delays and exits is more pronounced with a greater absolute magnitude of CAR as well as having a longer impact (it is pronounced across longer time windows). This lends support to Hypothesis 3.

DISCUSSION

Test market and national launches lead to positive reaction in market return. Announcement of delays and exits lead to negative reaction in market return. The negative reaction is much sharper than the positive reaction. The results are similar to other previous studies like Sharma and Lacy (2004). Managers need to be very careful in product planning and announcements. Delays not only impact the firm but also the eco-system-partners and trust with customers and other stakeholders. Test marketing and launches in a limited sense lead to positive reaction in stock valuation. Any initial sequential new-product foray into a market is viewed positively. This suggests that such calculated risk-taking is rewarded. Managers need to be careful in announcement of delays and abandonment. Delays and abandonment have a more pronounced and sustained impact. This may also be a reason why there are fewer numbers of product delay and product abandonment announcements. This research is an interdisciplinary work as it is at the interface of marketing and finance. It brings in concepts like event-study methodology to study one of the core marketing concepts like new product development.

LIMITATIONS

1. *Small Sample Size*: A major limitation is the rather small size of the sample, especially in the delay and product abandonment sample. This is owing to the fact that a lot of product delays or abandonment decisions are not explicitly announced. Apart from this, a lot of new product decisions are announced simultaneously in one public announcement or in announcements within a short time interval. Hence, these announcements cannot be used for analysis owing to the methodological considerations of the event-study methodology.
2. *Presence of Outliers:* In spite of all the methodological considerations that were followed in the event-study methodology, there were some outlying observations in the sample. Hence, the results have to be interpreted with caution.
3. *Business-to-Consumer product firms*: The sample included only business-to-consumer product firms. The study needs to include business-to-business type firms in future samples.
4. *Consideration of Product- and Firm-level factors:* Future research would need to incorporate the effect of factors like size of the firm, diversification levels, etc to investigate possible moderating effects.

CONCLUSIONS

New product development and test market announcements are perceived as good by the market. The firms are rewarded favorably. However, news like product abandonment and product delays are viewed negatively. Hence, firms must exercise caution about decisions on creating new products as the market would penalize them for new product investments that result in delays and exits. Hence, this study indicates that cautious optimism rather than reckless enthusiasm reflects the overall sentiment of the market for new product development and innovation as a whole.

TABLE II SUMMARY OF RESULTS OF EVENT STUDY			
Test Markets	**CAR**	**T-statistic**	**n(N)**
Time window			
0	0.001	0.32	37/80
(-1,+1)	0.0068463(37)	0.64	37/80
(-2,+2)	0.0154869(37)	1.31*	37/80
New Product Launch			
Time window			
0	0.0054	1.28*	59/73
(-1,+1)	-7.82	-2.31	59/74
(-2,+2)	-12.3	-2.16	59/75
New Product Delays and Exits			
Time window			
0	-7.9	0.0826**+	19/19
(-1,+1)	-13.903	0.0826**	19/19
(-2,+2)	-27.8	0.0826**	19/19

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CHILD BOOSTER SEAT SAFETY: AN ATTITUDINAL MODEL OF THE USE OF BOOSTER SEATS

M. Meral Anitsal, Tennessee Tech University
Ismet Anitsal, Tennessee Tech University
Kevin Liska, Tennessee Tech University

ABSTRACT

When used appropriately, booster seats can greatly increase protection of children's lives. Toward that end, children under 4'9", usually from age 4 to 8, when riding in a vehicle are required by law to sit in a booster seat restrained by a seat belt. However, research indicates that child safety needs to be better enforced. A program on child booster seat safety has been initiated in Tennessee. Specifically, Ollie's Seatbelt and Booster Seat Safety Program impacted over 57,184 children from 2,928 K-4 classrooms in 154 schools representing 95 counties of Tennessee. In its first year, from August 1, 2007 through September 30, 2008, Ollie Otter reached over 13 percent of Tennessee's 1,156 elementary schools. A research stream also parallels this seatbelt and booster seat safety program. The objective of this paper is to investigate parents' attitudes toward buying booster seats and factors influencing these attitudes. A structural model to investigate the theory behind parents' use of booster seats was developed and tested, and eight hypotheses out of nine have been supported. The attitude toward children while driving was found to influence parents' intentions of using booster seats . Risk attraction and risk aversion characteristics of parents, on the other hand, had major impact on the attitude development towards children while driving.

INTRODUCTION

According to the Center for Disease Control, "In the United States, 1,791 children younger than 15 years were killed and 282,000 were injured as passengers in motor vehicle crashes in 1997 (2007). As stated by the Washington State Booster Seat Coalition (2003), motor-vehicle collisions were the single largest killer of children age 4-8 years because riding unrestrained generated the greatest risk for death and injury among child passengers. The National Highway Traffic Safety Administration's (NHTSA) review of field data revealed that of children ages 0 to 14 killed in motor vehicle crashes during 2005, nearly half were unrestrained" (2006).

Unfortunately, many children who should be in a booster seat restrained by a seat belt are restrained. According to NHTSA, up to 90% of children in the U.S. who should be using booster seats were not using them regularly or at all (2006 and 2007). National SAFE KIDS Coalition (2003) found that only 19% of children who should be restrained in booster seats use them. Glassbrenner and Ye (2007) found that about 41 percent of 4- to 7-year old children were restrained in booster seats in 2006 in the U.S. Another study found that 72% of nearly 3,500 observed child-restraint systems were misused, increasing a child's risk of injury in a crash (NHTSA 2006).

What is a booster seat? Who should use it? What would happen with lack of or improper use of it? What would happen to child passengers only using seatbelts designed for adults with no booster seat in a motor-vehicle crash? All parents should know the answers to these questions by the time they have their first child. The National Safety Belt Coalition (2007) dictated booster seats should be used as a transition to safety belts by older children who had clearly outgrown their booster seat but were not ready for the vehicle-belt system because a booster seat raised a child to ensure the safety belt fit correctly. The shoulder belt should cross the chest and rest snugly on the shoulder, and the lap belt should rest low across the pelvis or hip area. An ill-fitting seat belt during a crash might cause devastating injuries (CNW Group 2008). Seatbelts designed for adults can create the risk of abdominal and spinal-chord injuries to children, and loosely fitting belts can cause facial and/or brain injuries when the head strikes the knees or other surfaces (Wall Street Journal 2003). Every state has its own laws on using seat belts and booster seats (Advocates for Highway and Auto Safety 2007). Tennessee was the first state to enact a law mandating that children be restrained in a safety seat and is also one of only 18 states requiring children up to age 8 to be restrained in a booster seat (Tennessee Department of Safety 2008). The first booster seat law was introduced in Washington State after a fatal accident involving a 4-year-old child using an adult seat belt (Higgins 2005).

Booster seats can greatly improve children's protection when used appropriately; in fact, "A properly used safety seat or booster reduces the chances of a child being seriously injured or killed in a car crash by more than half" (Baltimore Sun 2008). Usually parents protect their children in baby seats until age 4; however, many parents seem unaware of their children's vulnerability when using adult seatbelts before age 9. Booster seats provide 60 percent more protection than seat belts alone for children four to nine years old (CNW Group 2008).

Children's injuries and deaths caused by not using or by misusing seat belts and booster seats must be reduced. This lack of use or misuse may result from parents, family members, and other adults not encouraging child occupants to practice good safety standards and behavior. To remedy this situation, the Ollie Otter Seatbelt and Booster Seat Education Campaign was designed as a comprehensive program to encourage children to use booster seats and seat belts.

From August 1, 2007 through September 30, 2008, Ollie's Seatbelt and Booster Seat Safety Program reached over 57,184 children from 2,928 classrooms in 154 schools representing 95 counties of Tennessee. In its first year, this program impacted over 13 percent of Tennessee's 1,156 elementary schools. In contrast, the first-year project goals were to reach 50 schools and 100 classrooms. Parallel to this program is a research stream that is asking four main questions: (1) What motivates parents to buy and use booster seats for their children? (2) How do parents' various attitudes toward driving and children relate to their intentions toward buying and using booster seats? (3) What impact do situational factors such as state laws, peer pressure and cost of booster seats have on the purchase and use of booster seats? (4) What are the demographic characteristics of parents who prefer to use booster seats versus those who do not?

The current paper includes only the second research question: What are parental attitudes toward buying booster seats, and what other factors influence these attitudes?

CONCEPTUAL FRAMEWORK

Surprisingly, no formal research has been reported about attitudes toward booster seat use. On the other hand, literature on attitude formation and change is rich. To benefit from the literature, researchers have observed situations in which parents preferred to use or not use booster seats. Researchers also conducted informal discussions with parents about booster seat use. This exploratory research on drivers' activities in a typical driving situation revealed that multi-tasking was common. Some drivers like to take risks to enhance the fun of driving, while others are more concerned about their safety. These attitudes are reflected in the vehicle-safety features they choose, as well as in their daily activities. Also, the general attitude of parents toward their children may influence their attitudes toward booster seat purchase and use. Finally, observations revealed a difference in parents' attitudes toward their children in general and their attitudes while driving.

Engaging in multiple activities while driving is common. For example, many drivers are frequently seen talking on their cell phone and eating and drinking whether these activities correlate with an increased number of accidents has created much public debate. During informal interviews, researchers realized some parents believe talking on a cell phone does not influence driving abilities and, therefore, should be tolerated. Others believe that those engaging in other activities while driving should be ticketed as they endanger other drivers and passengers. Those who multi-task while driving are likely to be more attracted to risk taking. In contrast, those who are in favor of banning these activities seem to be more risk averse. Because no research is available about relationships among multi-tasking, risk aversion, and risk attraction, researchers hypothesize the following:

H_{1a}: *Attitude toward multi-tasking while driving and attitude toward risk aversion are likely to positively correlate.*

H_{1b}: *Attitude toward multi-tasking while driving and attitude toward risk attraction are likely to negatively correlate.*

Risk-aversion construct measures personality characteristics towards risk affinity, whereas, risk-attraction construct measures context-dependent risk taking (Conchar, Zinkhan, Peters and Olavarrieta, 2004). Although scales have established reliabilities and validities, these two constructs have not been investigated simultaneously. Therefore, researchers assume that they are different, yet related constructs. Specifically, although some parents like to take some risks, they are likely to behave responsibly towards their children and be more risk averse in situations regarding children. Hence, researchers offer the following hypothesis:

H_2: Attitude toward risk aversion and attitude toward risk attraction are likely to positively correlate.

Donthu and Gilliland (1996) studied risk aversion scale as a personality trait, measuring the degree to which a person expresses a desire to avoid taking risks. This trait can also influence drivers' attitudes toward risk aversion. Risk-averse respondents are likely to show a tendency toward extreme caution (Griffin, Babin and Attaway 1996). Those who are keen on avoiding risky movements in traffic are likely to buckle up. Their motto of"Better safe than sorry" may also influence their attitude toward children while driving and toward their children's behavior. For example, they are less likely to let small children sit in the front seat. They may also enforce seat-belt use for even short errands. Therefore, researchers hypothesize the following:

H_3: Attitude toward risk aversion while driving is likely to have a direct, positive effect on attitude toward children.

H_4: Attitude toward risk aversion while driving is likely to have a direct, positive effect on attitude toward children while driving.

Griffin, Babin and Attaway (1996) and Zuckerman (1971) suggested that risk seekers believed they could easily handle unexpected challenges and hazardous situations. They seek the thrill of risky situations and are likely to carry this trait into their driving. They may prefer fast driving to over-take slow drivers, make more moves in traffic, and fantasize about having race cars. They are also likely to care about their children's well being in general. Yet, as they actively seek the fun of taking risks, they are likely to be aware of the hazards of risky situations. Having children will not likely discourage them from taking risks, but will encourage taking extra precautions while driving to ensure the safety of their children. Therefore, they are likely not to forget to buckle up their children, or to let them out of their booster seats during a trip. While no research exists about how risk seekers are likely to behave in their children's presence, researchers assume that parents will be cautious to protect their children and be more aware of the hazards of risky situations.

Research, however, is necessary to provide evidence supporting or falsifying this assumption, thus the following hypotheses:

> *H_5: Attitude toward risk attraction while driving is likely to have a direct, positive effect on attitude toward children.*

> *H_6: Attitude toward risk attraction while driving is likely to have a direct, positive effect on attitude toward children while driving.*

The driver's attitude toward children is another influential construct. Those who strongly appreciate their children and feel good about them are less likely to let their children do potentially dangerous activities while driving. Indeed, they may neither let them unbuckle their seatbelts while the car is moving nor forget to secure them in booster seats for short errands. Therefore, researchers make the following hypothesis:

> *H_7: Attitude toward children is likely to have a direct, positive effect on attitude toward children while driving.*

Although installing and uninstalling booster seats and changing their location from one vehicle to another are cumbersome and sometimes inconvenient, parents are likely to appreciate booster seats and have a positive attitude toward them because they want to ensure their children's safety during driving. They may not remove them from their seats, no matter how much their children whine about being restrained, hence the following hypothesis:

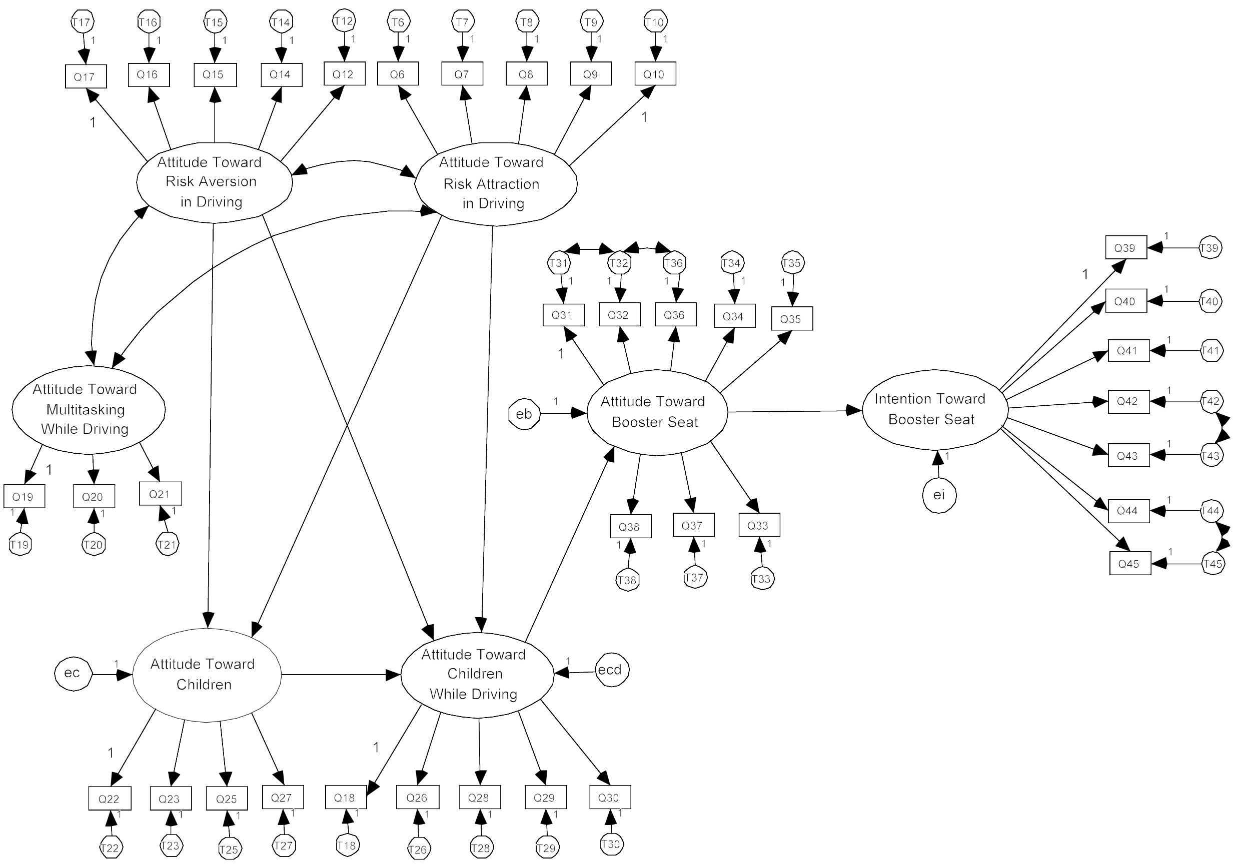
> *H_8: Attitude toward children while driving is likely to have a direct, positive effect on attitude toward booster seats.*

A positive attitude about booster seats is likely to make parents not only spend time finding a good booster seat, but also talk to other parents about the benefits of using one. Thus, researchers make the following hypothesis:

> *H_9: Attitude toward booster seats is likely have a direct, positive effect on intention towards using booster seats.*

The theoretical model is shown in Figure 1.

Figure 1: an Attitudinal Model of the Use of Booster Seat



METHOD

This research was conducted simultaneously in parallel to the Ollie Otter Program. In this educational campaign, volunteers visit K-4 schools in Tennessee and explain the importance of using seat belts and booster seats to students. The campaign mascot, Ollie the Otter, makes appearances and enforces the campaign message with songs and activities. Students are also encouraged to share their thoughts and feelings with their parents and to send letters to Ollie.

The survey method was used to collect data from parents of students who have been exposed to the booster seat safety program. To expedite the data collection process and ensure an acceptable response rate, teachers distributed the survey to their students, who were take them home to their parents. To ensure anonymity and avoid overstating positive feelings, surveys were distributed in blank envelopes; and no address or identity-related information was collected. Once the surveys were completed by parents, sealed in the blank envelopes provided, and returned to teachers, the teachers mailed the class package to the researchers. No incentives were provided for the survey respondents. However, as a token of appreciation, teachers were provided two payment vouchers: one to be used for a classroom pizza party allowing for further discussion of Ollie's message: "Wear Seatbelts Everyday: under 4 feet 9 – booster time" and another for personal or classroom needs. Each package was opened and surveys were coded at the research center.

Thirty-one teachers responded with a total of 422 questionnaires. Eight questionnaires were discarded due to missing values, and 414 questionnaires were used for further analysis. Some missing responses were replaced with the item averages before using AMOS 7.0 software to test the theory presented in structural equation modeling. Data collection has continued in parallel to the Ollie Otter program. The 422 responses represent a small coverage of the program reach; however, they provide an opportunity for preliminary analysis.

The survey instrument contains both newly developed and existing scales. For all concepts, respondents rated their agreement or disagreement level using seven-point scales ranging from strongly disagree (1) to strongly agree (7). All seven measurement items describing the subjects' intention toward booster seat use were newly developed for this study. Five items of the subjects' attitude toward booster seat use were adopted from Dabholkar (1994). New items were added to this scale to measure attitude toward such issues as multi-tasking, attitude toward children, attitude toward children while driving constructs based on observations and individual in-depth discussions with parents about how they drive in presence/absence of children, what aggravates them most, what they did to stop distraction, and what they thought about multi-tasking. Items for measuring attitude toward risk aversion in driving was adapted from Donthu and Gilliland's (1996) risk aversion construct, which measures inherent and invariant personality characteristics (Conchar et al., 2004). Five items representing attitude toward risk attraction were adapted from Griffin, Babin and Attaway's (1996) risk attraction construct that can be described as context-dependent willingness to take risks (Conchar et al., 2004).

Demographic analysis showed that the majority of respondents were between 25 and 44 years old (with 48.2% being 25-34 years old and with 33.1% being 35-44 years old). In terms of ethnic origin, 87.4% was Caucasian. Furthermore, 34.9% had a high school diploma, and 24.9% had some college experience. The median income was $59,000 and 75% was married. Respondents had an average of 2.3 vehicles per household.

RESULTS

The first step of analysis was to investigate the constructs' reliability and validity. Coefficient alpha was used to test construct reliability. As shown in Table 1, the reliability and factor loadings of each construct were adequate. The evaluation of discriminant and convergent validities and hypothesis testing were performed using AMOS 7 software package.

Table 1 – Reliability and Construct Validity

Construct	Item		Loading	Alpha
Intention Toward Booster Seat	Q39	Look for information about booster seats.	0.82	0.90
	Q40	Spend your time to find a good booster seat.	0.94	
	Q41	Compare the benefits of different booster seat brands.	0.93	
	Q42	Buy a booster seat for each child in your household.	0.56	
	Q43	Secure your child into a booster seat every time you drive.	0.53	
	Q44	Discuss the importance of using booster seat with a friend.	0.66	
	Q45	Recommend that your friends use a booster seat for their children.	0.63	
Attitude Toward Booster Seat	Q31	Bad - Good	0.82	0.95
	Q32	Unpleasant - Pleasant	0.83	
	Q33	Harmful - Beneficial	0.92	
	Q34	Unfavorable - Favorable	0.94	
	Q35	Unappealing - Appealing	0.87	
	Q36	Inappropriate - Appropriate	0.98	
	Q37	Foolish - Wise	0.92	
	Q38	Unsafe - Safe	0.84	
Attitude Toward Children	Q22	Children are enjoyment in life.	0.91	0.79
	Q23	I care about the well being of my children.	0.71	
	Q25	I feel good about my children	0.68	
	Q27	I try to protect my children from potential dangers.	0.49	
Attitude Toward Children While Driving (R)	Q18	Wearing a seat belt for a short errand is not always necessary.	0.52	0.70
	Q26	Regardless of their age, my children can responsibly sit in any seat they choose in the car.	0.49	
	Q28	I can do anything to stop my children whining in the car even let them get out of the booster seat.	0.61	
	Q29	Sometimes I forget to tell my children to buckle up.	0.55	
	Q30	When I am driving slowly on a rural road, putting my child in his/her booster seat is unnecessary.	0.51	
Attitude Toward Multi-Tasking While Driving	Q19	Police should ticket those who drive while talking on cell phone.	0.69	0.80
	Q20	Eating while driving is dangerous.	0.80	
	Q21	Drinking beverages while driving is dangerous.	0.77	
Attitude Toward Risk Attraction in Driving (R)	Q6	Fast driving would make driving more pleasant.	0.35	0.71
	Q7	I would like to drive a race car.	0.54	
	Q8	I sometimes do things I know are dangerous just for fun.	0.86	
	Q9	Taking risks can be fun.	0.72	
	Q10	I never hesitate to overtake those who drive very slowly.	0.38	
Attitude Toward Risk Aversion in Driving	Q12	I give the right of way to an aggressive driver if he or she endangers my safety.	0.48	0.71
	Q14	I always buckle up.	0.67	
	Q15	I would rather be safe than sorry.	0.70	
	Q16	I always avoid risky moves in traffic.	0.53	
	Q17	I pay attention to safety features while buying a car.	0.46	

R = Item has been reverse coded

To test the discriminant validity paths among the constructs, all constructs were set to one; and the resulting one factor model-fit was compared to the theoretical model as well as to alternative models (Table 2). As indicated by fit statistics and the change of the Chi-Square values, the one factor model was inferior to the theoretical model. Another test for discriminant validity was to release the path between intentions and attitude toward booster seats and set the rest of the correlations to one. This model showed that the intention regarding using booster seats was a separate construct. However, the resulting model still had significantly worse fit indices than the theoretical model. Similarly, the attitudes toward booster seats were tested and found to be a distinctive construct. These results showed that the theoretical model had discriminant validity.

Table 2 – CFA Model Comparison for Discriminant Validity			
if seven-factor model is correct, then:			
Number of Factors	d.f.	Change in Chi-Sq.	p
One Factor	21	3918.73	0.000
Two Factors	15	2329.69	0.000
Three Factors	10	1111.58	0.000

The second stage of the analysis was confirmation of construct validity as a measure of convergent validity. One indication of this validity was the model fit. Table 3 shows the details of model fit and tests of the hypothesized relationships. Results indicated that the model fit was good. All items loaded significantly to their related constructs, indicating adequate construct validity.

Table 3: The Model Fit	
Chi-Sq	1326.12
d.f.	615
Chi-Sq Ratio	2.156
CFI	0.922
RMSEA	0.053
AGFI	0.830
GFI	0.851

Table 4 is a summary of hypotheses and resulting path weights. Nine out of ten hypotheses were supported, showing a sound theoretical structure. All paths are significant and substantial except for the correlation between the attitude toward multi-tasking while driving and the attitude toward risk attraction. People in favor of banning such multi-tasking activities as talking on cell phones and eating while driving share a common personality trait of risk aversion, providing support to the first hypothesis. The attitude toward the risk-attraction construct has no relationship with multi-tasking.

Table 4: Test of Hypotheses

Hypotheses	Path	Standardized Regression Weights	p
H1a: Supported	Attitude Toward Multi-Tasking ↔ Attitude Toward Risk Aversion	0.21	0.003
H1b: Not Supported	Attitude Toward Multi-Tasking ↔ Attitude Toward Risk Attraction	0.00	0.959
H2: Supported	Attitude Toward Risk Aversion ↔ Attitude Toward Risk Attraction	0.39	0.000
H3: Supported	Attitude Toward Risk Aversion → Attitude Toward Children	0.41	0.000
H4: Supported	Attitude Toward Risk Aversion → Attitude Toward Children While Driving	0.18	0.040
H5: Supported	Attitude Toward Risk Attraction → Attitude Toward Children	0.19	0.004
H6: Supported	Attitude Toward Risk Attraction → Attitude Toward Children While Driving	0.31	0.000
H7: Supported	Attitude Toward Children → Attitude Toward Children While Driving	0.21	0.003
H8: Supported	Attitude Toward Children While Driving → Attitude Toward Booster Seat	0.21	0.015
H9: Supported	Attitude Toward Booster Seat → Intention Toward Booster Seat	0.29	0.000

The attitudes of subjects toward risk aversion and risk attraction have strong positive effects on their attitude toward children and toward children while driving. Their attitude toward children also has a strong positive effect on their attitude toward children while driving. As theorized, their attitude toward children while driving has a strong positive effect on attitude toward booster seats. Moreover, alternative models with direct paths from the rest of the constructs—namely attitudes toward risk aversion, risk attraction, multi-tasking, and children—were also investigated. None of those models have significant paths to attitude toward booster seats and none generate a better fit for the data. Finally, their attitude toward booster seats has a strong direct effect on the intentions to buy and use booster seats.

DISCUSSION AND FUTURE RESEARCH

This preliminary research's results showed the importance of the parents' attitude towards children while driving as an influential construct on their attitude toward booster seats. Their intent to buy, use, and recommend a booster seat for children depends heavily on a positive attitude toward booster seats. The key variable in forming a positive attitude towards booster seats was the subjects' attitude toward children while driving. This information was very important for the campaign's success. Target group of this campaign (K-4 students) was selected correctly. Communication activities need to focus on teaching children how to behave in a moving vehicle. By making buckling the "cool thing," the responsibility of buckling and staying buckled would belong to the children. As a result, parents will be under less stress while driving.

The attitude towards children while driving was found to be drastically different than the attitude toward children in general. In the attitude toward children construct, we learned what parents think, feel, and do about their children in general. Parents overwhelmingly stated that children were fundamental to their enjoying life. They felt good about their children and cared about their well-being. Parents also declared that they try to protect their children from potential dangers.

If the above statements are correct, why do some parents not buckle their children into booster seats? The attitude toward children while driving construct sheds some light on this dilemma. Sometimes these parents forgot to tell their children to buckle up. Once children thought it was ok not to buckle up, they stopped using their booster seat. This perception could have been further strengthened as some parents believed that when driving very slowly on a rural road, putting the child into booster seats was unnecessary. Some parents, on the other hand, let their children get out of the booster seat to stop them from whining in the car. Finally, still other parents believed their children could responsibly sit on any seat they chose, including the front seat next to driver.

The importance of the attitude toward children while driving construct indicated once more the Ollie Otter Seatbelt and Booster Seat Safety program's value. Thanks to this program, using booster seats has become "cool" among elementary school children. The parents' education about booster seats needs to be merged with this program because research indicates that educating children to buckle up in a booster seat every time they are in a vehicle *and* educating parents to consistently require their to ride in booster seats and buckle up are key factors in reducing children's injuries and death in vehicle accidents.

This research has also significantly contributed to the perceived risk literature in marketing. Conchar, Zinkhan, Peters and Olavarrieta (2004) suggested an integrated framework for the conceptualization of consumers' perceived risk processing. Their compiled literature on the perceived risk construct identified contradictory results in risk affinity (risk aversion) as a personality trait and propensity to take risks (risk attraction) research. They concluded that risk affinity is a static personality trait that shows a general tendency to seek or avoid risks (Dowling, 1986). Risk-taking propensity (risk attraction), on the other hand, was defined as a consumer's willingness to make a risky choice in a specific situation (Conchar et al., 2004). Our research provided some empirical support to this concept. Validity and reliability checks showed the two constructs were clearly separate. Both constructs have strong positive effects on attitude toward children while driving. We need to do more qualitative research to obtain an in-depth understanding of how these two constructs influence behavior; however, this preliminary investigation revealed interesting outcomes. Individuals with a high risk-taking propensity while driving are likely to be aware of their actions and the potentially hazardous consequences. Therefore, they may be meticulous about driving safety by consistently requiring their children to sit in booster seats. Similarly, parents who are highly risk averse are likely to be equally meticulous about the safety of their children while driving, as indicated by their attitude toward using booster seats.

Researchers assumed that risk-seeking parents were likely to continue their risk-seeking behavior, but would be more cautious about their children's safety. A post-survey interview indicated that a skate-boarder parent did not stop skate boarding; instead, he took his children to skateboard with him, but bought helmets and knee and elbow pads for them. However, the above-mentioned assumption needs further investigation in relation to driving. Another interesting finding of this research is the lack of correlation between risk attraction and multi-tasking constructs. This finding requires further qualitative research to understand theoretical foundations of risk aversion, risk attraction and multi-tasking.

The current study's limitation was that respondents were predominantly female. A second wave of data collection is expected, however, to compensate for this limitation. As a result, model comparisons based on demographic variables will be performed. The current research objective was to learn parents' attitudes toward buying booster seats. At the same time, it also aimed to learn other attitudinal factors influencing this attitude. Future research is needed to understand other stakeholders' motivation regarding booster seats. Situational factors, such as state laws, peer pressure, and cost of booster seats, could also shed more light on the attitudinal model.

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SERVICE GUARANTEES: A REVIEW AND EXPLANATION OF THEIR CONTINUED RARITY

Michael A. McCollough, University of Idaho

ABSTRACT

Service guarantees have the potential to transform service organizations. Despite their high potential value and some very successful examples they remain the exception rather than the rule for service organizations. Further, service guarantees can provide a unifying framework that brings together the service quality literature, the complaining literature, the service failure and recovery literature, and the relationship marketing/loyalty fields. This paper reviews the traditional warranty literature as well as the service guarantee literature with a focus on why service guarantees remain rare. Specific recommendations are given based on current practice and study to enhance service guarantees.

INTRODUCTION

Few if any consumers would buy a new car or even a television without a written guarantee. Indeed, for some the strength of the offered guarantee relative becomes the key deciding factor in deciding which product to purchase. However these same consumers frequently buy service products, including relatively expensive products such as crusies and tour packages without a service guarantee. While many service managers and researchers advocate service guarantees, they remain rare. The fundamental question addressed in this research is why this is so.

First, service guarantees are presented as a unifying framework for the related but distinct literatures of service quality, complaining, service failure and recovery, and the relationship marketing/loyalty literature. Next, the guarantee literature is reviewed. Examples of successful service guarantees are highlighted. Next, problems with both the literature and practice of service guarantees are presented as a reason why service guarantnees remain relatively rare. Finally, specific recommendations are provided to advance the literature on both service guarantees and practice.

SERVICE GUARANTEES AS A UNIFYING FRAMEWORK

Service failure and recovery is an area of intense interest to researchers and practitioners alike. The allied areas of service quality, complaining, satisfaction and dissatisfaction, and loyalty also attract considerable interest. Indeed, the research in these related yet distinct areas has become so developed and detailed that some scholars today focus on a specific subfield such as the role of failure attributions on satisfaction or the impact of justice on recovery efforts. Arguably in the quest to understand the phenomenon of failure and recovery scholars and managers risk "losing the forest for the trees." One possible framework to unify these research areas are service guarantees (Kandampully and Duddy 2001).

First, guarantees address a key issue in the complaining literature. Why do many if not most dissatisfied consumers choose not to complain? Among the many reasons advanced for the failure of disgruntled consumers to complain is ambiguity over just what the consumer can expect in the way of recovery and compensation, confusion as to what constituents a failure, and uncertainty over who is to blame for the service failure. Potentially service guarantees can address these problems. A well crafted service guarantee makes it clear to the consumer what constitutes a failure, how to seek redress, and what the outcome of complaining will be (Halstead, Dröge, and Cooper 1993). Service guarantees therefore make the recovery process and outcome clear to both the consumer and the front line service provider. Consumers by virtue of the guarantee know what to expect and the internal training and systems necessary to support the guarantee guide the service provider in providing redress. In short, a well supported service guarantee enables the formal recovery guidelines necessary for successful recovery, empower associates to act, and fosters the culture of customer satisfaction critical to successful service failure recovery.

A guarantee provides the formal vehicle by which loyalty following service failure and recovery can be assured. A guarantee should provide assurance that failure is rare and that in the event of failure adequate recovery will be provided. Armed with such confidence consumers should return following failure and recovery to give the service provider another chance.

Finally, organizations are advised in the service failure and recovery literature to not just respond to service failures but to identify and eliminate the cause of failure. A service guarantee can "close the loop" between responding to service failures and taking the measures necessary to keep problems from occurring in the first place. Firms that offer service guarantees should track the causes of failure (much like a manufacturer would track recalls and warranty claims) and should use this information to eliminate the causes of the service failure. In essence service guarantees should foster a culture of continuous improvement whereby service failures are tracked and eliminated resulting in ever increasing service quality and customer satisfaction.

REVIEW OF THE PRACTICE AND LITERATURE OF SERVICE GUARANTEES

Service guarantees are formal promises made to customers about the service they will receive (Zeithaml and Bitner 1996). Like goods guarantees, service guarantees are designed to alleviate customer loss in the event of failure. Numerous researchers have written extensively on service guarantees (Bolton and Drew 1995; Firnstahl 1989; Hart 1988, 1993; Hart, Schlesinger, and Mahar

1992; Lewis 1993; and Raffio 1992.) Service guarantees have been credited with instilling a customer focus in the firm; setting clear service quality standards, generating feedback to understand failure and to build marketing muscle.

Types of Service Guarantees

Unconditional and Specific Results: Service guarantees are typically either unconditional full satisfaction guarantee or a specific result/attribute based guarantee (Wirtz and Kum 2001; Hart 1993). An unconditional guarantee is generally held out to be the most powerful with Hart (1988) arguing that "A service guarantee loses power in direct proportion to the number of conditions it contains." An unconditional guarantee contains few if any provisions and states in essence "your satisfaction guaranteed or your money back." An example of an unconditional satisfaction guarantee would be Hampton Inn's famous satisfaction guarantee which states "We guarantee high quality accommodations, friendly and efficient service, and clean, comfortable surroundings. If you are not completely satisfied, we don't expect you to pay." Alternatively for many years Dominos Pizza offered a specific results performance guarantee which stated "30 minutes or it's free" guarantee. Presumably the pizza could have been of poor quality but delivered on time and the guarantee would not be valid.

Wirtz and Kum (2001) note that the power of the unconditional guarantee is potentially muted by its high ambiguity. McDougall, Levesque, and VanderPlatt (1998) in an experimental study focusing on hotels and house cleaning found mixed support for the superiority of unconditional versus specific results guarantees. Consumers preferred specific results guarantees when considering the ease of invoking the guarantee. However, when consumers considered which firm to select among competitors the unconditional satisfaction guarantee was a better indicator of quality. In other words, it is the specific terms of a conditional guarantee that might foster consumers to seek redress by making clear what failures are covered and what steps will be taken by the service provider in the event of failure. However, when selecting among a series of service providers the unconditional guarantee was a superior indicator of overall service quality. Wirtz and Kum (2001) tested what they termed a "Combined Guarantee" which includes both the wide scope of the unconditional guarantee and the most important attributes of a specific results guarantee. In an experimental study that focused on travel and photocopying services they found the unconditional guarantee was not necessarily superior to the specific results guarantee and that the combined guarantee was superior to either. These findings are important in capitalizing on the power of a guarantee to both signal quality and provide the specific guidance necessary to encourage consumers to seek redress (complain.)

Explicit or Implicit

Guarantees can also be implicit or explicit. For instance, a high end luxury resort would typically not offer an explicit formal guarantee (either unconditional or specific results) but would instead rely on an implicit understanding with the guest that they will make any problem right. Hart (1988) argues that service providers such as the Ritz Carlton rely on an implicit service guarantee and that the provision of an explicit guarantee might lead consumers to question why an explicit guarantee was necessary after years of exemplary service. Indeed, Hart (1988) argues that world class service providers that have relied on an implicit guarantee might encounter negative consumer perceptions if the implicit guarantee was formalized in an explicit guarantee. However, Wirtz, Kum, and Lee (2000), found that while an explicit service guarantee provided the most benefit to a hotel with a good reputation (expected quality improved, perceived risk was reduced and purchase intentions saw major increases) it did not harm the property with an outstanding reputation (providing modest reduction in perceived risk and a similar increase in expected quality.)

Because many services are paid for prior to the service being performed a service is a promise (Callan and Moore 1998; Firnstahl 1989). As a promise it can be argued that all services carry an implicit guarantee. However, given the unstated nature of the implicit guarantee it is possible that the service provider and service consumer are often unsure as to what exactly is being guaranteed.

Given the pioneering nature of the Hampton Inn guarantee the hospitality industry has lead the way in services with many of the strongest examples and most successful guarantees being offered in food service and lodging. Holiday Inn offered a service guarantee in the 1970's that is credited with reviving its flagging operations (Whitford 1998). Likewise, Hampton Inn's guarantee is generally cited as one of the most powerful and competitively decisive guarantees ever introduced (Rose 1990). The guarantee was subsequently extended to all of the Promus properties and to Hilton Hotels subsequent to their acquisition of Promus in 2000. Outside the United States, Whitbread Travel Inn (now rebranded Premier Inn) has used an ongoing guarantee to achieve a competitive advantage in the United Kingdom (McCaskey and Symes 2004; McCaskey 2001) while in Israel the hotel chain ISROTEL provides a "warranty certificate" guaranteeing a perfect vacation (Donath 1997). In food service there are a number of important examples including Dominos Pizza with its famous 30-minutes or it's free guarantee, Seattle's Satisfaction Guaranteed Eateries (Firnstahl 1989) and McDonalds guarantee of the early 1990's. Mountain Mikes Pizza once offered a guarantee to future franchisors that if they were not satisfied after 33 months the company would refund franchise fees (Romano 1994). Bugs Burger Bug Killers is example of a very powerful guarantee by a supplier with a primary customer base of food service providers (Burger 2005). Carnival Cruise Lines guarantees customer satisfaction or a prorated refund and return flight at the first port of call (with considerable exceptions) remaining the only cruise line to make such an offer.

However, other service guarantees have proved far less successful. The now defunct Biztravel.com had to back off its guarantee of on-time arrival for flights booked through its website (while reinforcing its hotel and rental car satisfaction guarantee (Jones 2001). In 2000 Amtrak offered a guarantee which was subsequently abandoned (Machalaba 2003) because the passenger service was unable to deliver the service claimed**.** Likewise Starwood introduced a service guarantee for its Sheraton chain amid considerable fanfare in 2002. However, no mention of the guarantee could be found on Sheraton's website as of 2009 and Sheraton's recent J.D. Powers rankings placed it near the bottom of the upscale Hotel segment. Alternatively the former Promus units which continue to offer service guarantees enjoyed ratings at or near the top of the J.D. Powers ratings.

Reasons to Offer a Guarantee – The Services Marketing Literature

Customer focus

Hart (1988) argues that knowing what the customer wants is the "sine qua non" in offering a service guarantee. A service *guarantee forces a focus on customers* because to successfully offer a service guarantee a firm must identify its customers and determine their expectations about important aspects of the service product. While a firm can identify customer expectations without a guarantee, by warranting its performance, a service firm imposes on itself a strong incentive to perform such an important task. Given the historical production orientation of many service firms, a guarantee may also impose a customer orientation which has the potential to affect significant change in the organization's culture.

Setting clear standards

The setting and communication within an organization of clear service quality specifications has been identified as a critical element in the delivering of high service quality (Parasuraman, Zeithaml, and Berry, 1985). A service *guarantee sets clear standards* for a service firm, telling the employees what the company stands for and forcing the organization to define the role and responsibility of every employee (Hart 1988, 1993). Ultimately, a service guarantee can convey to members of the organization the clearest and most important standard of all, complete customer satisfaction. For instance, research in a hotel setting has found that service guarantees impact employees' performance which affected perceived service quality (Sum, Lee, Hays, and Hill 2002). Similarly, Hays and Hill (2001) found that a guarantee has a positive effect on service quality through its effect on employee motivation and vision.

To build marketing muscle

Hart (1988, 1993) argues that a service guarantee *builds marketing muscle* by reducing pre-purchase risk. As services are intangible and dominated by experience and credence qualities (Lovelock 1996 Murray and Schlacter 1990), it is often more challenging, relative to goods, for consumers to determine in advance the service performance that can be expected. Therefore, service guarantees are effective, in part, because they lower perceived risk and facilitate exchange by tangibilizing (via the warranty contract) abstract service quality.

Hart (1988) also argues that service guarantees build marketing muscle by encouraging loyalty from current customers and by generating positive word-of-mouth. In essence, a service guarantee can bestow a sustainable competitive advantage on a firm. Essentially such an argument is based on the assumption that only a firm with superior service quality could afford to guarantee its offering while competitors with lower service quality would not be able to afford to do so. Thus, the consumer would value service guarantees because they reduce the risk of purchase decisions. Further, a service guarantee is both rare and difficult for competitors to duplicate. Since achieving a sustainable competitive advantage is often viewed as more difficult for service firms (Bharadwaj, Varadarajan, and Fahy 1993), a guarantee may take on added importance for service firms seeking to tangibilize intangible service quality. Similarly, Hart (1993) notes that extraordinary guarantees can help differentiate a firm.

To generate feedback and understand failure

A service *guarantee generates feedback* when invoked *forcing a firm to understand why it fails* (Hart 1988). In turn, this information can be used to design more reliable service offerings. Consider, by guaranteeing tangible goods, a traditional goods manufacturer is assured that when the guarantee is invoked information will be automatically generated on the rate and cause of failure and the cost to repair or replace the defective product. In contrast, many service firms, in the absence of a service guarantee, lack good information on the causes and cost of customer dissatisfaction.

Generating feedback to understand failure a firm may be able to capture and capitalize on superior information. For example, Toyota Motors can refer to internal financial reports to determine, via warranty claims, the cost of defective products. Such information may not only help identify the cause of failure, but may also serve as an implicit proxy for the more abstract cost of customer dissatisfaction. Finally, in line with Total Quality Management (TQM) principles, tangible goods firms considering quality initiatives have a ready benchmark by which to judge the success of their efforts. By comparing the cost of rework and warranty claims against the cost of a TQM initiatives, a return-on-investment (ROI) can be calculated. The result is the famous axiom that “quality is free” (Crosby 1979; Deming 1986)

By contrast, without a guarantee a service firm may lack information on customer dissatisfaction, its root causes, and the cost of poor service quality. As a result, the service firm may under appreciate the potential ROI of service quality initiatives. The cost of poor quality for many service firms is the unrecognized cost of customer dissatisfaction and customer turnover, which can be very significant. For instance, Reicheld and Sasser (1990) maintain that some service firms can boost profits by almost 100% by increasing customer retention by just 5%. Without a service guarantee, dissatisfied customers may not complain to the firm (Hart 1988), and, even if they do, the cost of addressing the service failure may very well not be reported in a distinct internal expense category. However, the service firm that guarantees customer satisfaction should be able to refer to its internal reports to determine the cost and causes of customer dissatisfaction. In essence, firms with a service guarantee capture information on why they fail, the cost of such failures, and the ROI of initiatives to improve service reliability.

The Continued Rarity of Service Guarantees

Given the successful use of service guarantees since at least the 1970's (Holiday Inn) followed by the Hampton Inn guarantee (1989) along with the focused academic and practitioner advocacy for guarantees starting with Hart (1988) it might be expected that service guarantees would be the norm by now. However, this is not the case. In a 1996 article, seven years after Hampton Inn gained competitive traction with their guarantee, Evans, Clark, and Knutson reported that 75% of hotels surveyed did not offer a service guarantee and of those only one had any intentions to offer one. While the author is unaware of more recent studies it would appear that most hotels still do not offer an explicit service guarantee. For instance, a review of the web sites of most major national and international hotel chains show most do not offer an explicit satisfaction guarantee. Further some guarantees which were introduced, some with much fanfare, have either been discontinued or are no longer promoted by the service provider.

In other service industries the promise of guarantees also seems to be unfulfilled. For instance, guarantees still remain the exception and not the rule in banking, and financial services, retail, education, auto service, and telecom. Indeed, the only area where guarantees have gained notable acceptance is low price guarantees. Common in many industries such as retail, they have lately gained traction on company and third-party travel web sites (Rohlfs and Kimes 2007; Thompson 2005). Not only have low price guarantees (technically a form of specific results guarantee but largely inconsistent with the conceptualization of the bulk of the service guarantee literature) gained almost universal acceptance in a fraction of the time since service guarantees were first widely reported in the literature but it can be argued that such an emphasis on price has actually had a negative impact on consumers expectations of service quality. Indeed, while firms focus on low price guarantees and seem largely unable to tangibilize the intangible quality of their service through satisfaction guarantees, consumers increasingly turn to the ratings of their fellow consumers to evaluate quality before purchase by reviewing online reviews. Numerous web sites allow consumers to do what service guarantees seem to have failed to do, tangiblize intangible service quality. For instance, consumers can go to the web for reviews of retailers (internet and brick and mortar, sellers and buyers (e-bay), and hotels (hotel.com and expedia). Conceivably, yellowpages.com allows consumers to rate all service providers. Some websites, among much controversy now allow consumers to rate medical professionals.

Given the powerful arguments in the literature for service guarantees and the strong success of some guarantees the question must be asked: Why haven't service guarantees become the norm for service providers? Arguably there is still room for significant service quality improvement. Indeed, poor service still seems to prevail throughout the service industry (Gerstner and Libai 2006), or as Business Week put it more colloquially in front page cover story in 2000, "Why Service Stinks" And firms that do offer service guarantees generally credit them as a source of significant competitive advantage. The most plausible reasons for the failure of service grantees to achieve widespread acceptance will be reviewed next. To begin this review the traditional guarantee literature from the legal and economic literature will be reviewed. As will be demonstrated, this literature, rarely cited by service guarantee writers offers powerful reasons why some of the traditional reasons proposed for offering a service guarantee might be seriously flawed. If so, the rarity of service guarantees might have a theoretical explanation.

Reasons to Offer a Guarantee – The Legal and Economic Literature

Most academic advocates of service guarantee seem largely unaware of an extensive body of work on guarantees in the legal and economic literature that predates the service guarantee literature. Further, these scholars would likely be surprised to learn that this literature largely refutes the primary arguments used to advance service guarantees. In essence, when evaluated by the preexisting literature on guarantees the theory used to underpin the service guarantee literature is frequently wrong and possibly fatally flawed.

In direct contrast to the service guarantee literature, the traditional guarantee literature which has been developed primarily by economists and legal scholars, tends to be highly theoretical, often very quantitative, and generally descriptive as opposed to prescriptive (for instance, see Cooper and Ross 1985; Grossman 1981; Heal 1977; Lutz 1989; Priest 1981.) This review of the traditional guarantee literature is necessarily brief, and readers interested in more detail are directed to Priest (1981) who offers an extremely detailed, comprehensive, and lucid review. The traditional warranty literature tends to take guarantees as a given and seeks to explain why a firm would offer a warranty. On the other hand, the service guarantee literature is often more normative, noting the lack of service guarantees and advocating their adoption. Further, in general, the traditional guarantee literature is based on the study of tangible goods warranties. It is possible that the focus on tangible goods warranties reflects the generally greater prevalence of goods versus service guarantees and the predating of the services literature by the bulk of the warranty literature. In addition, the literature tends to be highly complex, abstract, and due to its extensive use of mathematical modeling not highly accessible to practitioners or more qualitatively inclined scholars.

Three primary, generally competing, explanations have been advanced within the traditional warranty literature to explain the phenomenon of guarantees: Exploitation Theory, Signaling Theory, and Investment Theory. Significantly for this review, very little acknowledgment of these three classical theories of guarantees can be found in the service guarantee literature. Indeed, Hart (1988) makes no reference to any of the classical guarantee literature or theories.

The Exploitation Theory

Although counterintuitive, from the exploitation theory perspective guarantees were not seen as a contract in the consumer's best interests, but rather were viewed as a contract which was drafted by the seller to limit liability. Warranty contracts were seen as a unilateral contract drafted and imposed "by the seller and only involuntarily adhered to by the consumer" (Priest 1981). The exploitation theory emerged shortly after the introduction into the marketplace of warranty contracts in the early 1900's and was heavily influenced by the courts as they attempted to wrestle with the legal issues involved with enforcing (or voiding) warranty contracts. Support for the exploitation theory was found in the similar nature of warranty contracts within industries where collusion was believed to exist (Priest 1981). Firms also were believed to be most eager to limit liability due to unforeseen events (such as acts of God) or which were difficult to calculate. Warranties also were believed to be a vehicle whereby marketers could limit liability arising from the marketer's extravagant advertising claims (Priest 1981). Ultimately, the exploitation theory gained high credence with American courts which refused to enforce warranties that were viewed as unduly limiting the liability of sellers (Priest 1981).

In general, the exploitation theory of warranties can be interpreted as having given way to, first, the signaling theory and, in turn, the investment theory of warranties. On one hand, evidence has often failed to support the exploitation theory (Priest 1981). Arguably, it is also possible that with courts limiting the exploitative use of warranties, coupled with increased competition in many industries, the use of warranties may have changed over the years from seeking to limit manufacturing liability to gaining a competitive advantage.

However, within the business and marketing literature arguments stressing a "soft" exploitation perspective can be found. For instance, Udell and Anderson (1968) offered a "protective" warranty explanation whereby guarantees served not so much to protect the consumer, but "the seller from unreasonable claims of purchasers." (p. 1) Similarly, Menezes and Quelch (1990) state that warranties are effective, in part, because ". . . warranties protect the firm from unreasonable claims by purchasers and limit the firm's responsibility for defects in materials and manufacturing that emerge during normal use" (p. 71).

The Signaling Theory

Firms may offer warranties to signal to consumers the higher quality of their products (Boulding and Kirmani 1993; Grossman 1981; Kashyap 2001; Kelley 1988; Priest 1981; Shimp and Bearden 1982; Wiener 1985; Wirtz 1998). Signaling theory is derived from the study of information economics and considers situations in which buyers and sellers possess asymmetrical information. Under signaling theory sellers are believed to have perfect knowledge of product quality while the buyer's knowledge is imperfect. For instance, the quality of many products cannot be determined in advance by buyers with any high degree of certainty but can only be discovered after purchase and use. Because of asymmetrical information, sellers of high quality products have an incentive to send a pre-purchase (market) signal to buyers to achieve a competitive advantage and market premium over sellers of low quality products. Presumably, buyers will view such signals as highly believable, as the producers of low quality products could not hope to match the warranty of the high quality seller (Priest 1981). Signaling theory is perhaps the most cited guarantee theory within the marketing literature (Bearden and Shimp 1982; Boulding and Kirmani 1993; Innis and Unnava 1991; Kelly 1988; Udell and Anderson 1968; and Wiener 1985) and has been used to justify service guarantees (see Kashyap 2001 and Wirtz 1998 among others). For instance, in a setting focused on mid-priced hotels Marmorstein, Sarel, and Lassar (2001) found that the presence of a guarantee had a significant impact on choice of hotel, a finding consistent with signaling theory.

The key problem with signaling theory is the issue of moral hazard (or consumer opportunism). Moral hazard occurs when the probability of product failure is a function of not just producer quality but unobservable consumer efforts (Lutz 1989; Padmanabhan and Rao 1993; Priest 1981). For instance with tangible goods, if a consumer does not perform needed maintenance the probability of failure increases, as do warranty claims. However, consumers have limited incentive to maintenance if the cost of the repair would be covered by a warranty. An example is the auto owner who does not invest in adequate maintenance and upkeep because they believe the risk of product failure due to this abuse of the product will be covered by the warranty. Consumer opportunism (Chu, Gerstner, and Hess 1998) is similar in many respects to the concept of moral hazard. An example of consumer opportunism is a retail customer that takes advantage of a money back guarantee by wearing a dress to a New Year's Eve party and then returns it.

Arguments that service guarantees tangibilize intangible service quality or reduce pre-purchase risk are consistent with signaling theory. In essence, any theory of guarantees that does not address the problem of moral hazard would be expected to collapse under the problem of moral hazard. Therefore, unless the problem of moral hazard can be explained the market signaling theory cannot be accepted as an explanation of warranties (Lutz 1989; Priest 1981). This would include service guarantees. In response to the problem of moral hazard, Priest (1981) offered the investment theory of warranties.

The Investment Theory

Priest (1981) interprets guarantees as a form of insurance or repair contract designed to prolong productive life. The guarantee does not so much signal to, or assure, consumers of the high quality of a product as it reduces their risk by limiting unanticipated financial loses. Products with warranties (or more generous warranties) must command a market premium to cover the cost of higher anticipated warranty claims (Chu, Gerstner, and Hess 1998). Therefore, consumers implicitly face a choice to either self-insure or purchase a product with a warranty. If consumers self-insure they have lower up-front costs, but they also assume the risk of product failure. Further, they have more incentive to properly maintain the product. In this respect, the investment theory eliminates the problem of moral hazard inherent in signaling theory because consumers bear the cost of their unobservable actions by choosing between paying a market premium to purchase a product with a warranty (or a more generous warranty) versus the option to pay a lower up-front cost and to "self-insure." Empirical support for the investment theory of warranties is offered by Priest (1981), Erevelles (1993), and Heal (1977).

In many instances, basic warranty coverage is part of the standard purchase price, and the consumer has no opportunity to decline the warranty in exchange for a lower, up-front purchase price. (See Fruchter and Gerstner (1999) for a possible explanation of why warranty offers are often similar by industry.) However, an optional Extended Service Contract (ESC) serves as an excellent example of the investment theory of warranties. Typically, ESC's allow consumers to pay an additional premium in exchange for more generous or longer warranty coverage. While ESC's may be called an extended warranty, they are in their essence an insurance contract which the consumer may purchase to protect himself/herself from the risk of product failure.

Investment theory has received little attention within the marketing literature. However, it should be noted that numerous studies of guarantees in the marketing literature have emphasized the risk reduction aspect of warranties (Erevelles 1993; Bearden and Shimp 1982). In one study Lidén and Skålén (2003) found that while service guarantees did not reduce risk prior to purchase (as signaling theory would predict) they did reduce consumer risks once the failure occurred (a finding more consistent with the investment theory). Potentially, studies that emphasize the risk reduction aspects of warranties could be interpreted as consistent with either signaling theory or investment theory. However, to the degree that these studies emphasize that warranties reduce pre-purchase, perceived risk, and not actual financial risk, they are probably most consistent with signaling theory. Therefore, based on investment theory consumers, depending on their risk aversion would chose in some instances to self insure and in other cases they would chose to transfer this risk via a warranty contract. It can be argued that the converse should be true. In some cases marketers will find it advantageous to pool the risk of consumers and offer a guarantee while in other cases it may make greater financial sense to transfer this risk to consumers (or demand a "premium" to accept the risk.) For instance, in some situations marketers, by pooling the risk of rare but financially significant loses, can offer a guarantee at minimal additional cost. Consumers, especially given that their ability to estimate risk may be imperfect may find such a guarantee to be very valuable. Further, individual consumers are by definition in a situation where they cannot pool this risk. An example of such a guarantee might be a cruise company that books the passengers' air travel. There is a risk that a passenger's flight might be cancelled or delayed for reasons beyond the control of either the cruise company or the passenger (weather, mechanical problems, etc.). By guaranteeing to refund the passenger's cruise fare if they miss the sailing (or a portion until the passenger can reconnect at the next port of call) the cruise company is pooling the risk of all passengers. In this respect investment theory can explain unconditional guarantees that cover losses arising from third parties and acts of God. Such situations are not subject to the problem of moral hazard that challenges signaling theory and underlies investment theory. Indeed, investment theory would appear to be the only theory of guarantees that can explain such guarantees.

POSSIBLE EXPLANATIONS FOR THE RARITY OF SERVICE GUARANTEES

Service Guarantees are Rare Because of Moral Hazard

As shown, most proponents of service guarantees offer arguments consistent with signaling theory. However, the problem of moral hazard largely negates the validity of signaling theory as a viable reason to offer guarantees. Therefore, it is possible that service guarantees remain rare because of the problem of moral hazard.

Most service guarantee scholars dismiss moral hazard or potential customer abuse. Indeed, the empirical service guarantee literature generally shows that consumer abuse (or moral hazard) is relatively rare (Chu, Gerstner, and Hess 1998; Donath 1997; McCollough and Gremler 1999a; Wirtz and Kum 2004) and that gains from guarantees offset the losses. However, the literature shows that service providers often are reluctant to guarantee services because they fear that consumers would abuse the offer. This seems to reflect a prevalent belief among practitioners that service guarantees are inherently flawed because consumers simply can't be trusted. While service researchers may not see moral hazard as an issue managers seem to believe otherwise, even if it is simply a gut feeling. Alternatively, services are high in consumer coproduction, with successful service delivery often do to the efforts of both the consumer and the service provider. This co-production nature makes the fear of moral hazard perhaps more critical for service providers then goods providers.

A detailed examination of the impact of moral hazard on service guarantees has been performed by Wirtz and Kum (2004). They found that the amount of compensation was not linked to the likelihood of consumers fraudulently invoking the guarantee. They also found that ease of invoking the guarantee was not linked to consumer abuse. Further the more satisfied the consumer the less likely they were to invoke the guarantee without cause. They did find that some personality variables were linked to consumer opportunistic behavior. From a practical standpoint this finding may be difficult for service providers to incorporate directly into guarantees as it is difficult to either target or restrict access to guarantees based on such factors as morality, self-monitoring, and Machiavellianism.

Given the mixed evidence for moral hazard vis-à-vis service guarantees, a closer look at the nature of services versus tangible goods is in order. First, for some aspects of a specific result guarantee, moral hazard is not a factor because only the firm's performance is at issue and no consumer efforts are involved. For instance, a guarantee that your food will be delivered in a certain set time frame is largely unaffected by any possibility of moral hazard. Therefore, for specific results guarantees where no consumer co-production efforts are involved moral hazard is not an issue and the signaling theory could applies to service guarantees. However, for unconditional guarantees moral hazard remains a very serious issue.

Second, for moral hazard to be a factor consumer actions must be unobservable. For instance, a tangible good manufacturer is generally unaware of how the consumer treats (or mistreats) their product once purchased. However, for many types of service co-production means that the service provider can monitor and observe the consumers actions. Not only does this assure that the consumer is correctly performing their co-production role but it may also serve to allow the service provider to monitor consumer actions that might result in fraud. Therefore for services high in observable co-production effort the service provider can monitor both consumer co-production efforts as well as consumer fraud, rendering moral hazard moot.

Third, many services have a high relationship component (Gwinner, Gremler, and Bitner 1998). On one hand this puts service providers in a position to use data bases and essentially "fire" customers that abuse the guarantee. This is, as a rule, not the case for tangible goods sellers. Secondly, as shown by Wirtz and Kum (2004) if consumers value the relationship they are less likely to cheat on a guarantee. This reinforces the observation by many that guarantees be reserved for preferred customers such as airline club members. However, given the prevalence of data base marketing today there seems no reason to limit the guarantee to certain high spending customers; the organization simply needs to track the consumers who invoke the guarantee under circumstances that seem abusive.

Finally, a service guarantee may actually reduce moral hazard by defining the relative coproduction roles of the consumer and the service provider. Because of coproduction some view customers as partial employees (Bettencourt 1997; Bowen 1986; Mills and Morris 1986) and service guarantee articles cite service guarantees as a way to "train" the consumer as partial employee (Maher 1991; McCollough and Gremler 1999a). From this perspective the guarantee is a service contract spelling out the relative roles of the participants and may even shield the service provider from service failure claims resulting from the efforts (or lack) of the consumer.

In summary, while, arguably, the investment theory and not the signaling theory has become the primary theoretical explanation of tangible goods guarantees, it offers special conceptual problems when dealing with services. Moral hazard depends on consumer actions and these actions must be unobservable. Some aspects of services do not depend on consumer actions and to the degree they do these actions are often observable. A further problem with the investment theory for services is that viewing a guarantee as an investment vehicle requires that the warranty be viewed as a type of insurance or repair contract which is tied to, and designed to extend, the life of the product. As services are often frequently purchased, low priced, transient performances without any expected life, it is not necessarily clear how a service guarantee can act to extend the life of the product. Conversely most tangible goods with guarantees where the warranty is a key factor in the purchase decision are higher priced consumer durables which are purchased infrequently. Therefore the investment theory may discount the ability of a guarantee to form a lifetime relationship with the consumer. As a result, the financial justification that recovering dissatisfied consumers and fostering repeat business across all segments is not considered under the investment theory.

Therefore, it is possible that the fundamental way service guarantees act versus tangible guarantees is intrinsically different. Issues of moral hazard must be considered but they can be managed in a manner unlike tangible goods guarantees. Signaling theory may therefore be a more useful model for explaining service guarantees than for explaining tangible goods guarantees. However, rather than dismissing the issue of moral hazard service providers must pay close attention to this risk and the management of this behavior for service guarantees to be effective. Any service guarantee that ignores this risk is unlikely to be successful in the face of consumer opportunistic behavior.

Service Guarantees are Rare Because of a Limited Target Market

It could be that service guarantees are rare because they are most effective for a small subset of the market that are risk adverse while the majority of the market is not sufficiently risk adverse to pay the market premium a service guarantee would require. The investment theory of guarantees would propose that marketers offer guarantees to more risk adverse individuals for a premium price while allowing more price sensitive consumers to self insure. The investment theory might also apply to service guarantees if they allow the organization to segment the market (Danaher 1998) based on consumers' risk preferences (Mann and Wissink 1989). Under this scenario firms that offer a guarantee are able to target and attract risk adverse individuals. However, those that are less risk adverse would presumably buy from a firm that does not offer a service guarantee at a lower rate and would, in effect, self-insure. Indeed, in general it is more efficient for consumers to self insure for low priced products, a rule that would generally apply to such low priced hospitality offerings as restaurant meals and hotel rooms.

Fruchter and Gerstner (1999) indicate that guarantees, paradoxically, may often be in the organizations interest but not the consumer's. In essence, they assume that a firm offering a guarantee must charge a premium to cover increased costs and that this forces "easy-to-satisfy" consumers to pay a higher price they otherwise would. However, this condition seems to hold only under conditions of monopoly. Under competition the benefit of the guarantee is that it allows a firm to differentiate. Interestingly, they show that under competition the firm that offers an unconditional guarantee can be more profitable than the firm that offers no warranty or partial coverage, even if the returned product has no or limited salvage value (a typical case for services) and as long as the consumer has not acted opportunistically. While the lack of salvage value for services would seem to make guarantees less viable, under Fruchter and Gerstner's modeling it should be remembered that for many services the variable costs are rather low. Therefore the lack of a salvage value is partly offset by a low production cost. Alternatively if a guarantee encourages greater capacity utilization for perishable service products an organization may still be able to make good on some guarantee claims and still see a net increase to profits.

Interestingly, Fruchter and Gerstner's modeling seems consistent with the Exploitative Theory that holds that guarantees are primarily in the firm's interest. Alternatively, arguments that guarantees allow a firm to target risk adverse consumers (Mann and Wissink 1989; Danaher 1998) might also be consistent with signaling theory. Therefore, the ability of a service guarantee to differentiate a firm from the competition is an explanation of guarantees that can be justified using any one (or more) of the three traditional guarantee theories.

Service Guarantees are Rare Because of a Lack of Consumer Acceptance

Following off the targeting issue mentioned previously, when a new product fails in the marketplace a key reason may simply be that consumers do not value the offering. Guarantees, while important are an element of the augmented product (Kotler and Keller 2006) and are rarely the key reason a consumer purchases a product, either tangible or intangible. For instance, McCollough and Gremler 1999b in a classroom setting found that while service guarantees were valued by students they were not the key factor for choosing a class. As another example, Tucci and Talaga (1997) found that the impact of a service guarantee on choice for a restaurant was negative for a low priced restaurant and had no impact for a higher priced restaurant. However, Tucci and Talaga found that other factors such as prompt service and food quality were predicative of choice. As another example, for a hotel, while a guarantee might be valued it will likely be less important than location, price, amenities, or even the image of the resort.

Ultimately consumers receive the product they demand. Consumers that book at online websites and search by price will receive a product determined by cost considerations. The rapid adoption of low price guarantees by the industry demonstrates that price is seen as a key buying criteria and that service guarantees are not. Indeed, price may loom disproportionally large. Being simply one cent higher than the competition means that the hotel comes up after the competition in the price sort and is therefore less likely to be examined and booked.

Finally, even if the consumer is aware of the satisfaction guarantee they may still not "accept the guarantee" and complain in the event of service failure. In this respect, guarantees are only part of the answer to encourage consumers to give voice. Unconditional guarantees in particular may leave enough ambiguity in terms of what is guaranteed and what the recovery response may be to dampen complaints. Alternatively, consumers may feel the results of invoking the guarantee do not justify the cost of complaining. In other cases consumers may feel that the complaint is minor compared to the reward promised, violating their sense of internal equity. In some of these situations a service provider should not wait for the consumer to invoke the guarantee. Employees should invoke the guarantee if they see a deviation against standards. For instance, no complaint should be necessary for a guarantee to be invoked in the case of a meal that takes longer to be prepared and delivered than the internal standards specify (Hocutt and Bowers 2005; Marvin 1992). Further, Hocutt and Bowers found that it is important for service providers to encourage a customer to invoke a guarantee. They found that customers that did not invoke a guarantee when a service failed were more disgruntled and more likely to engage in negative word-of-mouth.

Service Guarantees are Rare Because they Require a Price Premium

An important caveat would seem to be in order here. Arguments that firms (tangible and intangible) must charge a premium to cover the higher cost of a guarantee program are common (see Priest 1981) and apparently assumed to be true based on the face validity of the argument. Indeed the investment theory of guarantees rests on this assumption. However, this argument does not appear to be empirically well established. Indeed, from a TQM perspective in which "quality is free" (Crosby 1979), it could be that firms with highly reliable offerings may not have to charge a higher price from a cost perspective. To the degree that high service quality (and guarantees) are rare and valued, the service provider may still be able to command a market premium (regardless of cost structure.) Therefore, even if empirical evidence shows that firms that guarantee their product charge a market premium this should not necessarily be taken as proof that such firms must charge a higher price to recover the cost of the guarantee program.

How does the TQM argument apply to service guarantees? First, by capturing the information on service failure when a guarantee is invoked the service provider can implement service initiatives that more than pay for themselves. Second, the lifetime value of the customer more than offsets the cost of the service guarantee. Indeed, returns on service guarantees of 600% or more are given (Sowder 1996). Alternatively, Fruchter and Gerstner (1999) assume that guarantees will cost the organization more. Which perspective is correct? To evaluate a differentiation strategy based on risk or price sensitivity this question must be addressed.

For a service organization some quality is free and other aspects of quality are decidedly not. Properly preparing a meal, servicing a car, accurately preparing a tax return, cleaning a room right the first time, maintaining accurate reservations, smiling, and in general performing reliably is largely free. Indeed, preparing a new meal, reservicing a car, paying penalties and fees on an incorrect tax return, recleaning a room or losing reservations is decidedly expensive and most initiatives that will “do it right the first time” should pay for themselves. However, adding amenities or services will generally cost the firm more. Consumers under an unconditional satisfaction guarantee model may invoke the guarantee over such factors as an unclean room or factors that are more amenities based. Therefore, specific results guarantees focusing on attributes that are “free” will largely pay for themselves and do not require a price premium to cover additional costs. Unconditional guarantees that cover all aspects of quality may indeed require a price premium and a targeting strategy based on high overall quality and risk aversion.

A second issue is whether the firm is pursuing a relationship marketing strategy or is more transactional. Priest (1981) and Fruchter and Gerstner (1999) essentially model transaction specific exchanges and do not consider either the long run or customer life time value. Service guarantee proponents explicitly consider a long term perspective in which quality gains can be captured resulting in lower costs, higher service quality and higher customer loyalty. The reality is that some organizations have a short run planning horizon while others have a longer term perspective. Likewise, some consumers exhibit a short run orientation focusing on the price of the service while others prefer to seek out long run relationships with service providers founded on quality. At the extreme we have situations where a consumer has no intentions of using a service more than once and has limited information on quality. Managers realize this and the infamous “tourist trap” results. Under this single transaction and very short run scenario it would be surprising if the service provider offered high quality, low prices, or a service guarantee. At the other extreme some consumers display considerable loyalty, always having their car serviced at the same shop, preferring a favored restaurant to all others, or choosing to patronize a particular insurance agent for all their insurance needs. Under this situation, quality, prices, relationship marketing and service guarantees all come into play.

In summary, while service guarantees are often proposed for all service providers they might work best under situations where the organization can target a risk adverse consumer more concerned with quality or overall value (the combination of price and quality) and where ongoing relationships can be established with the consumer. Further, specific results guarantees can be focused on reliability issues which will pay for themselves over the short run while unconditional guarantees are a more long term orientation that may require relationship marketing, a less price sensitive consumer and a longer planning horizon.

However, while on the whole, the argument that the lack of service guarantees may be a result of their limited applicability to very risk adverse and price insensitive consumers may be a plausible argument it appears to be a less than convincing explanation for their relative rarity. Many of the most successful guarantees cited in the literature are focused on low cost services, do not appear to necessarily require the incursion of greater costs by the service provider or the payment of a premium by the consumer, and are not necessarily focused on strictly the upscale market

(McDonald's, Dominos Pizza, Hampton Inn, etc.) Alternatively, many high priced services that do involve a significant risk element and where consumers might be effectively segmented and targeted are not noted by widespread use of service guarantees.

Service Guarantees are Rare Because of Execution Issues

Service guarantees may be relatively rare because they are extremely difficult to design and execute. This is essentially the argument that high service quality is a source of sustainable competitive advantage because it is difficult to duplicate. Deciding to offer a service guarantee does not change this fact. It forces a firm to confront this reality. Hart (1988; 1993) and others note that service guarantees require the commitment and support of the entire organization, from the CEO on down to the lowest paid associate. Unlike a new advertising campaign which can be largely designed and executed by the marketing department a service guarantee will require buy in and support of all areas. The CEO must approve what might appear to be a very costly and difficult venture. Marketing must decide what features consumers value most and therefore which features to guarantee. Operations will need to design systems to assure quality and capture feedback on failures for corrective action. Human Resources must provide extensive training and hire new associates capable of delivering on the firms promise. Ultimately nothing short of an entire, companywide culture of service quality and customer satisfaction will allow a successful service guarantee initiative. Faced with such a daunting challenge some firms may choose to focus on other, more easily obtained initiatives.

For instance, even relatively simple to execute low price guarantees are difficult for firms to pull off. Thompson (2005) reports that many firms, some with guaranteed lowest room rates on their web sites do not have the lowest price on their websites. Indeed, the hotel's flagship website yielded the lowest price only about 55% of the time. If something as relatively simple as a lowest rate guarantee (compared to implementation difficulty of an unconditional satisfaction guarantee) causes difficulty in execution how much more complex and daunting must an overall satisfaction guarantee be for an organization?

Therefore, firms that wish to improve quality and offer a service guarantee may wish to start small. Focusing on a handful of key attributes and offering a specific results guarantee is therefore perhaps a good intermediate step for organizations that cannot commit to the total organizational transformation necessary for an unconditional satisfaction guarantee. By systematically identifying and guaranteeing important service quality attributes the firms can work up to a more comprehensive guarantee including an unconditional guarantee. Paradoxically, statements that only a unconditional guarantee will do and that a service guarantee loses power in direct proportion to the number of conditions may have lead some firms to choose not to offer any kind of service guarantee at all.

Service Guarantees are Rare Because of Franchise Issues

Franchising is a typically venture form for services. Volumes have been written on franchising which will not be recapped here. However, assuring quality standards are adhered to by franchise outlets is no simple matter. Getting franchise support and buy in for a service guarantee is likely a daunting challenge and for some service guarantees simply insurmountable. Certainly some service guarantee initiatives fail because of a lack of franchise support. Compounding this is that many franchisors are more focused on the short term revenue associated with selling a franchise. Therefore ultimate consumer satisfaction via a service guarantee might be a secondary issue at best.

Service Guarantees are Rare Because of a Reliance on Implicit Guarantees

Potentially, explicit guarantees are rare because implicit guarantees have become the favored choice of service providers. Either because of concerns over the impact on reputation an explicit guarantee would have or apprehension over granting consumers explicit power over the firm, organizations may have chosen to adapt an implicit guarantee.

While ultimately an empirical question which this author could not find addressed in the literature, it does not seem that the kind of uniformly consistent and high service quality implied by this explanation exists across service industries which would give this hypothesis support. No doubt however, most service providers would respond that they do offer an implicit guarantee. This very belief may serve to create internal inertia which reduces the organizations incentive to develop an explicit guarantee.

Service Guarantees are Rare Because of Cross Cultural Implications

Numerous studies have demonstrated that individuals from different cultures and countries respond differently in general to service offerings and to recovery effort in particular (McCleary, Weaver, and Hsu 2006; Yuksel, Kilinc, and Yuksel 2004). The service guarantee literature notes that some consumers may react negatively to a service guarantee because of the novelty, because of a belief an implicit guarantee already exists, and because they may feel that the service is not one that should be guaranteed (Hart 1988, 1993, McCollough and Gremler 1999a 1999b). Undoubtedly the appropriateness of a service guarantee and consumer acceptance will depend on the cultural background of the consumer (Fabien 2005). In Japan written service guarantee often results in suspicions consumers (Fojit 1995). Organizations with a customer base that is trans-national might therefore find offering a service guarantee to be more complex given the various views on the appropriateness of guarantees among their client groups. Service firms should therefore consider focusing guarantee efforts on cultures that will respond most favorably. Multinational chains may choose to publicize the guarantee in countries where the consumers will be most receptive and downplaying the guarantee among target groups that would find the guarantee more puzzling.

MAKING SERVICE GUARANTEES EFFECTIVE

Despite their relative rarity and challenges service guarantees can still be very effective and have the potential to provide service firms with a significant competitive advantage. Drawing on the preceding review the following recommendations are made to enhance the likelihood of success of those organizations that wish to offer a guarantee.

Monitor Moral Hazard

The single most plausible explanation for the relative rarity of service guarantees is fear of consumer abuse. This explanation is supported by writings in the legal and economic area concerning the problem of moral hazard regarding the signaling theory. It is further supported by frequent comments in the more practitioners focused literature in which business managers cite fear of consumer abuse as a prime reason they do not offer a service guarantee. While moral hazard has not been shown to be a major problem for service guarantees it nevertheless remains a potentially serious issue. Firms wishing to minimize their exposure to fraud should manage moral hazard rather than simply deciding that the risks are too great to justify the benefits of a service guarantee. The simplest strategy is to focus on specific results guarantees that cover the actions of the service provider and do not involve any efforts by consumers. For instance that your car repair will be under the quoted estimate, that your taxes will be accurate based on the information provided, that reservations will not be lost, that rooms will be clean and satisfactorily made up, that all billing will be done correctly, meals will be delivered within the time specified, etc.

In many instances unconditional satisfaction guarantees are however stronger and preferable. In this situation the organization can use membership or preferred programs to focus on those customers that they most trust and who place a higher value on the relationship with the service provider. Alternatively, data base marketing could be used to track those customers that abuse the guarantee and the organization may either “fire” these customers or simply reserve the right to revoke the guarantee offer to selected abusers.

Focus on High Relationship Situations

Not only will focusing on high relationship situations reduce the likelihood of moral hazard it should improve the overall service encounter by enhancing the role of the service guarantee as a coproduction contract. Many services are complex and require that consumers take an active role. If customers do not perform their tasks properly service failure may result. Therefore service firms must "train" their customers and service guarantees have been offered as an excellent means to accomplish this task. Even though failures due to the customer failing to perform their service responsibility are not the firm's responsibility it nevertheless results in a failure and lowers service quality. A service guarantee can serve as a relationship contract and as a means to educate the consumer. These learning costs will not only enhance service quality they should increase loyalty by creating a switching barrier based on knowledge.

Focus On Risk Adverse Consumers That Are Less Price Sensitive to Capture Value

Service guarantees should be most effective in situations in which there is a higher risk of failure, monetary or social risk is higher, and where consumers are relatively more risk adverse than price sensitive. As noted, for some aspects of service quality no additional costs are incurred (correctly making up a room, maintaining accurate records, etc.). In other cases a service guarantee may indeed be accompanied by higher costs. Regardless, the service provider should still be able to capture the value inherent in a service guarantee. Alternatively, those consumers that are buying on costs are unlikely to respond to a guarantee offer regardless if it results in a higher priced service product. Service guarantees are ultimately a differentiation, not a cost strategy and should be managed as such.

Consider Specific Results Guarantees - At Least Initially

For many firms offering an unconditional satisfaction guarantee may seem to be simply too risky and too daunting. These organizations should identify what they can do best that consumers value most and provide a specific results guarantee that covers that aspect of the service encounter. The firm will still be able to leverage aspects of its service quality to capture market share. At the same time the organization can continue to work toward an unconditional satisfaction guarantee, if appropriate, by adding more coverage to the specific results guarantee. Further, firms should consider capturing the unique benefits of an unconditional and a specific results guarantee by offering a combined guarantee (Wirtz and Kum 2001).

Dry Run the Guarantee

A service provider should perform a dry run of a service guarantee first. This will allow the organization to refine systems, training, and service quality before making the guarantee a formal promise to customers. Further, the organization can gain a more accurate understanding of the cost in claims of a guarantee during this time period. Nothing is apt to do more harm to a service organization's reputation than offering a guarantee that must be withdrawn because the service promises made cannot be honored.

Don't Wait For the Consumer to Complain To Invoke a Guarantee

In many cases a service failure is immediately obvious to an organization. Indeed, if co-production is involved it becomes more likely the organization should be aware of the failure and that the consumer should not have to incur complaining costs. A service guarantee should encourage complaining by making clear to the customers what constitutes a failure and the likely outcome of complaining. However, due to complaining costs no guarantee is likely to result in all customers that experience a service failure complaining. Further, if the consumer believes the failure is obvious to the service provider they may feel that they do not need to complain and the failure becomes a test of the service guarantee promise.

Make the Implicit Guarantee Explicit Within the Organization

Firms may feel that an explicit service guarantee would be received by their consumers with confusion or mistrust. Those with outstanding service quality likely have an implicit service guarantee. However, within the organization this guarantee should be made formal, written, and explicit. This will enhance the service quality culture, increase the likelihood that training is provided for all front line employees, provide clarity to as to what constitutes a failure and what appropriate recovery efforts are, and should result in the internal systems to capture failures and enhance continuous improvement. Further, this will force organizations that believe they have an implicit service guarantee to actually confront the reality of whether in fact internal and external customers do indeed perceive the presence of an implicit guarantee.

Capture Information on Service Failure

From an organization point of view one of the key benefits of a guarantee is that it brings the cost of customer dissatisfaction onto the firm's financial statements. Tangible goods firms that offer guarantees have an expense line on internal income statements that reports the cost of scrap, rework, and warranty claims. Most service firms do not. Instead, the cost of customer dissatisfaction is loss of customers to the competition which does not show up on any financial statement. For most profit driven firms, if there is not a number on a financial statement associated with a concept then the concept simply does not exist. Service guarantees make the concept of customer dissatisfaction and loss very real. Against this cost service firms can weigh the cost of quality initiatives to determine if indeed the costs outweigh the gains and if indeed "quality is free." Further, by monitoring and tracking service guarantee claims the firm creates a virtuous cycle in which causes of dissatisfaction are identified and eliminated leading to ever increasing service quality. Ultimately this increasing service quality renders the guarantee almost moot. It becomes a symbolic statement more than a service recovery manual.

Offer a Service Guarantee Because They Are Rare

The single best reason for a firm to offer a service guarantee is that they are rare and should be of value to customers. Value to customers and relative rarity are two of the key conditions for a sustainable competitive advantage. And the apparent difficulty of the hospitality industry as a whole to duplicate the long standing guarantees of some high service quality performers implies that developing and making good on a guarantee through service quality is a difficult feat to duplicate. Therefore, there appears to be a capability gap around the delivery of high service quality that seals the role of service guarantees as a powerful competitive weapon. While the rarity of service guarantees is puzzling to researchers it is good news for service organizations seeking to use service quality to gain a sustainable competitive advantage.

FUTURE DIRECTIONS FOR SERVICE GUARANTEE RESEARCH

This manuscript has outlined some potential reasons why service guarantees remain rare. However, these propositions are not empirically tested. Future research should examine the reasons proposed to determine the relative veracity of the basic explanations for the rarity of service guarantees proposed here. Particular attention should be paid to the issue of moral hazard and its impact on specific results and unconditional satisfaction guarantees. From both a theory and practitioner perspective there is no more likely explanation for the continued rarity of service guarantees than the problem of moral hazard. Further study of when moral hazard is (and is not) an issue could pave the way for more widespread adoption of service guarantees with their attendant benefits to both organizations and consumers.

Further research should also seek to refine our understanding how and when service guarantees foster complaining, superior recovery, service quality and customer loyalty. More research is also needed on when consumers find a service guarantee a valuable addition to the product and when it is of less importance relative to other service product features.

CONCLUSION

In tangible goods, the quality revolution of the 1990’s has played out such that many organizations no longer see goods’ quality as a source of competitive advantage. Instead goods quality is a minimum necessary, but insufficient condition for success. The same phenomenon has not been observed in service firms. Service quality seems to still be characterized by the continuing high rate of failure of services, the relatively lower quality versus goods of services, and the untold billions in losses consumers, organizations, and the economy suffers each year as a result of this poor service quality and lower productivity. A weary service quality researcher might indeed despair that the situation will ever see marked improvement.

Service guarantees, once held out as a great hope for improving service quality do not seem to have lived up to their promise. Were guarantee advocates guilty, in the language of the service quality literature of "over promising and under delivering?" This review seeks to clarify the promise of service guarantees and enhance their potential to deliver greater service quality, customer satisfaction, and organizational success. Properly understood, constructed, and implemented service guarantees do indeed have the potential to transform service quality for organizations and consumers alike.

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DOUBLE DIAMONDS, REAL DIAMONDS: BOTSWANA'S NATIONAL COMPETITIVENESS

Jay van Wyk, Pittsburg State University

Diamonds do not make engines run faster or planes fly further or higher. Unique among major raw materials, the gem diamond has no material use to man

– Nicky Oppenheimer, Chairman, De Beers

ABSTRACT

This study investigates the national competitiveness of Botswana in the global diamond industry. Botswana (Debswana) has market share as a producer of diamond rough within the De Beers cartel. The challenges which Botswana faces to enhance its national competitiveness are explored, notably changes in cartel rules and domestic demands for development.

A "Double Diamond" framework is developed to explore Botswana's competitiveness. This framework, unlike Porter's domestic single "Diamond", embraces both the impact of international and domestic determinants on national competitiveness. These determinants include factor, demand, firm strategy and rivalry, and supporting industries. Chance and government policy, as exogenous variables, are included.

Debswana and the Botswana government have initiated changes in the country's national competitiveness strategy. These changes involve a shift from a volume producer of diamond rough to a "straddler" strategy. Through vertical integration, Botswana is in the process of moving up the value addition chain. Debswana will likely increase profitability by adding aggregation, cutting and polishing industries to its current production.

In the shorter term, vertical integration will assist Botswana in its pursuit of national development goals (human development, infrastructure construction, fight against HIV/AIDS, poverty alleviation). In the longer term, Botswana realizes its vulnerability based upon a diamond dependent economy. Economic diversification is essential for long term stability and growth. The dominant economy of neighboring South Africa has impeded Botswana's diversification efforts in manufacturing and financial services. Large coal reserves may offer Botswana diversification opportunities to export commodities and energy.

Keywords: national competitiveness, diamond industry, Botswana, Debswana, De Beers cartel

INTRODUCTION

Mining, particularly for diamonds, has played a dominant role in the impressive economic development of Botswana since this southern African country became independent four decades ago. In 2004 and 2005, Botswana was the World's leading producer by value of rough diamonds, producing approximately 25% of the World's output (Kimberley Process, 2007). Seventy-five percent of Botswana's current export earnings come from diamond sales (Baxter, 2006). The diamond industry contributes a third of the country's GDP and approximately half of government revenues (EIU, June 20, 2006). It is therefore not surprising that Botswana has had one of the fastest economic growth rates in the World, averaging over 9% per year from 1967 to 1997 (Government of Botswana, 2007; US Dept of State, 2006).

According to Jin and Moon (2006), diversity among nations reflects different environmental conditions which, in turn, affect the strategies, directions and challenges of a specific industry. Therefore, it is essential to understand competitiveness, both domestic and international, for a particular country. In the case of Botswana, the diamond industry is an integral part of the global diamond cartel dominated by De Beers. The De Beers cartel has received extensive attention in the literature (Bergenstock, 2005; Gregory, 1962). This analysis, however, will focus on Debswana, the firm that dominates the Botswana diamond industry and which is jointly owned by the Botswana government and De Beers. The fusion of governmental interest and firm strategy presents an opportunity to understand how Debswana operates both domestically and globally, as part of a cartel, to pursue the national competitiveness of Botswana.

This paper is important for a number of reasons. First, the national competitiveness of Botswana is largely determined by the diamond industry which dominates the country's economy. Second, the "resource curse", i.e. national economies dominated by a single commodity, has plagued many developing countries. However, Botswana has used its resource wealth prudently for socio-economic development while maintaining political-economic stability by adhering to democracy and free market principles. Third, national competitiveness must be viewed in a globalized context where determinants of national competitiveness have increasingly involved cross-border activities and processes.

This article is organized into five parts. It addresses relevant theories, the supporting literature and an application to Botswana's unique situation. Part I discusses definitions and theories of competitiveness. Part II outlines Porter's (1990) Diamond Model of National Competitiveness. Part III introduces the generalized "Double Diamond" framework which emphasizes that national competitiveness is shaped by both domestic and international environments. Part IV analyzes the four determinants of competitiveness as applied to Botswana within the changing dynamics of the global diamond cartel and of domestic political economic issues. Finally, Part V outlines thoughts on the future competitiveness of Botswana.

THEORIES OF NATIONAL COMPETITIVENESS

In management literature, different usages of competitiveness are influenced by the level of analysis. McFetridge (1995) identified competitiveness at three levels: firm, industry and national. One usage is to view competitiveness at the level of the individual firm (Porter, 1990) and of individual sectors within a country (Toyne, Arpan, Barnett, Ricks and Shimp, 1984). According to Kurdrle (1996), "(I)f a firm is holding or expanding its share while maintaining satisfactory profits, the firm can be considered competitive". A second usage is that of industry competitiveness. Porter (1990) simply defines an industry as competitive if its trade balance is positive and if the industry's export share exceeds the national average. Kurdrle (1996) regards an industry as competitive if it maintains a steady or growing market share and satisfactory profits for all firms in the industry. He, however, indicates that the definition of an industry is problematic due to heterogeneity (e.g. product line diversity, national ownership) and generalizations about industry performance based upon firm data. Others, notably Rugman (1987) and Porter (1990), appear to equate the competitiveness of entire countries to that of firms or industries.

A growing body of literature has emerged that views national competitiveness as distinguishable from competitiveness at the industry or firm level. (Boltho, 1996; Strange, 1998) National competitiveness may be viewed from a narrow or a broad perspective. The narrow definition views relative factor costs (e.g. exchange rates, relative unit costs, land costs) as the determinants of national competitiveness. (Manzur, Wong and Chee, 1999; Carlin, Glyn and Van Reenen, 2001) An example of this approach is Porter's (1998) definition of national competitiveness as the value of output produced by a unit of labor (e.g. productivity).

For many business scholars, national competitiveness tends to be more broadly conceived as a complex of institutional and political-economic issues and the ways in which these affect the microeconomic activities of firms within their competitive environments. For instances, Luo (2001) argues that both currency crises and abrupt institutional changes affect the competitive environment in emerging economies. Zinnes, Eilat and Sachs (2001) regard national competitiveness as an input into a country's production process that generates the wealth of a nation. Their definition stresses the importance of synergies among firms and among firms, markets and governments, and above all, the crucial role of well functioning institutions. In similar vein, Kao, et al. (2008), describe national competitiveness as a measure of the relative ability of a nation to create and to maintain an environment in which enterprises may compete so that the level of prosperity may be improved. The broader definition of national competitiveness weds standard growth theory (i.e. growth results from changes in production factor accumulation and in total factor productivity) and new institutional economics theory (i.e. the role of institutions and "rules of the game"). (North, 1994; Picciotto, 1997) The definition of national competitiveness as used in the Global Competitiveness Report may be regarded as a benchmark of this broader definition, i.e. the ability of a national economy to achieve sustained high rates of economic growth based upon sustainable policies, institutions and other economic characteristics that promote such growth. (World Economic Forum, 1997, p.12) As a benchmark of national competitiveness, Thompson (2004) found that indices of four annual rankings of countries, i.e. World Competitiveness Yearbook compiled by the International Institute for Management, Global Competitiveness Report of the World Economic Forum, Economic Freedom of the World by the Fraser Institute, and An Index of Economic Freedom by the Heritage Foundation and the Wall Street Journal, are closely correlated. All these rankings use political-economic and institutional indices in line with the broader definition of competitiveness.

THE SINGLE DIAMOND FRAMEWORK

Porter's (1990) study of a hundred industries in ten nations challenged existing theories of international trade by explaining why a nation achieves international success in a particular industry. (Davies and Ellis, 2000) Porter's (1990) Diamond Model of National Competitiveness consists of four country specific determinants and two external variables. The first category of determinants is factor conditions which include human, capital and physical resources as well as the physical and knowledge infrastructure of a country. Category two is demand conditions such as the structure of demand in the home market; the size and growth rate of home demand; and the processes through which domestic demand is internationalized, e.g. "pull" factors which avail a nation's products and services in foreign markets. Factor three refers to related and supporting industries. This entails the clustering of suppliers, knowledge-input institutions and end-users in close proximity which stimulate innovation and competitiveness. The fourth category is firm strategy, structure and rivalry. This includes the ways in which firms are managed and choose to compete as well as the ways national and firm cultures shape education and the pool of employer talent.

Porter (1990) also identifies two exogenous forces that, although not direct determinants, may influence the competitiveness of nations: chance and government. The role of chance, which may impact on competitiveness, includes macro-political, macro-economic and technological factors. Examples are political decisions by foreign governments, technological breakthroughs, significant shifts in international financial markets and exchange rates, wars and oil shocks. The second exogenous force includes the various roles of government in the competitiveness arena. Examples are protectionist measures, competitive regulations, procurements of goods and services, and tax laws.

Grant (1991) correctly assessed that Porter's "Diamond" "…encouraged a surge of further theoretical and empirical research into the role of national environments in determining international competitive advantage." Broadly speaking, the application of Porter's "Diamond" falls into two categories. There are studies that replicate Porter's single "Diamond": Jasimuddin's (2001) analysis of competitive advantage in Saudi Arabia; Turner's (1994) study of Japanese financial services organizations; Chobanyan and Leigh's (2006) case study of Armenia; and Chen and Ning's (2002) study of e-commerce in China. The second category of studies extended or adjusted Porter's

"Diamond" to a "Double Diamond" framework of analysis. The thrust of this approach is that national and international competitiveness are increasingly linked in a globalized economy.

THE "DOUBLE DIAMOND" FRAMEWORK OF NATIONAL/INTERNATIONAL COMPETITIVENESS

Dunning (1993, 2003) suggested various improvements to adjust Porter's "Diamond" to the dynamics of international competitiveness. The framework should include both domestic and international influences on national competitiveness as well as the interaction between such domestic and international influences. If countries are part of regional economic integration systems, national "Diamonds" have to be replaced by supranational "Diamonds". The contribution of multinational enterprises to competitiveness must also be placed in proper perspective. The advantages of MNEs over cross-border market transactions include the ability to arbitrage factor or intermediate product markets, to reap economies of scale or scope benefits, to diversify country risks, and to exploit better the gains of the common governance of related value-added activities. Furthermore, inward foreign direct investment (FDI) flows are beneficial even though the host country or its people must trade a degree of economic sovereignty for economic progress. Firms increasingly procure assets and intermediate products from outside national boundaries which mean that the determinants of national competitiveness are both national and international. Finally, successful government may be a necessary condition for the competitive advantage of a country; it is not a sufficient condition because successful firms are also required to insure national competitiveness.

Rugman and D'Cruz (1993) demonstrate that Porter's "Diamond" model, if based on the operations of triad-MNEs, are not necessarily applicable to smaller, open, trading economies. They argue that the Canada-US Free Trade Agreement dictates that the Canadian "Diamond" needs to be considered jointly with the US "Diamond". Canadian competitiveness operates in a "Double Diamond" called the North American "Diamond". Hodgetts (1993) concurred by pointing out that the competitiveness of Mexico's leading clusters (petrochemicals and automobiles) are considered within the North American "Diamond". The subsequent formation of NAFTA confirms the relevance of the North American "Diamond" to understand competitiveness in the US, Canada, Mexico and even in Central America and parts of Latin America. Unfortunately, both these studies did not deal adequately with the impact of Porter's exogenous variables (chance and government) on North American competitiveness.

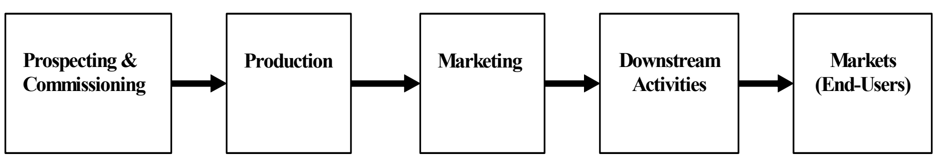
Bridwell and Kuo (2006), in discussing the computer industry in China and Taiwan, outlined a single "Diamond" for each country, but also a "Double Diamond" for the greater China, i.e. "…two countries or one nation with two interconnected regions." In a study of three industries (software, dairy, music) in Ireland, O'Connell, Clancy and Van Egeraat (1999) criticized Porter's "Diamond" on two grounds. Demand may be initially domestic, but on balance, influential customers, competitors and suppliers are located abroad rather than in Ireland. Secondly, domestic clustering was also not a requirement for the increase in Ireland's national competitiveness.

The study of Moon and Lee (2004) applied Porter's paradigm to compare the competitiveness of two firms, Samsung Electronics and Sony. The authors concluded that "the paradigm of the generalized double diamond model, which extends Porter's single diamond model, offers a more comprehensive framework to explicitly explain multinational activities."

BOTSWANA AND NATIONAL COMPETITIVENESS IN THE DIAMOND INDUSTRY

As argued below, the level of analysis issue is less relative in a discussion of Botswana's national competitiveness. One firm, Debswana, has a virtual monopoly of the local diamond industry. Furthermore, the national economy in terms of GDP and exports is largely driven by the diamond industry. To appreciate national competitiveness in the diamond industry, an understanding of the industry's value creation process is essential. Value creation refers to the activities performed to increase the profitability for organizations participating in the process. (Fig. 1) The global diamond industry operates as a De Beers dominated cartel. Through vertical integration, De Beers dominates prospecting, production and marketing. Debswana, as a De Beers' subsidiary, is a prominent producer: contributing 80% of revenue and 70% of production for De Beers (Mineweb, 2006). Debswana's value creation functions include mining and quality control of gem stones.

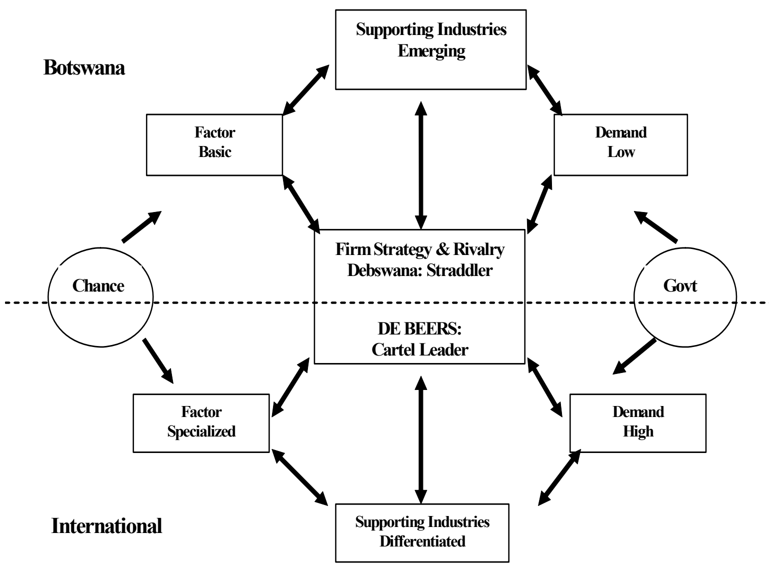
Figure 1. Value Creation in the Global Diamond Industry



The essence of the De Beer cartel is its monopolistic hold on the marketing mix of diamonds. Although De Beers and its subsidiaries produce approximately half of the World's diamonds, about three-quarters of all rough diamonds are marketed through the De Beers' single channel distribution system. De Beers sets the price of rough diamonds and only sells to selected buyers called sightholders. The sightholders supply the downstream activities (cutting and polishing industries). Finished gem stones are sold to wholesalers, designers and retailers in the major jewelry markets, e.g. USA, Japan, EU, China and India. According to Ariovich (1985), markup on diamonds occurs throughout the value addition process: mine sales 67%, dealers of rough gems 20%, cutting units 100%, wholesale dealers 15% and retail 100%. As argued below, the role of the participants in the value addition process has been changing over time due to the impact of changes in the industry and the influence of exogenous factors on the diamond cartel.

Botswana, and in essence, Debswana's position in the global diamond industry is captured in the "Double Diamond" framework depicted in Figure 2. However, for the purposes of this study, Porter's original exogenous factors, chance and government, were added to the model. This captures the dynamic nature of national competitiveness and the reality that institutional capability is an integral part of national competitiveness.

Figure 2. "Double Diamond" Framework for the Global Diamond Industry



The double diamond framework is useful to analyze the global nature of the diamond industry. The relationship between the parent company, De Beers, and its subsidiary, Debswana, involves a disaggregated value creation chain. Competitiveness determinants are not confined to Botswana, but involve cross-border activities. As argued below, changing circumstances has led to realignments in the value creation chain. Efforts by the Botswana government, a joint venture partner with De Beers in Debswana, are aimed at some vertical integration. De Beers has been under pressure to adopt more competitive practices in the global diamond cartel.

FACTOR DETERMINANTS

Domestic factor conditions in Botswana's diamond industry may be described as basic or generalized factors. The industry is based on the discovery of a natural resource and the availability of unskilled and semi-skilled labor essential for the extractive process of diamond mining. However, advanced or specialized factors essential to add value to rough diamonds originate from FDI emanating from the international environment. This demonstrates the critical role of a multinational corporation, De Beers, in the development of the diamond industry in Botswana. De Beers provided the capital investments for exploration and commissioning of mining productions in Botswana. Largely due to De Beers, FDI inflows to Botswana reached $346m in 2005, up from $20m average annually for 1980-1990. FDI stocks reached $1.084bn in 2005, up from $698m in 1980 (UNCTAD, 2006). De Beers commenced with diamond exploration in the Bechuanaland Protectorate in 1955. In 1967, when the Protectorate became independent as Botswana, a team of De Beers' geologists found abundant quantities of diamondiferous kimberlite near Letlhakane. In the same year, the largest kimberlite pipe (177 hectares) was found near Orapa. Debswana, a 50:50 partnership between De Beers and the Botswana government started operations at the Orapa and Letlhakane Mines in 1971 and 1975, respectively. Another diamond pipe was found in the Naledi River Valley from which the Jwaneng Mine came into full production in 1982. Jwaneng is regarded as the richest producer of gem quality diamonds in the World (Debswana, 2006).

If national competitiveness, as Porter (1990) argues, is a function of productivity then Botswana's mining industry is characterized by robust growth as outlined in Table 1.

Table 1. Average Annual Growth Rates in the Mining and Quarrying Sector: Productivity Indicators in Botswana

Period	Output Index	Employment Level	Capital Index	Labor Productivity Index	Capital Productivity Index	Multifactor Productivity Index	Unit Labor Cost Index	Capital/Labor Ratio Index
1979-1985	18.7	4.0	8.6	11.1	12.1	12.1	-4.6	-0.1
1985-1991	4.8	0.7	5.0	4.0	0.1	0.3	4.2	4.2
1991-1997	0.6	1.8	0.1	-0.5	0.7	0.5	7.2	-0.9
1997-2003*	7.7	-1.2	4.1	9.3	3.6	4.0	-7.3	6.0
2003-2006*	4.8	4.4	2.6	0.3	1.6	1.4	-0.3	-1.1

*Provisional figures
Source: Botswana National Productivity Center (2006)

According to the Botswana National Productivity Center (2006), lower or negative productivity growth is related to startups and expansions of operations. It is expected that when operations in the newer mine stabilizes, productivity in the sector as a whole will improve. Although productivity in the mining sector exceeded that of the manufacturing and construction sectors, it lags that of other sectors such as utilities, commerce, and financial and business services.

The role of the Botswana government, an exogenous factor, was crucial. It added advanced elements to basic production factors. Unlike many developing countries with rich mineral resources which are characterized by mismanagement and corruption, the Botswana government, in sharp contrast, utilized diamond revenues for the development of human capital, infrastructure and mining technology. Adult literacy increased from 34% in 1981 to 81% in 2003. Elementary and high school enrollment reached 98% and 61%, respectively, in 2005. Enrollment at the University of Botswana reached 15,725 in 2004, up from 1,012 in 1981. In 2005, more than 9,000 Batswana were studying at foreign universities (EIU, April 4, 2006; *Sunday Times (SA), 2006*).

At independence, Botswana had approximately 20km of paved road which linked the capitol of Gaborone with the South African border. Today, 4,200km of the road network of 18,327km are paved and linked to all major towns and district capitols. Botswana is closely linked to the South African infrastructure of roads, rail lines and ports. The newly constructed Trans-Kalahari Highway connects Botswana to the Namibian port of Walvis Bay (Central Statistics Office, 2005).

Botswana has been awarded the highest sovereign rates in Africa. Since 2001, Moody's Investor Service assigned a rating of A-2 for long term foreign currency debt, Prime-1 (P-1) for short term foreign currency debt and A-1 for domestic currency debt. Standard and Poor's Rating Service confirmed long and short term currency ratings of A+ and A-1, respectively, for Botswana. The A-/A-1 long term and short term foreign currency ratings were also affirmed (Bank of Botswana, 2006). The ratings underpin the strong culture of fiscal prudence and political stability which characterize Botswana (Bank of Botswana, 2006).

As previously noted, effective institutions are vital for national competitiveness. In the case of Botswana, its institutions and good governance measure well against benchmarks related to the broader definitions of national competitiveness. Botswana ranks high on the Index of Economic Freedom (36/157 countries), Ease of Doing Business (48/175 countries), and the Transparency International Index (36/180 countries). On the Global Competitive Index, Botswana is ranked relatively high (56/104 countries). According to this report, Botswana is competent on factor driven determinants of competitiveness, but still weak in terms of efficiency and innovation. (Heritage Foundation, 2008; World Bank, 2006; Transparency International, 2008; World Economic Forum, 2008) According to Freedom House (2008), Botswana is a free country, i.e. a democracy in terms of political freedom and civil liberties. However, the EIU (May 11, 2009) ranked Botswana 40th out of 167 countries on its Democracy Index. The EIU regards Botswana as a flawed democracy with many strong institutions (e.g. electoral process, civil liberties, government effectiveness), but with some weak institutions in terms of political participation and political culture (e.g. weak and fractured opposition parties).

If, as argued above (Zinnes, Eilat and Sachs, 2001; Kao, et al., 2008), national competitiveness is the ability of a country's industries to generate the wealth of a nation, Botswana has been a success story. The material benefits of the diamond driven economic growth are clearly evident in Botswana. At independence in 1966, Botswana was one of the poorest countries in the World, but the government utilized its diamond wealth to uplift its populous to the level of a middle income country with an estimated per capita GDP of $13,300 in 2008. (CIA World Factbook, 2009)

Some concerns remain about the factor determinants of the mining industry in particular and Botswana in general. Although the government has invested heavily in education, the shortage of semi-skilled and skilled workers remains high. The shortage of generalized skills is exacerbated by two factors: the inadequate quality of local university graduates and unnecessary bureaucratic red tape in issuing ex-patriot work permits. In addition, the high prevalence rate of HIV/AIDS infection is a drag on the country's economy in terms of higher cost burdens and lower productivity rates. (EIU, May 11, 2009) Due to the HIV/AIDS pandemic, Botswana is poorly ranked (124/177 countries) on the Human Development Index. (UNDP, 2008) Despite the wealth creation effect of diamond production, concerns about unemployment persist in Botswana. The diamond industry is not labor intensive and accounts for less than five percentage of employment in the formal sector. Unemployment stood at 17.1% in 2005/06, but the rate increased to 31.6% if discouraged workers were included. (EIU, May 11, 2009)

DEMAND DETERMINANTS

Demand determinant, according to Porter (1990), refers to the nature of home market demand for an industry's product or service. Porter views demand conditions in terms of the size of the home market and in terms of sophisticated and demanding buyers. That is, if the size of home demand is large, firms will invest to reap economies of scale. As argued above, the "Double Diamond" approach viewed demand not just in a domestic context. Indeed, in a globalized economy, multinational firms will internationalize and endeavor to meet demand in many countries through exports and FDI. Jin and Moon (2006) argue that in a "self-reinforced diamond system", internationalization should come first. Once an industry secures a larger global market, the factors of the "Diamond" framework will create dynamics where many of the challenges may be solved. Once the industry has bigger markets by expanding internationally, it will capture the need to invest in upgrading its domestic production and process technologies to handle large volume orders quickly and efficiently. In Botswana, domestic demand for diamonds is negligible. Trade in rough or uncut diamonds is strictly controlled, and trade in finished products (jewelry) is miniscule due to the underdeveloped nature of the local value added functions in the diamond industry. Predominantly, Botswana exports rough diamonds for sale through the De Beers Trading Company in London. When Botswana entered the global diamond market, the De Beers cartel had already dominated this market for almost a century through a single distribution market channel. Additionally, it must be noted that Debswana has, over the past four decades, behaved as a loyal and productive player in the De Beers cartel.

By 2004, World-wide sales of rough diamonds hit a record level of \$11.2bn and diamond sales increased by 6% to \$65.5bn. In 2004, De Beers sold \$5.7bn worth of rough diamonds (48% of the World's total) and reported earnings at \$652m (Spar, 2006). In 2006, consumers around the World spent \$68bn on diamond jewelry (Wu, 2007). If Kurdrle's (1996) view that market share and satisfactory profits are benchmarks of a firm's competitiveness in an industry, then Debswana is clearly the market leader in the global diamond industry. (See Table 2)

Table 2. Estimated World Diamond Output (percentage)

Countries	Carats	Revenue
Botswana	22.37	27.04
Russia	16.79	20.3
South Africa	9.6	13.26
Angola	3.6	9.4
Democratic Republic of the Congo	14.97	7.4
Canada	2.38	5.77
Namibia	1.3	4.96
Australia	23.78	4.59
Source: World Diamond Council (2006)		

Australia produced a larger output in carats, but the Botswana output of high quality gemstones generated substantially more revenue. Botswana is well positioned to maintain market share since its diamond production increased to 34 million carats in 2007, up from 15.5 million carats in 1994. In Botswana, mining's contribution to GDP increased to 42% in 2006/07, up from 37.3% in 2002/03. (EIU, 2009)

Sales of diamond jewelry are concentrated in eight key markets which represent three-quarters of World sales. For example, in 2005, the USA accounted for 31% of World sales, followed by Japan with 25% of sales. India and China are the emerging markets for jewelry consumption and have steadily increased their share to 8.3% and 8.9%, respectively (Diamond Intelligence Briefs, 2007). According to the Gem and Jewelry Export Council, total cut and polished diamond exports witnessed a decline of 7.83% in the financial year 2006-2007. Diamond merchandise exports, valued at \$9.77bn marked a growth of 3.37%. The industry's contribution to the total value addition is \$4.1bn for the financial year 2006-2007. The USA (31%) continues to be the largest exporting destination followed by Hong Kong (21%) and United Arab Emirates (19%) (Diamond Intelligence Briefs, 2007). According to the Cost of Doing Business Survey 2006 conducted for the Jewelers of America, profit margins remain lucrative, e.g. 37.8% on loose stones and 48.7% on finished jewelry (National Jeweler, 2006).

Debswana's dominant role as a producer in the De Beers cartel makes Botswana especially vulnerable in the current world economic downturn in which demand for luxury goods such diamonds has declined dramatically. According to Wonder Nyanjowa, the metals and mining analyst of Frost & Sullivan Consultancy, the decline in disposable incomes meant that consumers in key diamond markets such as the USA, China and India have reduced expenditures on luxury goods. As a consequence, De Beers, the cartel leader, has cut diamond production by 40% from all its operations including Botswana. (The Namibian, 2009) Even this drastic step was inadequate to match demand with supply to maintain premium prices according to the market strategy of the De Beers cartel. As a further step, Debswana has temporarily stopped production in all four of its mines for seven weeks due to a decline of 60% of diamond exports. (Clayton, 2009)

FIRM STRATEGY, STRUCTURE AND RIVALRY

Although Porter expressed strong preference in favor of vigorous domestic rivalry, the Botswana diamond industry is part of the De Beers global cartel with strong monopolistic overtones. Ownership in De Beers consists of a 45% share by Anglo American, 40% by Central Holding Company (Oppenheimer family), and 15% by the Botswana government. (Anglo American, 2009) Diamond production in Botswana is virtually monopolized by Debswana Diamond Company (Prop) (Ltd) in which De Beers and the Botswana government each holds a 50% share. Debswana has four mining operations at Damtshaa, Jwaneng, Orapa and Letlhakane. Some junior diamond mining companies do operate in Botswana. For example, DiamonEx produces around 330,000 carats per year which is about 1% of existing national production. (EIU, May 17, 2006) In contrast, the Debswana mines produced 31.9m carats in 2005, up from 30.3m in 2004 (Debswana Annual Review, 2005).

From 1873 to 2000, the strategy of the De Beers cartel was to control supply, demand and prices of diamonds for the mutual benefit of all players in the value addition chain. These players included producers, diamond cutters and polishers, and jewelry retailers. During this period, the operations of the De Beers cartel have been well documented in the literature (Epstein, 1982; Even-Zohar, 2002; Lenzen, 1970). Collusion rather than competition is the norm in a cartel. The Double Diamond Model obviously reflects market economic principles, which in turn, poorly explain the success and the persistence of cartelization in the world economy.

De Beers' supply control was based on a single distribution channel, The Central Selling Organisation, which marketed three-quarters of global diamond rough production. De Beers controlled prices, and aggregated the parcels of rough diamonds which carefully selected buyers (sightholders) had to purchase or reject in total. In times of high production or low demand, De Beers stockpiled diamond rough (buffer stock), only to be sold when demand conditions improved. The De Beers cartel earned the reputation of handling change effectively, e.g. flooding the market with low grade diamonds to punish Zaire's defection; compromising with Alrosa, the Russian producer of high quality gems, to sell some of its output on the open market; and introducing The Kimberley Protocol (engraving identification on gem stones) to keep "blood diamonds", produced by warlords in Africa, off the market (Spar, 1994; Newman, 1998; Bergenstock, Deily and Taylor, 2006).

De Beers' legendary promotion campaign, valued at approximately $200m per year, exploited the psychology of romance and the myth of scarcity, to create a need among consumers to pay high prices for diamond jewelry. De Beers' strategy is a case of market-driving, where it "leads the customer" and reshapes markets to its own requirements. This is in contrast with market driven strategies which aim to meet the needs as defined by consumers or end-users (Harris and Cai, 2003).

In 2000, De Beers revised its strategy in various ways. Organizationally, De Beers delisted from the Johannesburg Stock Exchange. The new privately owned company, De Beers Centenary AG, also reorganized its single channel market distribution system and changed its name from the Central Selling Organisation to the Diamond Trading Company (DTC). It slashed a number of sightholders and the remaining ones now choose the rough gems they wish to purchase from the DTC. This liberalization in the cartel was partly due to the settlement of a long standing anti-trust lawsuit against De Beers in the USA. De Beers also capitalizes the equity value of its brand name in the following manner: (1) adding engraved microscopic identification on its gem stones; (2) excluding free riders, e.g. buyers, from benefiting from De Beers' generous advertising and promotion budget while focusing on the promotion of its own brand name jewelry products; (3) establishing its own retail shops and setting up a joint venture with Louis Vuitton, Moet Hennessy (LVMH), one of the World's leading luxury companies, to sell De Beers branded line of premium diamond jewelry (With this move, De Beers strongly differentiated the diamond jewelry market in an effort to enhance brand equity in the high quality segment of the market.); and (4) reducing buffer stocks as a cost saving measure.

How did Debswana –that is, the Botswana government--react to De Beers' new strategy? As outlined above, Debswana is the dominant supplier of gem stone quality diamonds to the DTC. Historically, the Botswana government followed a conservative economic policy to encourage foreign investors such as De Beers. The goal of the policy was to utilize acquired wealth from the diamond industry to develop human capital, to improve the infrastructure, to fight HIV/AIDS and to diversify the economy. The government's reaction to De Beers' new strategy differed in terms of short and long term goals. In the short term, the Botswana government and De Beers signed a suite of agreements which will not deviate from past relationships. The mining licenses for all Debswana's mines were renewed and Debswana sales agreement with the DTC was extended for another five years (Debswana, 2006). In the long run, Debswana will assert its position as the dominant supplier to De Beers' production of rough diamonds to lure more profitable downstream value addition activities to Botswana. Festus Mogae, the then President of Botswana, told leading members of the diamond industry in Antwerp that leading companies will be enticed to relocate to

Botswana and to develop "every aspect of diamond manufacturing in Botswana (cutting, polishing, sawing, and whatever else you do to a diamond) to insure skills transfer. We hope that there will be a balance between employment creation (through the cutting of smaller goods) and profitability (cutting of higher quality of goods)" (Diamond Intelligence Briefs, 2006).

Future strategic scenarios for Debswana may point to competing on one of four strategic positions: big brother, i.e. presence across value chain; volume player, i.e. large scale operations in a single segment; specialists, i.e. possession of skills; and straddler, i.e. presence in adjacent segments. Debswana's current strategic position is that of a volume player. It supplies 66% of a combined production of De Beers Consolidated Mines (South Africa), Namdeb (Namibia) and Debswana. By value, Debswana contributes 70% of total De Beers' production and 80% of the revenue generated by De Beers. The Botswana government is actively pursuing a better strategy for Debswana. At a minimum, it plans to adopt a straddler strategy. The government has no choice but to diversify its economy to create a diamond manufacturing sector (aggregation, cutting, polishing). Diamond resources will be utilized to reap the benefits from downstream vertical integration. De Beers, however, remains the "big brother" in the diamond industry by expanding its vertical integration to retail sales, thereby insuring that the cartel will remain dominant in the near future.

RELATED AND SUPPORTING INDUSTRIES

According to Porter (1990), related and supporting industries are those whereby firms coordinate and share activities in the value chain or those involved in products that are complementary to the firms of a given nation. This entails inputs from suppliers and information sharing between end-users to improve the process of innovation and upgrading. Currently, diamond mining in Botswana is capital intensive, but only employs 1.5% of the workforce. However, it clearly stimulates other industries: directly the industry contributes one third of GDP and indirectly there would be little produced without it. According to De Beers, approximately one in every four jobs in Botswana is linked to the diamond industry (Baxter, 2006). According to Debswana's *Strategy 2010,* the firm outsourced or privatized non-core functions such as construction and waste management to related industries (Debswana, 2005). For example, Bateman Engineering N.V. received a contract of $13m to double the processing throughput at Debswana's Damtshaa Mine (Diamond Intelligence Briefs, 2006).

Prospecting for new diamond pipes is an important related industry in Botswana. Debswana's existing mines have reached a production plateau and new mines must be commissioned to uphold Botswana's market share as a producer of rough diamonds. The Resource Stocks World Investment Risk Survey 2005 rated Botswana as the best location for mineral investment World-wide, rising above Australia and Canada. This attractive business environment, together with rising commodity prices, has led to heightened prospecting activities. By 2005, the

Botswana government had already issued 848 prospecting licenses, of which 575 were for diamond prospecting (EIU, April 4, 2006).

Historically, since the mid-1950's, De Beers dominated diamond prospecting in Botswana. Now, De Beers often forms joint ventures in the prospecting business. One such joint venture is with African Diamonds, an Irish based exploration firm. African Diamonds has discovered significant diamond deposits at its AK6 Project near Orapa. This discovery may be potentially developed into one of the ten largest diamond mines in the World (EIU, July 17, 2007). However, to commission a new diamond mine is a capital intensive business. For example, Broken Hill Properties spent approximately $500m to get its DiaMet Mine in Canada on production. De Beers took 12 years since the discovery of diamonds and financial outlays of $300m to bring its Venetia Mine in South Africa to production (Vos, 1989).

As outlined above, value creation in the global diamond industry occurs mostly in related industries such as aggregation, cutting and polishing as well as in retail sales. Although the value chain in the diamond industry has been virtually integrated under the De Beers cartel, changes in the operation of the cartel since 2000 indicate that downstream value addition will increasingly happen in related and supporting industries. As previously mentioned, (1) these value adding functions take place outside Botswana and (2) the Botswana government is actively pursuing a strategy to bring more value adding functions to their country. From 2007, the aggregation or blending of diamond parcels for sale to sightholders will no longer be handled by the DTC in London, but by the Botswana Diamond Valuing Company (BDVC) in Gaborone. The BDVC will operate from the Diamond Technology Park developed by the Botswana government at the first-phase cost of $80-90m. This value adding function will bring best practices and technology to Botswana which will result in domestic job creation, skills transfer and increased government revenues to fund the objectives of the country's Ninth National Development Plan (EIU, July 31, 2006). However, due to the global economic downturn, De Beers has put on hold all plans to move rough diamond sorting and valuing to Botswana. (Clayton, 2009)

Botswana is also looking to push its diamond fortunes further up the value adding chain by establishing cutting and polishing factories in the country. In 2006, four licenses for such operations were granted by the government (Novellino, 2006). Three of these manufacturing licenses are held by some of the World's largest diamond conglomerates and DTC sightholders: Steinmetz Diamond Group, SAFDICO and Suashish Diamond Ltd (Diamond Intelligence Briefs, 2005).

PROSPECTS FOR NATIONAL COMPETITIVENESS IN BOTSWANA

The future points to various ways in which national competitiveness may be enhanced in Botswana's diamond industry. Despite some limitations, vertical integration in the industry is the most obvious strategy. Debswana will likely broaden its market share in production to include aggregation and even more assertive entry into the cutting and polishing industries. To do so successfully, Debswana requires access to specialized factors such as human capital and technology. Foreign firms which outsource downstream production to Botswana will fulfill some of these needs. However, Debswana recognizes that in the global competitive environment the firm already suffers from a shortage of managers, engineers and technicians (Debswana, 2005). Debswana's expansion of in-house training may help to alleviate this factor deficit. In 2009, the new University of Science and Technology is slated to open with 2,500 students. The government should also increase funding for study abroad particularly in neighboring South Africa which has a highly developed educational system for technical and managerial training. (EIU, April 4, 2006)

In terms of marketing, the single distribution channel offered by the DTC, i.e. De Beers' Supplier of Choice Mechanism, will serve Botswana's interests the best. Botswana lacks the specialized factors to develop a sophisticated marketing strategy on par with De Beers' renowned marketing prowess. Debswana has declined the opportunity to acquire an equity share in the DTC due to its high operating costs of approximately $200m per year. Suggestions that the Botswana government should sell its 15% share in De Beers will be contrary to the country's prudent and conservative policies. The dividend flows from De Beers, particularly the increased revenue from retail sales, remain a lucrative source of revenue to Botswana. Also, Debswana is a beneficiary of De Beers' market intelligence which is unrivaled in the diamond industry. Previously, the Botswana government sold its share in Anglo American Corporation (AAC) to balance a budget deficit. In the long run, that was an ill advised decision given the profitability of AAC, the fourth largest mining company in the World based upon market capitalization (*Financial Mail*, 2007).

Replacing the De Beers' monopoly with an oligopoly may be fraught with risk for supplier nations. Without De Beers' enforcement on supply, price determination and market driving strategies, competitive reaction may lead to destructive competition among players such as Alrosa, Rio Tinto, BHP Billiton or even Debswana. The forces of the free market will undoubtedly undermine the diamond cartel and diamond dependent economies such as Botswana (Mineweb, 2006).

The Botswana government has also investigated the creation of a national brand for the country (Diamond Intelligence Briefs, 2006). Such a branding strategy may be useful to promote the attractiveness of Botswana's business environment among foreign investors. However, a Botswana brand name in the diamond industry will be a futile exercise given De Beers' proven brand equity in the industry. De Beers' brand equity is firmly based on the global recognition of its brand name, retail products and promotional strategies. In balance, a "straddling" strategy appears to be the most realistic position for Botswana to tighten its national competitiveness in the global diamond industry.

Diamond reserves, even with heightened prospecting, remain a finite resource. In the long run, the Botswana government, quite rightly, strives for a more diversified economy which will be less dependent on diamond revenues. Diversification of the economy and a reduction of diamond dependency pose daunting challenges for Botswana's national competitiveness. Botswana's efforts to develop manufacturing and financial service sectors are inhibited by the dominance of the South African economy in the southern African region (Van Wyk and Custy, 2004). Manufacturing and financial services only contribute 3.6% and 10.5%, respectively, to GDP in Botswana (EIU, September 27, 2006).

The demands for energy in Botswana and South Africa, however, may offer other opportunities for diversification. Botswana has over 20bn tons of underdeveloped coal resources. Coal Investment Corporation, and its wholly owned subsidiary, Meepong Resources, have formed a joint venture with Kumba Resources, South Africa's largest coal mining company, to supply 2.5m tons per year of thermal coal to power stations in South Africa (EIU, May 19, 2006). The logical step for Botswana will be to attract FDI and to build its own power stations. This will reduce domestic dependency on South African energy power and create export opportunities to South Africa and other countries in the region where energy demands will outstrip supply in the near future (EIU, May 19, 2006). This energy dependency on South Africa has worsened considerably since South Africa suffered extensive "blackouts" in 2008 due to the lack of capacity in the face of rising demands for energy.

This qualitative study is an effort to contribute to the theory of national competitiveness. Although Botswana is a small developing country, it is an African success story. The country has established a stable democracy with strong institutions and maintains a business environment conducive to market capitalism. Successful government-industry relations have been the key to effective management and production of a national resource. The dynamic development of the determinants of Botswana's national competitiveness in a relatively short time period, is testimony to the effectiveness of government-MNE collaboration to serve both firm profitability and national socio-economic upliftment.

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IMPROVING THE PROMOTION OF CSR INITIATIVES: A FRAMEWORK FOR UNDERSTANDING STAKEHOLDER COMMUNICATIONS FROM A DYNAMIC LEARNING PERSPECTIVE

Derick Davis, Virginia Tech University
Jason B. MacDonald, Boise State University

ABSTRACT

In this paper we propose a dynamic framework for understanding how stakeholder perceptions influence firm decisions about corporate social responsibility initiatives. In discussing the framework, we outline the process through which NGOs leverage powerful stakeholders, such as shareholders, in their efforts to encourage social responsibility. Based on our framework, we recommend that firms take the following three steps to increase the success of CSR initiatives: (1) develop meaningful and relevant measures of the impact of CSR initiatives for each stakeholder, (2) craft stakeholder-targeted promotion plans that explain in objective terms how the initiative addresses stakeholder specific concerns, and (3) explain to core stakeholders, such as shareholders, how the firm is satisfying or addressing the concerns of other stakeholders.

INTRODUCTION

In recent years, we have witnessed efforts by corporations to profile themselves as socially responsible in response to the simultaneous development of the anti-globalization movement, shareholder activism, and corporate governance reform. The name change of British Petroleum to Beyond Petroleum is just one example of how firms are trying to communicate their commitment to society. Despite the growing enthusiasm for corporate social responsibility (CSR) by marketing practitioners and academics, there is little evidence to show that these initiatives have a significant positive effect on firm value. Mathur and Mathur (2000), for example, find that announcements related to green promotions produce significantly negative stock price reactions. Similarly, Vogel (2005) writes, the financial performance of many firms with relatively positive CSR reputations has been poorer than that of their less responsible competitors. In addition, Vogel (2005) posits, "The more a corporation trumpets its social or environmental commitment, the more vulnerable it is to challenges by activists when its behavior fails to meet their expectations" (p. 26)

We suggest that the shortcomings of marketing in terms of successfully promoting CSR initiatives are due primarily to marketing's failure to recognize the relationships between the stakeholders that are the recipients of the CSR initiative message as a dynamic learning system. That is, in spite of the existence of research documenting the effects of direct and indirect communications (see Frooman, 1999; Frooman & Murrell, 2005) within the stakeholder system, marketing scholars remain largely focused on corporate responsibility toward customers and channel members, while largely ignoring the role of marketing in managing direct and indirect communications with other stakeholders such as employees, non-governmental organizations NGOs, and shareholders.

Although marketing has developed expertise in such areas as cause-related marketing and environmental marketing, these studies are typified by their emphasis on direct seller-to-consumer communications. Because of this emphasis, questions such as "How are firm's efforts to communicate CSR initiatives to consumers interpreted by other regulators and shareholders?" and "Do asymmetries exist between stakeholders in terms of their perceptions of firms' CSR initiatives?" have gone unaddressed by the marketing literature. Ignoring the possible indirect effects of CSR communications on the stakeholder system has also discouraged investigation into how those lessons firms learn from past failures or successes of CSR initiatives influence decisions about future CSR initiatives.

Following the tradition of dynamic strategy frameworks (Dickson, 1992, 1996; Hunt & Morgan, 1996), we see the interaction of stakeholder responses to CSR initiatives as part of a dynamic learning system. In contrast to previous approaches in the marketing literature, our framework incorporates indirect as well as direct communication paths that exist between the firm, customers, investors, and NGOs. We also frame asymmetry, in terms of the expectations and perceptions of investors, consumers, firms, and NGOs, as a central component. The combination of dynamic systems and asymmetries allow short-term perceptual gaps to produce long-term measurable effects. We highlight the mechanisms behind such changes and focus on the CSR decisions-financial performance relationship within this dynamic context.

This article presents a conceptual framework that broadens our understanding of the dynamics of how CSR initiative promotions affect stakeholder perceptions and eventually, future decisions about CSR initiatives. The goal is to demonstrate how marketing knowledge of managing exchanges can be applied to relationships beyond the firm-to-customer or firm-to-supplier interaction. More specifically, our objective is to illustrate the dynamic effects of marketing CSR initiatives to consumption markets, NGOs, and consumption markets.

We begin with a brief overview of stakeholder theory and the role of indirect influence strategies. Next we present of framework for studying stakeholder responses to CSR initiatives that helps explain the decision making of firms and NGOs. We then make recommendations for improving the promotion of CSR initiatives and discuss potential future research avenues.

LITERATURE REVIEW

"Since Freeman (1984) published his landmark book, *Strategic Management: A Stakeholder Approach*, the concept of "stakeholders" has become embedded in management scholarship and in managers' thinking" (Mitchell, Agle & Wood, 1997, p. 853). Freeman's conceptualization of the firm as the hub of a wheel with stakeholders at the ends of the spokes around the wheel has become the convention from which stakeholder theory has developed (Frooman, 1999, p. 191). However, as Frooman (1999) points out, the dyadic nature of relationships in the hub-and-spoke conceptualization of stakeholder theory ignores the existence of interactions between stakeholders and their related indirect communications.

Indirect Communication and Stakeholder Influence Strategies

Although Maignan and Ferrell (2004) suggest that "there is only embryonic marketing research on CSR communications" (p. 17), there exists a rich management literature on how social stakeholders, such as NGOs, use direct and indirect communications to influence firm decisions. Frooman (1999) and Frooman and Murrell (2005), for example, show that direct communication efforts with firms by NGOs are deemed largely ineffective because of a low level of interdependence. In this context, a low level of interdependence suggests the welfare of one entity in the relationship is not directly dependent on the welfare of the other. On the other hand, indirect influence strategies, in which environmentalists use partners to pressure consumers and investors, were common.

Guay, Doh, and Sinclair (2004) also find that NGOs influence corporate conduct via direct, indirect, and interactive influences on shareholders. For example, the Taskforce on the Churches and Corporate Responsibility (TCCR) (a Canadian NGO), lobbied Talisman Energy ----- a Canadian firm operating in Sudan -- to adopt clear human rights standards and cease operations if those standards were not passed. Although the TCCR proposal was not passed, analysts estimate that it discounted the market price by 25% and a year later, Talisman withdrew from Sudan (Guay, Doh, & Sinclair, 2004).

Of particular interest to this research is Frooman and Murrell's (2005) finding that NGO influence strategies were in part determined by organizational learning. That is, NGOs, and especially environmentalist groups, learn from experience that indirect influence strategies commonly produce more positive results than direct influence strategies. As a result of this learning, NGOs develop a repertoire of indirect-influence strategies that may become so pervasive that indirect influence strategies are employed even when direct strategies would be more appropriate.

STAKEHOLDER INTERACTIONS AND THE PROMOTION OF CSR INITIATIVES

Maignan and Ferrell (2004) suggest that if businesses hope to enjoy concrete benefits from CSR, they must intelligently communicate their initiatives to relevant stakeholders. Although their approach is an improvement over the mass of marketing research on the subject, it focuses on firm-to-stakeholder relationships and once again fails to recognize the importance of stakeholder-to-stakeholder communications. Thus, to develop a greater understanding of CSR communication we need a framework that incorporates firm-to-stakeholder interactions, stakeholder-to-stakeholder interactions, and is dynamic in that it includes the effects of learning. Although there is a dearth of literature on the interactive effects of stakeholder perceptions on the success of CSR initiatives, we have identified a recently presented framework for studying the marketing/finance relationship that views stakeholder's relationships as interactive, is dynamic, and includes the effects of learning.

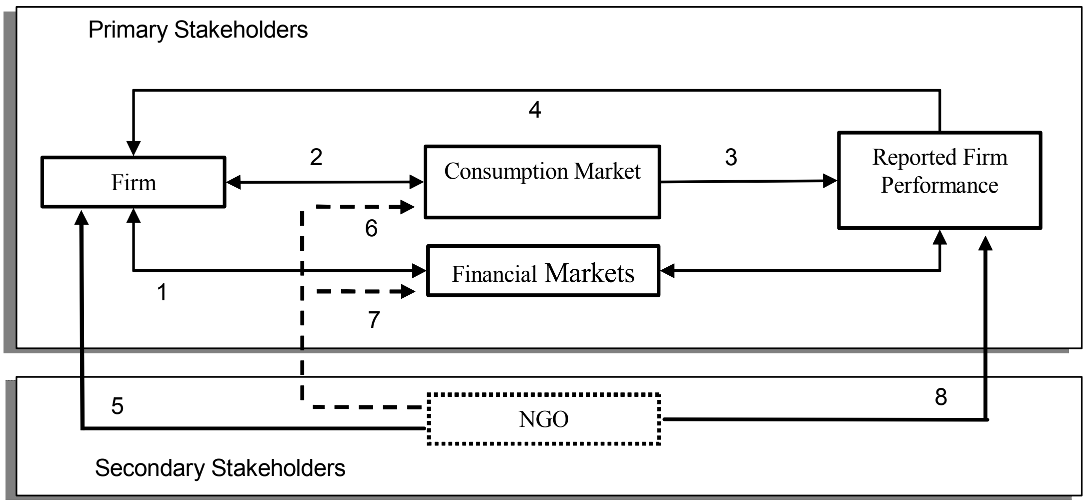
Lovett and MacDonald (2005) show in their dynamic framework of the marketing/finance relationship how direct and indirect communication channels can be used to increase the likelihood of marketing decisions being properly valued by the financial markets. The framework is based on the premise that firms indirectly influence financial market perceptions of expected firm performance through its performance in consumption markets which is in turn reflected in reported firm performance (e.g., 10K reports, annual reports, etc.) and through direct interactions with financial market representatives such as analysts.

A firm's failure to recognize interactions between consumption markets and financial markets and the consequent opportunity to directly influence financial market perceptions, can lead to asymmetric perceptions of firm performance (Lovett & MacDonald, 2005). In this situation, a firm may be overvalued or undervalued. When it is overvalued, an abundance of low-cost capital will flow to the firm. In the short-run, this may be a positive for the firm if they can effectively utilize the capital so that the market value is justified. However, the overvaluation may also lead to a huckster situation where the firm allocates more resources to directly influencing financial market perceptions rather than the consumption markets (Lovett & MacDonald, 2005). When the firm is undervalued, it faces increased capital costs and may not be able to hold its position in the consumption markets. In this situation the firm may make questionable decisions that have negative effect on market value in the long-run (such as implementing increasingly greater price discounts on cars) simply to regain financial market approval in the short-run (Lovett & MacDonald, 2005).

Extending the Lovett and MacDonald Framework

Although the Lovett and MacDonald (2005) framework facilitates understanding of basic marketing/finance relationships, it does not address the role of non-core stakeholders, such as NGOs, or other non-economic units within consumption markets. To address this omission, we propose a dynamic framework that incorporates potentially asymmetric perceptions of value with respect to firms' CSR initiatives on the part of firms, consumption markets, NGOs, and the financial markets. Figure 1 highlights the dynamic nature of this system of relationships and captures the multiple paths through which marketing influences financial market perceptions of CSR initiatives.

Figure 1: A Framework for Understanding Stakeholder Communications from a Dynamic Learning Perspective



The core elements in this framework are the firm, consumption markets, NGOs, financial markets, and reported firm performance. Reported firm performance is comprised of cash flows, sales revenues, market share, and profitability; plus any framing and interpretation of firm performance that become available to financial markets (Lovett & MacDonald, 2005). Lovett and MacDonald (2005) conceptualize the financial markets and consumption markets as sets of actors (e.g., consumers, investors, analysts) that form perceptions about the firm and its products. Purchases are said to be both a reflection and a driver of consumption market perceptions.

The process that shapes perceptions in financial markets helps determine the expected value and liquidity of the firm (Lovett & MacDonald, 2005). Stock markets form perceptions of the expected value of the firm that are reflected as stock prices. These expected values incorporate the most up-to-date information about cash flows and risk, but necessarily include predictions of future cash flows (Fama & French, 1992). However, even the efficient market hypothesis acknowledges that investors do not always correctly and immediately forecast the firm's future returns (e.g., Ball & Brown, 1968). Because these short-term differences might be influenced by a firm's actions (Epstein & Birchard, 2000; Eccles et al., 2001), perceptions of performance may differ from actual firm performance and between investors (Barney, 1986).

In our framework, the NGO's perception formation process is more similar to the process followed in the consumption markets than the financial markets. That is, because there are no formal exchange markets for corporate social responsibility related information, NGOs and other environmentalists have a more difficult time getting efficient access to information about firm activities. However, despite the lack of a CSR information clearing house, NGOs do exchange information with other environmental organizations and stakeholders. NGO communication within the framework may be direct or indirect and commonly includes press releases, demonstrations, and lobbying.

Stakeholder Salience: Why Do Firms Pay More Attention to One Stakeholder?

Research suggests that salience, or the importance of a stakeholder to the firm, is central in determining how a firm attends to stakeholders (Agle, Mitchell & Sonnenfeld, 1999). Mitchell, Agle & Wood, (1997) suggest that three key stakeholder attributes affect stakeholder salience: power, legitimacy, and urgency. Power is defined as the ability to apply a high level of direct economic reward or punishment, coercive or physical force, and/or positive or negative social influence. Stakeholder legitimacy is defined as the acceptability or appropriateness of an entity's actions within some socially constructed systems of norms, values, beliefs, and definitions. Finally, stakeholder urgency is defined in terms of criticality and temporality. "A stakeholder claim is urgent when it is important and when delays in attention are unacceptable" (Agle, Mitchell & Sonnenfeld, 1999, p. 508).

Consistent with Neville, Bell, & Whitwell (2004), we suggest that urgency moderates the impact of power and legitimacy on stakeholder salience, altering the intensity or immediacy of stakeholder claims. Thus, stakeholders may have legitimate power over the firm, but if they do not feel the urgency to act, their demands will be less salient. Conversely, stakeholders may feel a sense of urgency in their demands, but if their demands are not legitimate and they do not have power over the firm, they will be less salient. Stakeholders that have power, legitimacy, and urgency, however, will be very salient to the firm.

Lovett and MacDonald (2005) suggest that urgency is negatively related to the level of stakeholder certainty in terms of firm performance. That is, as the gap between what the stakeholder expects of the firm and what they observe widens, urgency increases and the pressure on the firm to respond to the stakeholder concerns increase. In contrast, as stakeholder certainty increases, urgency decreases.

In our framework, the perceived gap between stakeholder expectations and observed behavior are directly influenced by consumption market perceptions, observable firm performance, and NGO perceptions. In addition, because of stakeholder interactions, the consumption market perceptions that influence financial market perceptions are also influenced by NGOs. Finally, within our framework exist multiple venues for firms and stakeholders to disseminate and receive information, all actors must learn how to function within this framework to gainfully manage perceptions.

Firm/Stakeholder Decision Making and Learning Feedback Effects

The framework consists of multiple feedback loops that are fueled by stakeholder perception formation processes. Within each of these loops exist learning feedback effects that play a critical role in stakeholder decision-making. In this context, learning feedback effects refer to a recursive relationship where the results of changes in resource or capability deployment are dependent on what was learned from past changes in resource and capability deployment (Dickson et al., 2001).

Firm Decision Making

Firm decision making in our framework is shaped by stakeholder feedback on past decisions. Feedback from the financial markets in the form of a stock price decrease after the launch of "green" or environmentally friendly products, for example, is a signal to the firm not to produce more green products (arrow 1 toward the firm, Figure 1). Similarly, the product demand increases, such as those seen for Toyota's environmentally friendly hybrid Prius (CNN, 2005), are signals from the consumption markets to produce more environmentally friendly cars (arrows 2, 3, and 4, Figure 1).

Because of the learning effects inherent to our framework, the financial markets learn over time to trust or doubt the decision making of firms in relation to CSR. Mathur and Mathur (2000), for example, suggest that credibility earned from past success results in more positive stock price reactions to CSR initiatives of better performing firms. In this context, better performing firms are "better" because they consistently match or exceed the performance expectations of the financial markets. Consequently, the promotion of a CSR initiative by a better performing firm will cause much less uncertainty and urgency in the financial markets than the same initiative by a historically poor performer. In the end, shareholders are less salient to the firm because they are unlikely to exercise their power.

Although shareholders are typically one of the most salient stakeholders (Mitchell et al., 1999), their ability to influence CSR related decision will vary. That is, even if there is a high degree of uncertainty about a firm's CSR initiative, shareholders will have little influence on future decisions about the initiative if the firm has a low level of dependence on the financial markets. Firms that generate sufficient profits from operations, for example, will be less dependent on the financial markets than firms that use public offerings to raise capital or firms that use a high degree of stock options for compensation (Lovett and MacDonald, 2005). Thus, shareholders may possess legitimacy and urgency but still have little salience with the firm because power is derived from dependence.

Investment decisions related to environmentally friendly car technologies exemplify the varying influence of the financial markets on CSR initiatives. Although all of the major automobile manufacturers have conducted R&D on low-emission automobile technology, many cut their investments because of financial market pressures. General Motors, for example, was once a market leader and even began selling an electric car but later cut the program because it was not profitable in the short-run. Within the same environment, Toyota and Honda continued to invest in hybrid technologies and even sell the resulting products at a loss despite financial market perceptions of the marketability of hybrid cars. Now that the price of gasoline has risen, Toyota has such a competitive advantage that automobile giant Ford decided to license the technology Toyota uses to produce the Prius instead of developing its own technology (Toyota, 2004).

In our framework, Toyota was able to preserve its commitment to hybrid technology for two key reasons: (1) it had consistently demonstrated a propensity to make good decisions that led to superior financial performance and market value and (2) it had a relatively low dependence on the financial markets. That is, even before the near collapse of U.S. car manufacturers in 2008-2009, GM’s market value was approximately one seventh of Toyota’s ($20 billion vs. $140 billion in 2005-2006) despite the fact that GM held a larger share of the automobile market (Forbes, 2005a,b). Further, Toyota has been consistently much more profitable and uses fewer stock options for compensation. Consequently, Toyota could afford to ignore short-term financial market pressures to change unprofitable investments in CSR while GM could not.

NGO/Stakeholder Decision Making

The popularity of indirect communication channels among NGOs for influencing firm decisions is another example of a learning effect. Although it is possible for a NGOs to have a direct relationship with a firm (arrow 5, Figure 1), few NGOs have enough power, or are salient enough, to directly influence firm decision-making. However, NGOs have learned over time to leverage the power of other stakeholders in order to accomplish their goals. A prime example of this behavior is NGOs use of shareholder activism as a mechanism to indirectly influence CSR related decision-making (Guay, Doh, and Sinclair, 2004).

According to our framework, NGOs increase their influence on firm decisions by building the perception that they have the ability to affect a firm's performance and its market value. The three key options that these organizations have are: (1) negatively influencing consumer perceptions of the firm through advertising campaigns, demonstrations, or organized boycotts (arrow 6, Figure 1), (2) directly lobbying of financial market entities such as analysts, institutional investors, and individual investors (arrow 7, Figure 1), and or (3) attempting to influence consumption market and financial market perceptions by framing or drawing attention to aspects of firm performance that may have otherwise been overlooked (arrow 8, Figure 1).

Greenpeace activists, for example, attempted to influence consumption market and financial market perceptions indirectly when they stormed Trader Joe's grocery stores in the U.S. and seized cornbread mix from the shelves. Although the demonstration took place in the Trader Joe’s stores, it was really targeted at consumers and investors. Trader Joe's initially dismissed the behavior as "hyteria", but 6 months later management announced that it had agreed to force its suppliers to stop using genetically engineered ingredients (Frooman & Murrell, 2005). Efforts to indirectly influence corporate management through advocacy directed toward institutional and individual shareholders are typically subdued, relative to the discussed Greenpeace actions, but can also be confrontational. Friends of the Earth, for example, successfully leveraged the support of socially responsible investors to help convince the U.K. company Balfour Beatty not to construct a dam at Ilisu in Turkey (Sparkes & Cowton, 2004). In contrast, Partizans, a small London-based environmentalist group would occasionally storm the podium at shareholder meetings for RTZ, the world's largest mining company (Mackenzie, 1997).

IMPROVING THE PROMOTION OF CSR INITIATIVES

For CSR initiatives to be successful their value must be understood by many different stakeholders. Further, stakeholder expectations of the outcomes of a firm's CSR initiative should not be dissimilar to observable performance. Although a gap between expectations and performance can cause stakeholders to overvalue a CSR initiative, undervalued initiatives are likely a greater concern. Based on our framework, we suggest that firms take the following steps to increase the success of CSR initiatives and the probability that a firm's CSR initiatives are properly valued by stakeholders.

1. Develop better measures of CSR initiatives that are relevant to salient or potentially salient stakeholder
2. Craft stakeholder-targeted promotion plans that reflect measures of CSR initiatives and explain in objective terms how the initiative addresses stakeholder specific concerns.
3. Explain to core stakeholders, such as shareholders, how satisfying or addressing the concerns of secondary stakeholders will also benefit core stakeholders.

General Electric's Ecomagination program exemplifies what we would consider good CSR promotion. Ecomagination is a GE initiative to aggressively bring to market new technologies that will help customers meet important environmental challenges (GE press release, 2005). The GE program differs from typical environmental initiatives in that it uses relatively objective outcome measures to explain its value for the environment, customers, and shareholders. On GE's Ecomagination website, for example, GE promotes products that reduce air pollution, save customers' money, and increase profits and revenues for the company. In each case stakeholder relevant metrics are used to frame outcomes. For example, new locomotives are said to produce 83% fewer particulates and 60 percent fewer nitrogen oxide emissions. Compact fluorescent lights last ten times as long and offer energy savings of 70-75 percent. And environmentally friendly products produce competitive advantage and will lead to $20 billion in savings by 2010. Finally, the GE site also uses interactive media and press releases to explain to core stakeholder how their concerns and the concerns of other stakeholders are being met.

FUTURE RESEARCH

The stakeholder communication framework we have proposed is amenable to operationalization and empirical testing. Future empirical research on the framework may employ a variety of research methodologies and data sources to test core aspects of the overall framework and/or more limited relationships between select stakeholders.

For researchers that are interested in examining the overall framework, we suggest empirical examination of two core aspects: asymmetric stakeholder perceptions and the dynamic character of stakeholder salience. Although the case method and historical research have been used by authors such as Pajunen (2004) and Zietsma and Winn (2009) to map salience level changes and the evolving relationships between stakeholders, these research approaches are limited in terms of their statistical testing and gereralizability (Yin, 2009). Consequently, we encourage a more rigorous empirical research approach. Cross-sectional descriptive research, for example, would be appropriate for establishing asymmetric perceptions among stakeholders while a longitudinal or repeated cross-sectional research design would be needed to test for changes in salience over time.

In addition to the descriptive research approach, relationships in the framework could be explored using experimental research. In this approach, the levels of salience, urgency, and power for primary and secondary stakeholders could be manipulated across a range of scenarios to study the effects of salience on CSR decision making. The experiments could be conducted in the field (e.g., Frooman & Murrell, 2005) or in a laboratory setting similar to the way that game theory has been used to study ethical decision making (see Gibson, 2003). In the laboratory experiment, repeated games, where the current game is determined by the outcomes of a previous game, could be used to further explore CSR decision making over time.

Field based and/or lab based research efforts that include perceptual or self-reported data would be aided by existing salience related measures that have already been tested with respect to their psychometric properties. Agle, Mitchell and Sonnenfeld (1999), for example, present a set of Likert-type, self reported measures that have served as a base for a number of salience related studies (e.g., Eesley & Lenox, 2006; Mattingly, 2004) and have been adopted for use from the NGOs perspective (see Frooman & Murrell, 2005). Table 1 contains a sample of survey items used in various studies to assess stakeholder salience and its components.

In addition to the opportunities for testing the overall framework, there are a number of interesting relationships in the framework that can be explored. A good starting point for this type of research is the investigation of how the promotion of a CSR initiative affects its sustainability. Within the proposed framework, a company like Ford Motor Co. may launch a CSR initiative that is strongly supported by secondary stakeholders, such as environmentally focused NGOs. However, the sustainability of the initiative is expected to be dependent on the support of other, more salient stakeholders such as shareholders. If shareholders undervalue the initiative, for example, they will likely put pressure on Ford to stop spending money on what appears to be a value depleting venture. Our basic recommendation is that firms can offset the possible effects of the undervaluing of a CSR initiative by salient stakeholders, and especially shareholders, by crafting stakeholder-targeted promotions.

Table 1: Sample Measures of Key Framework Variables

Concept	Example of Relevant Literature	Potential Operationalization
Stakeholder Salience	Bhattacharya & Sen (2003); Mitchell, Agle, & Wood (1997)	"The claims of this stakeholder would be given priority over other stakeholders" and "I think about company X often"
Stakeholder Power	Agle, Mitchell, & Sonnenfeld (1999); Frooman & Murrell (2005); Pajunen (2006); Rowley (1997)	"This stakeholder group had power, whether used or not (definition: the ability to apply a high level of direct economic reward or punishment [money, goods, services, etc.]" and "This stakeholder group had access to, influence on, or the ability to impact the firm, by encouraging other stakeholders to apply a high level of direct economic reward or punishment."
Stakeholder Urgency	Agle, Mitchell, and Sonnenfeld (1999); Eesley & Lenox (2006); Mitchell, Agle, & Wood (1997)	"This stakeholder group urgently communicated its claims to the firm" and "This stakeholder group actively sought the attention of our management team."

In addition to the opportunities for testing the overall framework, there are a number of interesting relationships in the framework that can be explored. A good starting point for this type of research is the investigation of how the promotion of a CSR initiative affects its sustainability. Within the proposed framework, a company like Ford Motor Co. may launch a CSR initiative that is strongly supported by secondary stakeholders, such as environmentally focused NGOs. However, the sustainability of the initiative is expected to be dependent on the support of other, more salient stakeholders such as shareholders. If shareholders undervalue the initiative, for example, they will likely put pressure on Ford to stop spending money on what appears to be a value depleting venture. Our basic recommendation is that firms can offset the possible effects of the undervaluing of a CSR initiative by salient stakeholders, and especially shareholders, by crafting stakeholder-targeted promotions.

We suggest employing the event study methodology to study the effects of shareholder-targeted CSR promotions on the market valuation of a CSR initiative. This research method, introduced by Fama et al. (1969), is useful for measuring the effects of strategy changes on market value. In brief, event studies use time series analysis to identify potential excess returns associated with the announcement of a new strategy or initiative. Although it is most common in the fields of economics and finance, it has also been used to examine the market valuation effects associated with marketing strategies (see Chaney, Deviney & Winer, 1991) and even CSR (see Mathur & Mathur, 2000).

The LexisNexis Academic database of U.S. newspaper articles could be used to identify announcements related to the beginning and ongoing status of formal CSR initiatives. Announcements related to selected CSR initiatives could be examined and coded to reflect the stakeholder targets addressed (e.g., shareholders, NGO, regulators, etc.) and the specificity of the firm's efforts to articulate the possible value of the initiative to each stakeholder. An ordinal scale could be used to code the firm's communication efforts (e.g., 0 if the promotion made no effort to explain the effects of the initiative on shareholders, 1 if the promotion mentions shareholders, and 2 if the promotion details how the initiative will affects sales and future free cash flows which are two key factors in the determination of stock prices). A finding of significant differences in the market valuations of CSR initiatives across CSR-promotion type would suggest that CSR promotions moderate how the financial markets respond to CSR announcements.

After examining the relationship between CSR promotions and the market valuation of CSR initiatives, researchers could also explore how shareholder salience affects the responsiveness of firms' CSR-related decision making to financial market valuations. Although the framework suggests that firms' decision making reflects the concerns of salient stakeholders, the framework also emphasizes that stakeholder salience is very much transitory in that it can be acquired as well as lost over time (Mitchell, Agle & Wood, 1997). Thus, the salient stakeholder that influenced a firm to launch a CSR initiative may not be salient to the firm after the launch. Furthermore, if the launch of the CSR initiative was an unexpected event, the resulting expectations gap (Lovett & MacDonald, 2005) may lead to increased urgency on the part of other, potentially more salient stakeholders. In terms of shareholders, we expect stock price changes to be a signal of urgency and investor approval or disproval of the firm's strategy.

Although a change in stock price in response to a CSR announcement may serve as a signal of shareholder urgency, urgency alone does not equal salience. As Lovett and MacDonald (2005) point out, urgency merely moderates the effects of dependence. Consequently, if the launch of a CSR initiative leads to increased shareholder urgency and the firm is dependent on shareholders, it will likely respond to negative market value changes by ending or limiting the CSR initiative. In contrast, an increase in urgency should have little effect on firms that are not heavily dependent on shareholders. Toyota's decision to fund research and production of environmentally friendly vehicles, for example, may have led to increased urgency on the part of Toyota shareholders. However, if Toyota was less dependent of the equity markets, relative to another automobile company like Ford, Toyota's shareholders would be less salient and have less influence on its decisions related to the ongoing production of these vehicles.

To study the effects of market value changes on firms' decision making related to CSR initiatives, we once again recommend the use of the even study methodology. This methodology could be used to identify sets of firms that encountered significant negative or positive returns to the announcement of a CSR initiative. These sets could then be further divided into portfolios based on the firm's level of dependence on the financial markets. We recommend using a financial-metric based measure such as equity dependence as a proxy for shareholder power rather than the more common self-reported, Likert-type scale measures of power. Although these scales have proved useful for measuring stakeholder power (see Hendry, 2005; Agle, Mitchell & Sonnenfeld, 1999), a financial-metric based measure may allow for more accurate creation of portfolios.

Equity dependence refers to a firm's reliance on external equity to finance marginal investments. Firms with a high level of equity dependence are much more sensitive to changes in stock price (Backer, Stein & Wurgler, 2003). Kaplan and Zingales (1997) present a comprehensive measure of equity dependence called the KZ index that has been used in a number of existing financial market studies (e.g., Lamont, Polk & Saá-Requejo, 2001).

The construction of the KZ index is based on assumptions that a firm is more likely to be dependent on the financial markets when: 1) its profitability, cash balances, or previously untapped debt capacity are low, 2) its growth opportunities are good, and 3) when the incremental debt capacity of new assets are low. The higher the KZ index, the more dependent the firm is on the financial markets for equity (Lamont, Polk & Sa‡-Requejo, 2001). Data for the index are taken primarily from the Compustat database. The five-variable version of the KZ index used by Baker, Stein and Wurgler (2003) is as follows:

$$KZ_{it}=-\beta_1 CF_{it}/A_{it-1}-\beta_2 DIV_{it}/A_{it}-\beta_3 C_{it}/A_{it-1}+\beta_4 LEV_{it}+\beta_5 Q_{it} \qquad \textit{Equation (1)}$$

where $CF_{i\,t}/A_{i\,t\text{-}1}$ is cash flow (Item DP+ Item IB) over lagged assets(Item PPENT); $DIV_{i\,t}/A_{i\,t\text{-}1}$ is cash dividends (Item DVC + Item DVP) over lagged assets; $C_{i\,t}/A_{i\,t\text{-}1}$ is cash balances (Item CHE) over assets; $LEV_{i\,t}$ is leverage ((Item DLTT+ Item DLC)/(Item DLTT + Item DLC + Item SEQ)); and Q is the market value of equity plus total assets (price times shares outstanding from CRSP + Item AT) minus the book value of equity (Item CEQ + Item TXDB) all over total assets (Item AT). Items refer to Compustat annual data names. CRSP refers to the Center for Research in Security Prices database.

In addition to empirical testing of the effects of salient shareholders, future research should examine the influence of other non-salient stakeholder groups such as NGOs. Although these stakeholders are unlikely to have direct influence over firms' decisions because of their limited power and salience, these secondary stakeholders have opportunities to indirectly influence the firm through more salient stakeholders. In terms of empirical research, the authors suggest that shareholder resolutions, especially those dealing with environmental and CSR concerns would be a valuable data resource for examining the influence efforts of non-salient stakeholders. The event study methodology could also be used here to examine the effects of shareholder resolutions or proxies on the market valuation of targeted firms or on the market value of CSR initiatives that are supported by the communications of NGOs and other secondary stakeholders.

Finally, due to the exploratory nature of this research, the scope of the framework presented has been tightly constrained. Perhaps the greatest omission in this initial version is the influence of the media and its role in stakeholder communication. Although there are a number of potentially fruitful topics for exploration in this area, research should explore if the media mediates or moderates interactions between stakeholder groups and the firm. That is, does the media amplify the effects of firm and NGO communication on other stakeholders or does it act as a distinct stakeholder with distinct goals and interests? Research may reveal, for example, that the effects of media coverage on stakeholder communication vary by media type (e.g., traditional media (TV, newsprint, etc.) vs. new media (blogs, discussion forums, etc.)). Furthermore, firms and stakeholders alike may use or develop different strategies in the presence of media coverage and the effectiveness of these strategies may vary depending on the level of media coverage and level of media/strategy agreement.

CONCLUSION

In this article, we attempt to augment understanding of how stakeholders respond to CSR initiatives by presenting a framework that captures the linkages between CSR decisions, consumption markets, NGOs, financial performance, and financial market perceptions. Within the context of the framework, we discuss how firm and NGO decision making are influenced by stakeholder perceptions and the process through which NGOs leverage powerful stakeholders, such as shareholders, in their efforts to encourage corporate social responsibility.

A key premise of our framework is that asymmetric stakeholder perceptions can cause the financial markets to overvalue or undervalue CSR initiatives. To be properly valued, the gap between stakeholder expectations of a firm's CSR initiative and observable outcomes should be minimal. To minimize this expectation gap, we recommend firms use CSR promotions strategies that explain in objective, measurable terms how the initiative addresses stakeholder specific concerns and explain to core stakeholders, such as shareholders, how the firm is satisfying or addressing the concerns of other stakeholders. As the framework remains a work in progress, we invite and encourage researchers to aid in its development by subjecting it to critical evaluation and empirical testing.

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SOCIAL MARKETING AND DISTRACTED DRIVING BEHAVIORS AMONG YOUNG ADULTS: THE EFFECTIVENESS OF FEAR APPEALS

Ron Lennon, University of South Florida
Randall Rentfro, Nova Southeastern University
Bay O'Leary, Nova Southeastern University

ABSTRACT

This paper examines the topical issue of discouraging young adults from engaging in distracted driving behaviors. While the focus of the paper is on the effectiveness of fear appeals in achieving this objective, the paper also considers the role that distracted driving laws might play.

In an experiment involving 840 young adults, we examined whether social marketing fear appeals (1) changed participants' beliefs about distractions caused by four unsafe driving behaviors and (2) influenced participants' intentions of engaging in those behaviors. After viewing two fear appeals, participants rated the behaviors as more distracting than they previously believed. However, they reported increased intentions of engaging in the behaviors (a boomerang effect). Males reported greater increases in intentions to engage in two behaviors than those reported by females. We considered these results in light of findings from a separate focus group study of young adults'reactions to six fear appeals including the two used in this study. The PSAs used in this experiment aroused only low-to-moderate levels of fear in young adults; therefore, the appeals may not have been strong enough to reach young adults on this issue.

As we examined our participants' responses to open-ended questions, we found some evidence concerning the possible effectiveness of distracted driving laws. The males in our study were much more likely than females to suggest using laws and legal action to discourage distracted driving. Males also were more likely than females to say that fear appeals will not change distracted driving behaviors. Females were supportive of the use of fear appeals and suggested using interviews with people who had been affected by distracted driving accidents as an tool for changing the behaviors of young adults.

INTRODUCTION

Social marketing has long been used by government and nonprofit organizations to influence the behaviors of the general public. Advertising appeals used in social marketing have included rational/informational and emotional/fear appeals. In particular, fear appeals have been used to discourage various behaviors including drug use, drinking and driving, unsafe sexual practices, and unsafe/distracted driving. While the fear appeals literature is lengthy, questions remain about the effectiveness of fear messages.

With young adults, the ability of fear appeals to change intentions and behavior is particularly questionable. There have been several research studies which indicate that young adults recognize when fear appeal PSAs are "trying to scare us into not taking drugs or not smoking" but find the message irrelevant to them personally (Cohn, 1998; Hastings and MacFadyen, 2002; Hastings, *et al.*, 2004) or doubt the consequences would happen to them (Kempf and Harmon, 2006). In Great Britain, during the 1990s, there were a number of research projects completed to help develop HIV/AIDS campaigns. In research conducted with Scottish teenagers, it was found that they recognized the advertising was intended to frighten "people in general" or "others," but they did not identify with it. The teenagers felt that shock approaches would work for others but not for "me" (Hastings, *et al.*, 1990). Furthermore, with the prevalence of graphic and violent images in video games, movies, and even newscasts, it is perhaps even more uncertain today whether people are affected by fear messages. This may be particularly true for appeals targeted at young adults because today's youth have had much greater exposure than previous generations to graphic images and other fear messages.

This paper examines a current issue in society: discouraging young adults from engaging in distracted driving behaviors. The focus of the paper is on the effectiveness of fear appeals in changing young adults' beliefs about distracted driving behaviors and their intentions to drive while distracted. We also consider the role that distracted driving laws might play in reducing distracted driving.

REVIEW OF THE LITERATURE AND DEVELOPMENT OF HYPOTHESES

Social Marketing

The beginning of social marketing is credited to Kotler and Levy (1969) and Kotler and Zaltman (1971). Social marketing concepts are used to encourage the public to behave in socially desirable ways (e.g., wearing seat belts, not drinking and driving, not smoking, and not driving while distracted). Governmental organizations, particularly the U.S. federal government, are prominent users of social marketing. Examples of social marketing efforts by governmental entities include the U.S. Department of Agriculture's "5-a-Day" program and a number of advertising campaigns by the Centers for Disease Control and Prevention (see examples at www.social-marketing.org). The idea behind social marketing is to link the socially desired behavior to something that is of value to the individual, thus encouraging the individual to behave in the desired manner.

Social marketing efforts can appeal to a person's intellect (e.g., through informational or rational appeals) or to a person's emotions (e.g., through fear messages). However, Terblanche-Smit & Terblanche (2010) noted that informational and rational appeals are not effective with many social problems and, consequently, advertising practitioners often rely on emotional appeals to the public. Dillard and Peck (2000) found that effectiveness of emotional appeal PSAs was influenced by (1) fluctuating attitudes, (2) changes in affective responses, and (3) cognitive reactions for both positive and negative appeals. While several studies have examined the effectiveness of negative versus positive emotional appeals (Wheatley and Oshikawa, 1970; Robberson and Rogers, 1988; Block and Keller, 1995; Frazer et al., 2002), the findings have been inconclusive.

Fear Appeals

"Fear appeals motive attitude, intention and behavior changes—especially fear appeals accompanied by high-efficacy messages" (Witte & Allen, 2000:605). Consequently, fear appeals can be quite useful to practitioners, and the use of fear appeals continues to be prevalent in the design of PSAs. A fear appeal is a persuasive communication attempting to arouse fear, promoting precautionary motivation and self-protective action (Rogers and Deckner, 1975; Rogers, 1983; Tanner et al., 1989). Fear appeals typically provide two types of information. First, an attempt is made to arouse fear by presenting a threat (e.g., "serious painful injury") to which the recipient is susceptible (e.g. "car accident") and which is severe (e.g., "people die from car accidents"). Secondly, a search for "safety conditions" is prompted by recommending specific action (e.g. "by not texting and driving, you are less likely to have an accident"). Such action may be presented as effective in neutralizing the threat (e.g. "don't text and drive") and easy to execute ("drive safely"). Fear appeal studies have focused on these aspects (Witte, 1992; Eagly and Chaiken, 1993).

A long stream of fear appeals research in various disciplines has provided mixed evidence of their effectiveness (Ray & Wilkie, 1970; Wheatley and Oshikawa, 1970; Rotfeld, 1988; Burnett & Lunsford, 1994; Latour & Rotfeld, 1997; Witte & Allen 2000; Laroche et al., 2001; Ruiter, et al., 2001; Hastings et al. 2004, Mowen et al., 2004; Rossiter & Thornton, 2004; Meneses, 2010; Brennan & Binney, 2010). In the Extended Parallel Process Model (EPPM), Witte (1992) argues that the success or failure of a fear appeal depends on the target audience's evaluation of the two aspects of the message: perceived threat and perceived efficacy. Perceived threat includes the susceptibility of the individual to the threat as well as the severity of the threat. Perceived efficacy refers not only to the efficacy of the recommended response but also the ability of an individual to perform the advocated action. Fear appeals are mostly likely to change behavior when an individual perceives both threat and efficacy as high. However, according to EPPM, a fear appeal may have an unintended effect when perceived threat is high and the perceived efficacy is low. In that case, the EPPM predicts that an individual will do the opposite of what is advocated in the appeal. This "boomerang effect," is thought to occur because people in this situation will deny the threat or react against the message (Witte, 1992).

Several studies have documented the boomerang effect. For example, when studying the effects of an anti-smoking campaign aimed at college students, Wolburg (2006) found that for this audience, the response was anger and defiance. While anti-smoking campaigns reinforced the non-smokers decision, the smokers in the study reported wanting a cigarette after viewing the ad. Similarly, Feingold and Knapp (1977) found that an anti-drug campaign actually decreased negative attitudes towards dangerous drugs, and Bushman and Stack (1996) found people were more, not less, attracted to TV shows that had warnings of violence in them.

Miller and Rollnick (1991) theorized that when people are faced with the necessity to change their behavior, they feel that their personal freedom is threatened. This makes the behavior more attractive to them than before. In a comprehensive study (Wechsler et al., 2003) of colleges that had social marketing campaigns to try to reduce heavy drinking, no significant decrease in drinking was found. In fact, a pattern of increased drinking emerged.

There are a number of factors which may influence how a person will perceive and respond to a threat. These include the threshold at which the person will respond to the threat, their demographics, and the social implications of the behavior. The threshold at which a person responds to a threat is dynamic. Thresholds tend to change over time as a person matures, or the response to the perceived threat may lessen or increase due to lifestyle changes. Several studies have looked at responses to the threshold of the threat issued (e.g., Stuteville, 1970 and LaTour & Tanner, 2003). Demographics also may play a role in a person's response. For example, LaTour and Tanner found that ads about Radon in the home were viewed as more threatening by families with children. Finally, studies have also found that the impact of the behavior on social interactions may be more threatening than physical harm. For example, Ho (1998) found the social aspects of anti-smoking ads were more effective. In another study of anti-smoking ads, social approval messages were more effective with teenagers. Ads concentrating on bad breath and stained teeth tested higher than ads about cancer (Uusitalo and Niemela-Nyrhinen, 2008).

Our study examined whether PSAs influenced young adults' perceptions of distracted driving behaviors and altered their intentions to engage in such behaviors. The four behaviors examined were: talking on a cell phone, texting, eating, and playing music while driving. All of these behaviors have been portrayed in distracted driving PSAs. The above literature suggests that PSAs will prompt young adults to see the behaviors depicted in the videos as more distracting than they previously believed. However, the literature does not provide sufficient evidence to predict how the PSAs will affect the intentions of young adults to engage in the behaviors in the future. Therefore, we tested the following hypotheses:

H1a. The PSAs will increase the perception that talking on a cell phone while driving is distracting.

H1b. The PSAs will increase the perception that texting while driving is distracting.

H1c. The PSAs will increase the perception that eating while driving is distracting.

H1d. The PSAs will increase the perception that playing music while driving is distracting.

H2a. The PSAs will change the likelihood that young adults will talk on cell phones while driving in the future.

H2b. The PSAs will change the likelihood that young adults will text while driving in the future.

H2c. The PSAs will change the likelihood that young adults will eat while driving in the future.

H2d. The PSAs will change the likelihood that young adults will play music while driving in the future.

Individual Differences and Responses to Fear Appeals

Witte and Allen's (2000) meta-analysis of public health fear appeal studies concludes that individual differences have little influence over how people respond to fear appeals. However, Watson, et al. (2007) state that recent studies of fear appeals relating to road safety and safe driving suggest that "demographic characteristics such as age and gender influence the effectiveness of threatening messages" (208). They conclude that this inconsistency in the literature is due to the complex nature of the fear-persuasion relationship.

Our study examines the effect of PSAs on the likelihood that young adults will engage in distracted driving behaviors. Given this, the Watson et al. (2007) finding is particularly relevant and worthy of consideration. The narrow age range in our study suggests that we are unlikely to find differences in responses due to differences in ages. However, we should consider whether males and females may respond differently to distracted driving fear appeals.

Rotfeld (1999) contends that an optimal type of threat must be used for a fear appeal to be effective, and LaTour and Rotfeld (1997) argue that "no threat evokes the same response from all people" (45). Despite this, safe driving fear appeals rely heavily on threats of injury or death (Tay and Watson, 2002). However, Watson et al. (2007) conclude that "young males appear to be less persuaded by appeals involving physical threats" and state that there is increasing evidence that young males are more affected by threats of legal sanctions (e.g., loss of license) or social threats (e.g., the social stigma associated with loss of license). These findings suggest that young males may be less influenced than young females by distracted driving PSAs which focus on the threat of physical harm.

Lewis et al. (2007), found a significant gender difference in reported intentions not to speed and not to drink and drive after participants viewed two 60-second fear appeals television advertisements. The study found that females report lower intentions to engage in both behaviors than their male counterparts. Similarly, in a study of the effectiveness of a safe driving advertising campaign in reducing the number of fatal accidents, Tay and Ozanne (2002) found that the fear appeals are effective for young female drivers but not for young male drivers.

Studies examining other behaviors (e.g., smoking) have also found gender differences. Smith and Stutts (2003) examined the effects of anti-smoking fear appeals on high school students. They found that females are more influenced than males by fear appeals stressing threats to long-term health. Males, however, respond more than females to fear appeals that focus on negative social consequences of smoking. Similarly, Quinn et al. (1992) found that females experience more fear arousal than males from fear appeals based on the health consequences of smoking. In de Meyrick's (2010) study of fear appeals campaigns in Australia, it was found that the campaigns had a different effect on males and on females. This indicated that differentiated, tailored campaign strategies targeting males and females separately are needed.

Because our study focuses on distracted driving behaviors, we considered whether males and females may respond differently to the fear appeal PSAs in our study. Based on the literature cited above, the following hypothesis is tested:

H3: Young adult females will be more influenced than young adult males by distracted driving fear appeal PSAs.

METHODOLOGY

Distracted Driving PSAs

We viewed 20 distracted driving PSAs we found through searches of the U.S. Department of Transportation website, state transportation department websites, and on other websites such as YouTube. We selected two PSAs that were representative of distracted driving fear appeals targeted at young adults. Both PSAs were produced by the Los Angeles Department of Transportation as a part of their "Watch the Road" program.

The distracted driving PSAs used in this experiment previously had been tested in a separate focus group study. Lennon and Rentfro (2010) examined young adults' ratings of the effectiveness of six fear appeal PSAs on four social issues: distracted driving, smoking, drug use, and unprotected sex. Focus group participants watched all six PSAs (two distracted driving, two smoking, one drug use, and one HIV) and rated each message on the following dimensions: graphic content, fear arousal, likelihood of consequences, severity of consequences, self-efficacy, response-efficacy, and overall effectiveness. Based on the focus group participants' ratings, Lennon and Rentfro classified the fear messages in the distracted driving PSAs as low-to-moderate strength fear appeals. Although we searched for a stronger fear appeal to use in the current study, we were unable to identify one. Consequently, this study was limited to examining the effects of low-to-moderate strength fear appeals.

Data collection and sample

The experiment was conducted on four campuses of three southeastern universities in the United States. One university is a publicly-supported university, while the other two are privately-supported. Students were asked to voluntarily participate in this research study, and no one declined to participate.

Participants completed a pre-test questionnaire in which they rated the level of distraction caused by four behaviors (talking on a cell phone, texting, eating, and playing music while driving) and indicated how frequently they currently engage in the behaviors. The participants then viewed two fear appeal PSAs and completed a post-test questionnaire. In the post-test questionnaire, the participants once again rated the level of distraction caused by the four behaviors, indicated their likelihood of engaging in the behaviors in the future, responded to two open-ended questions about the PSAs and ways to reach young adults on this issue, and provided demographic information.

MAJOR FINDINGS

Participants

The experiment was completed by 840 young adults. Based on the demographic data provided by the participants, we excluded from our analyses the responses from 22 participants who stated that they do not drive a vehicle. Of the remaining 818 participants, we excluded responses from anyone who did not provide an age and anyone who was over 30 years old. Therefore, our results are based on the responses from 673 young adults with an average age of 21.6 years. Table 1 provides other demographics for the participants.

Current Distracted Driving Behaviors

In the pre-test questionnaire, we asked participants to state how frequently they engaged in four distracted driving behaviors: (1) talking on a cell while driving; (2) texting while driving; (3)

eating while driving; and (4) playing music while driving. Participants indicated their responses using a 7-point Likert with the endpoints: 1 = Never; 7 = Always.

Table 1: Demographics of the Sample	
Demographic Group	**n**
Gender	
Males	339
Females	334
Age	
Age ≤ 20	269
21 ≤ Age ≤ 24	308
25 ≤ Age ≤ 30	96
Marital Status	
Single	601
Married / Partnered	63
Divorced	8
Children	
Have children	26
No children	647
Taken a safe driving course	
Have taken	440
Have not taken	232
Had an accident while driving distracted	
Yes	80
No	592

The reported current driving behaviors for all 673 participants and for each demographic group are presented in Table 2. The two most frequent distracted driving behaviors among all participants were playing music while driving with a mean of 6.56 and talking on a cell phone will driving with a mean of 4.31. The participants engaged less frequently in texting while driving and eating while driving, but the means of 3.44 and 3.37, respectively, still indicated that the behaviors were fairly common for this participant group.

Table 2: Current Behaviors Means (1 = Never … 7 = Always) *statistically significant difference at .05 level					
	n	Talk on cell phone	Text	Eat	Play Music
Overall	673	4.31	3.44	3.37	6.56
Gender					
Males	339	4.07*	3.27*	3.10*	6.55
Females	334	4.54*	3.61*	3.66*	6.57
Age					
Age ≤ 20	269	4.31	3.60*	3.45	6.64
21 ≤ Age ≤ 24	308	4.31	3.51*	3.36	6.53
Age ≥ 25	96	4.27	2.75*	3.20	6.42
Marital Status					
Single	601	4.31	3.54*	3.38	6.59
Married / Partnered	63	4.27	2.41*	3.35	6.33
Divorced	8	4.13	4.13*	3.75	5.88
Children					
Have children	26	4.46	2.77*	3.65	6.08*
No children	647	4.30	3.47*	3.36	6.58*
Driving Course Taken					
Have taken	440	4.37	3.51	3.46	6.62*
Have not taken	232	4.18	3.31	3.22	6.45*
Had an accident while driving distracted					
Yes	80	4.59*	3.81*	3.63	6.62
No	672	4.26*	3.38*	3.34	6.55

We used one-way ANOVAs to test whether the current distracted driving behaviors differed among demographic groups. We found the following differences statistically significant at the .05 level. Females reported that they engaged in talking on a cell phone, texting, and eating while driving more frequently than males. Participants younger than 25 years old were more likely to text while driving than participants between 25 and 30 years of age. Single and divorced participants were more likely to text than married drivers, and participants without children were more likely to text than participants with children. Participants who had completed a safe driving course were more likely to play music than those who had not taken a course. Interestingly, participants who had been involved in accidents while driving distracted reported that they were more likely to talk on a cell phone and text while driving than participants who had not been involved in an accident.

Distraction Ratings

The pre-test and post-test questionnaires asked the participants to rate the level of distraction caused by the four behaviors using a 7-point Likert scale with the endpoints: 1 = Very distracting, 7 = Not at all distracting. The participants recorded their prior beliefs in the pre-test questionnaire. After viewing the PSAs, the participants again rated the level of distraction for each behavior. We tested whether the participants rated the behaviors as more distracting after viewing the videos (lower means indicate a higher level of distraction) using paired samples t-tests. The results of the t-tests are reported in Table 3. After viewing the PSAs, the participants rated all four behaviors as statistically significantly more distracting than their prior beliefs. These results support H1a – H1d.

Table 3: Paired Samples Tests
Pre-test Distraction Rating v. Post-test Distraction Rating
(1 = very distracting … 7 = not at all distracting)

Behavior	Pre-test mean	Post-test mean	t	Df	Significance (one tail)
Talk on cell phone	4.54	4.06	8.162	671	$p < .001$
Text	2.62	2.39	4.371	672	$p < .001$
Eat	4.53	4.06	8.793	672	$p < .001$
Play music	6.40	6.31	2.235	670	$p < .014$

Current Behaviors v. Future Intentions

After viewing the PSAs, participants indicated their intentions of engaging in the distracted driving behaviors in the future using the same 7-point Likert scale (endpoints: 1 = Never; 7 = Always) used in the pre-test to indicate current behaviors. We used paired samples t-tests to determine if their future intentions differed from their current behaviors. The results are reported in Table 4. For all four behaviors, the participants indicated a statistically significant higher likelihood of engaging in the behavior in the future than they currently do. In other words, we observed a boomerang effect. Although H2a – H2d did not predict the direction of change, the hypotheses predicted that the participants' future intentions would differ from their current behaviors. Thus, our results provide support for H2a – H2d.

Table 4: Paired Samples Tests Current Behaviors (pre-test) v. Future Intentions (post-test) (1 = never … 7 = always)					
Behavior	**Current Behavior mean**	**Future Intention mean**	**t**	**Df**	**Significance (two tail)**
Talk on cell phone	4.31	5.15	-15.850	671	p < .001
Text	3.44	3.54	-1.979	672	p < .049
Eat	3.37	4.02	-11.579	668	p < .001
Play music	6.56	6.66	-3.005	671	p < .004

Gender Differences

Given the prior literature on road safety fear appeals, we hypothesized that females would be more affected by the PSAs than males. We tested H3 a number of ways. First of all, we asked the participants to rate the effectiveness of the PSAs in changing the behavior of young drivers. The participants rated the effectiveness using a 7-point Likert scale with endpoints: 1 = Not at all effective; 7 = Very effective. The mean effectiveness rating by females was 3.79, and the mean rating by males was 3.35. Using a Oneway ANOVA, we found that the ratings were statistically significantly different (df = 1, F = 13.940, p < .001). Thus, females thought the PSAs were more effective than the males thought they were.

We then performed a series of repeated measures ANCOVAs to see if there were gender differences in the other responses (pre-test v. post-test distraction ratings and current behaviors v. future intentions). In the ANCOVAs, we included children as a covariate because gender was significantly correlated with having children at .01 level; the proportion of females in our sample who have children was more than twice the proportion of males with children. Gender was not correlated with any other demographic variable, and therefore, we did not include any other demographic variable as a covariate. We then ran repeated measures ANOVAs using only gender in the model. All of the results were essentially the same as the results from the ANCOVAs; therefore, for simplicity we report results from the ANOVAs here.

Table 5 reports the pre-test and post-test distraction rating means by gender, and Table 6 reports the current behavior and future intention means by gender. With the exception of the males' distraction ratings for playing music, both males and females rated the behaviors as more distracting after viewing the PSAs than their pre-test ratings. Despite this, males responded that they were more likely in the future to talk on a cell phone, text, eat, and play music while driving. However, females reported higher likelihoods of talking on a cell phone, eating, and playing music; females reported that they were less likely to text while driving in the future than they currently do. These results reflect a boomerang effect.

Table 5: Means by Gender Pre-test Distraction Rating and Post-test Distraction Rating (1 = very distracting … 7 = not at all distracting)				
Behavior	**Males Pre-test mean**	**Males Post-test mean**	**Females Pre-test mean**	**Females Post-test mean**
Talk on cell phone	4.45	4.09	4.63	4.03
Text	2.65	2.45	2.59	2.32
Eat	4.41	4.03	4.66	4.09
Play music	6.34	6.37	6.46	6.26

Table 6: Means by Gender Current Behaviors (pre-test) and Future Intentions (post-test) (1 = never … 7 = always)				
Behavior	**Males Pre-test mean**	**Males Post-test mean**	**Females Pre-test mean**	**Females Post-test mean**
Talk on cell phone	4.07	5.13	4.54	5.16
Text	3.27	3.61	3.61	3.47
Eat	3.10	3.94	3.66	4.11
Play music	6.55	6.70	6.57	6.61

Table 7 and Table 8 report the results of the repeated measures ANOVAs. Our results revealed no gender differences in the reaction to the PSAs when participants were asked to rate the level of distraction caused by each behavior. However, we did find gender differences for two of the behaviors (talking on a cell phone and eating while driving) when we compared current behaviors with the likelihood that the participants would engage in the behaviors in the future. While both males and females exhibited the boomerang effect, males increased their future intentions of talking on a cell phone and easting while driving by more than females. It appears that for these two behaviors the boomerang effect was stronger for males. Based on all of these results, we find modest support for H3.

Freeform comments

In the post-test questionnaire, we asked participants to: (1) describe a video that would change the behavior of younger drivers and (2) identify a good way to reach young adults on the issue of distracted driving. Responses were free form; therefore, we coded the comments into common categories.

Table 7: Repeated Measures ANOVAS Significance of Main Effect for Gender Pre-test Distraction Rating v. Post-test Distraction Rating			
Behavior	**Df**	**F-statistic**	**Significance (two-tail)**
Talk on cell phone	1	1.402	p < .554
Text	1	.611	p < .435
Eat	1	1.804	p < .180
Play music	1	.022	p < .961

Table 8: Repeated Measures ANOVAS Significance of Main Effect for Gender Current Behaviors (pre-test) v. Future Intentions (post-test)			
Behavior	**Df**	**F-statistic**	**Significance (two-tail)**
Talk on cell phone	1	5.886	p < .016
Text	1	.549	p < .459
Eat	1	9.098	p < .003
Play music	1	.248	p < .618

In describing a video that would change behavior, the most frequent comments were that the video should show real life accidents (35% of the comments received) and show very graphic content (18%). 14% of the comments received said that no video would change behavior, and 8% supported the use of videos like the ones used in the experiment.

In identifying a good way to reach young adults on the issue of driving while distracted, the most frequent responses were: take legal action by arresting, ticketing, and fining anyone who is driving distracted (15%); have young adults watch videos of accidents, videos from cameras in cars showing unsafe driving while engaging in distracting behaviors, or videos of accident recreations (13%); put ads on TV and billboards (10%); have classes in school where young adults are presented with statistics and photos from actual accidents (9%); and have young adults listen to live people who have been affected by distracted driving including drivers involved in accidents, survivors of accidents, and people who have lost friends or family members in distracted driving accidents (9%).

Crosstabs of the comments by gender revealed that the percentages of comments in each category were fairly similar across both genders. However, there were a few differences worth noting. When we asked participants to describe videos that would change the behavior of young adults, males more frequently commented that no video would change behavior while females more frequently noted that the videos used in the experiment would change behavior. Males more frequently stated that graphic content was important, while females made more comments about using interviews with drivers who had been in accidents caused by distracted driving. When we asked how to reach young adults on the issue of distracted driving, females once again stressed having young adults watch video interviews of people affected by distracted driving while males more frequently called for taking legal action.

CONCLUSIONS AND IMPLICATIONS

The role of fear appeals

There have been several studies of fear appeals and their effectiveness over the past 40+ years, and our study adds to this stream of research by providing additional insight into young adults and their responses to fear messages. Our findings provide caution to advertising professionals as they design distracted driving fear appeals targeted to young adults. Based on our results, these fear appeal PSAs may cause young adults to behave in the opposite way than what is advocated in the message. In addition, our results suggest that young adult males may respond differently to fear appeals than young adult females, at least when it comes to messages about road safety.

Our study documents that young adults frequently talk on their cell phones and play music while driving, and they text and eat while driving on a fairly regular basis. They do this even though they recognize that these behaviors are distracting. Furthermore, our results suggest that current distracted driving PSAs are not effective with this target audience. Based on the findings of Lennon and Rentfro (2010) this may be due to the low-to-moderate strength of the fear messages in the distracted driving PSAs used in this experiment. To be effective with young adults, future PSAs may need to invoke stronger fear messages.

Our participants' responses to open-ended questions provide interesting insights into the thinking of young adults. Many participants stated that PSAs should feature scenes of real life accidents and include graphic content. Even with this content, however, young adult males frequently said that videos would not change distracted driving behaviors. Males expressed support for using legal means (e.g., arrests and tickets) rather than PSAs to deter distracted driving. Young adult females appear to be more receptive to PSAs, and, therefore, it may be wise to target future PSAs at females rather than males. In addition, advertising practitioners should consider developing PSAs that employ interviews with people affected by distracted driving accidents as suggested by the females in our study.

Legislation related to distracted driving

As of February 2010, nineteen states, various local governments, and the District of Columbia have enacted legislation that bans texting while driving and twenty-one states and the

District of Columbia ban all cell-phone use while driving for novice (generally young adult) drivers (Governors Highway Safety Association, 2010).

Recent research has shown that cell phone bans can be effective in reducing distracted driving accidents. Nikolaev et al. (2010) completed research on the use of hand-held cell phone usage in areas where there was legislation prohibiting it which had been in place for several years. They found that after banning hand-held cell phone use while driving, that the areas had lower personal injury accident rates overall. However, they also found that the ban has a bigger impact in high-density urban areas rather than in lower-density rural areas.

But, the Insurance Institute for Highway Safety (2008) found that for teenagers in North Carolina, cell phone usage actually increased after a cell phone ban was placed on under-18 drivers. In addition, Anne McCartt, one of the authors of the study stated "Cell phone bans for teen drivers are difficult to enforce…and aren't effective, based on what we saw in North Carolina" (Insurance Institute for Highway Safety 2008).

Part of the problem with enforcement is whether enforcement is primary or secondary. Primary means that a police officer can pull over someone simply for talking on his/her cell phone, while secondary refers to only ticketing someone for cell phone usage if they are in violation of another law (like speeding). Of the 21 states and D.C. that have cell phone bans and the 19 states and D.C. that have texting bans only, only 15 have primary enforcement of those bans (Governors Highway Safety Association 2010).

The US federal government has given the issue of distracted driving a great deal of attention. The Department of Transportation (DOT) launched the website called D!straction.gov www.distraction.gov) to serve as a resource and catalyst for action on this issue. In addition, the DOT held a distracted driving summit in the fall of 2009 to discuss distracted driving and to explore courses of action. Shortly after the summit, Secretary of Transportation Ray LaHood testified before the U.S. Senate Committee on Commerce, Science and Transportation about ways to discourage distracted driving. He noted the importance of laws banning the use of cell phones and texting. He then added, "Education, awareness and outreach programs are also essential elements of our action plan. These measures include targeted outreach campaigns to inform key audiences about the dangers of distracted driving" (LaHood, 2009:3). His testimony suggests a continuing role for social marketing as laws, enforcement, and social marketing become complementary tools in efforts to reduce distracted driving.

Potential future research

Our study suggests several avenues for future research. Our study employed two low-to-moderate strength PSAs because, at the time of our data collection, we were unable to locate distracted driving PSAs with strong fear messages. Recently, at least one very graphic PSA has been produced, (by Gwent police department, Gwent, UK) which would allow a future study to compare the effects of low, moderate and high strength fear appeals on young adults' intentions of engaging in distracted driving.

Future research also could examine the effectiveness of combining legal and social marketing approaches to decrease distracted driving accidents. These studies might compare the effectiveness of using fear appeals with using informational (rational) appeals in locations where cell phone and texting bans have been passed. While prior research has shown that appeals to a person's intellect are not effective with many social issues, it may be possible that the combination of laws and informational appeals may be more effective than combining laws and fear appeals in this context.

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THE IMPACT OF ACCESS, COST, DEMOGRAPHICS, AND INDIVIDUAL CONSTRAINTS, ON HUNTING FREQUENCY AND FUTURE PARTICIPATION

Robert Montgomery, University of Evansville
M Gale Blalock, University of Evansville

ABSTRACT

The number of hunting consumers over the age of 16 declined 10% from 14 million to 12.5 million between 1996 and 2006. The purpose of this research is to explain some of the underlying causes for the 10% decline in hunting consumers and develop marketing strategies to halt the decline. The results of a sample of 228 big game hunters indicate that the biggest constraint to future hunting is lack of time. Three of the four biggest constraints to future hunting are access related; public crowding, lack of access to private land, and bonus points. To a lesser extent cost is perceived as a constraint to future hunting, particularly license cost.

INTRODUCTION

Hunting is big business. In 2006, 12.5 million U.S. hunting consumers over the age of 16 spent $25 billion hunting. The average annual expenditure per hunter was $1,992 or $110 per hunting day (NSSF 2007). Wildlife recreation is a catalyst for economic growth in every state, particularly in rural areas which have less commerce than urban areas. Spending by outdoorsmen increases employment (593,000 jobs), raises economic output, and generates tax revenues for local communities (Southwick Associates 2007). Private beneficiaries of this largesse include manufacturers, distributors, and retailers of guns, electronics, decoys and calls, trees stands and ground blinds, ATVs, cutlery, archery, clothing, footwear, optics, food, drink, gasoline, lodging, outfitters, outdoor media, and landowners. Perhaps more importantly, the 50 state wildlife agencies rely on the $10.6 billion collected annually in hunting and fishing licenses and fees as their primary source of revenue (FHWAR 2006). In addition to license fees many agencies receive a portion of the taxes levied on hunting and fishing equipment. In sum, the management of all wildlife and their habitats is primarily paid for by hunters, fisherman, and farmers so that they and others can enjoy it.

A Sport, Industry and Heritage In Crisis?

The number of hunting consumers over the age of 16 declined 10% from 14 million to 12.5 million between 1996 and 2006 (FHWAR 2006). It should be noted that the number of actual hunters is under-reported because those under 16 years of age or over 65 are not counted, and landowners who hunt don't have to buy permits in some states (Anderson 2008). There was a corresponding decline in hunting expenditures of 3% from 2001 to 2006. Thus, there are fewer hunters spending more per capita. Any industry would be concerned about a 10% drop in the number of consumers. This trend is particularly worrisome for businesses in the hunting industry because some of the likely reasons for the cause of this trend (e.g., loss of hunting land to urban and suburban development, decline in the number of resident farmers, etc.) are unlikely to go away. Also adding to the worries is the fact that the decline occurred in the face of a 13% increase in the population of the U.S.

RESEARCH PURPOSE

The purpose of this research is to explain some of the underlying causes for the 10% decline in hunting consumers and develop marketing strategies to halt the decline. First, this study will determine who hunts, why they hunt, where they hunt, and what they hunt. Secondly, the effects of access and opportunity, personal constraints, and demographics on future hunting and hunting frequency are assessed.

To date, little has been written about the decline of hunting in the academic literature. First, the work which has been done is discussed to provide context for this study. Second, a theoretical model of consumer decision-making that will guide the study is detailed. Third, the methodology is outlined. Fourth, the results and implications for private and public stakeholders are presented. Lastly, some recommendations are offered.

LITERATURE REVIEW

Research on the decline in the number of U.S. hunters has generally been focused on four areas: Access and Opportunity, Cost, Personal Constraints, and Demographics. These four areas of influence are discussed in more detail in the sections that follow.

Access and Opportunity

Urban sprawl began forcing eastern hunters onto private leases and hunting clubs in the 1970's. The pace quickened in the 1990s as timber companies began pulling their land out of public programs in favor of private leases. By the mid 1990s as much of 70% of deer hunting in many eastern states was conducted on private lands. This drove up the cost of participation which led to fewer opportunities to hunt. This trend is now nationwide. Several states are now giving outfitters exclusive rights to nonresident licenses which limits access to public lands as well (Marshall 2002). The only place where the "Ask the farmer and you'll get to hunt for free" culture still exists in any numbers is in Manitoba and Saskatchewan for waterfowl hunting (Swan 2008).

Commercial and residential development and clean farming practices reduce the habitat available for hunting. Quail and rabbit habitat have been particularly hard hit, severely limiting the opportunities of rabbit and quail hunters (Phillips 2007). According to Marshall (2002) the U.S. is losing 1.5 million acres a year to development.

A study by Mehmood et al. (2003) found that 18% of former hunters cited the lack of public hunting areas as the reason they quit hunting. Miller et al. (2003) found that the biggest situational constraint limiting hunters was no available land for hunting (26%) and not enough game (17%). Wright et al. (2001) looked at constraints to hunting between hunters who were hunting less than they had prior (decreasers), those who are hunting the same amount (stables), and those who are hunting more than they had prior (increasers). Their results indicate that lack of access and opportunity is a significant constraint for decreasers but not for stables or increasers. They also found non-participants who had a positive attitude towards hunting perceived access to be a bigger problem than those who had previously participated.

A study by Response Management/National Shooting Sports Foundation (2008) asked respondents whether they would classify the access problem as an absolute lack of land or a situation where the land exists but the hunter cannot get to it. The majority of respondents indicated it was the latter; they just can't get to it. When asked why access was getting worse the top responses were cannot get permission to private land and loss of land due to urbanization. Another problem was that private land is often leased to hunting clubs. Finally, 11% of respondents cited poor behavior by hunters for causing the land to be closed.

The mobility of our population likely has an impact on access because people often don't know about hunting possibilities or lack hunting partners as they move to a new area. Providing support for this proposition, a study by Wickman et al. (2007) found that the longer a person lived at their current address the more days they spent hunting.

The increasingly common practice of using lotteries or bonus points to award hunting licenses, further limits opportunity. If an individual goes one or more years without being drawn for a hunt, they may find a permanent replacement for their discretionary time (Johnson 2009).

The current economic recession (beginning in December 2007) may further limit the opportunity to hunt. The reduction of revenue that is being experienced by most states is leading some to close or restrict hours on public wildlife refuges (Marshall 2007).

Cost

As mentioned previously, the average hunter spends nearly $2000 per year or $110 per hunt (NSSF 2007). Mueller (2006) determined that total lifetime hunting expenditures total $96, 017.92 per hunter. Clearly, hunting has a significant cost component.

Backman et al. (1993) found that the most important factor that explains lack of participation among former hunters and non hunters is cost (25.8% of the variance explained). Those with a positive attitude toward hunting did not perceive cost as a strong constraint, however.

Mehmood et al. (2003) found that 5% of former Alabama hunters quit due to expense. An additional finding of this study is that the cost of a hunting license was not prohibitive for the majority of respondents. Indeed, 50% of respondents were willing to pay an additional 20% or more for a hunting license. Finally, Mehmood et al. (2003) found that former hunters hunted primarily on private land. The increased cost of private leases may have contributed to their decision to quit hunting.

Wright et al. (2001), report that costs associated with hunting were consistently viewed as constraints by respondents. FHWAR 2001 report that 8% of former hunters quit due to cost. Similarly, Miller et al. (2003) report that 5% of respondents cited lack of financial resources as their biggest constraint to hunting.

Personal Constraints

Personal constraints to hunting include lack of time, poor health, negative attitudes, and lack of interest. Each is discussed below.

Americans are time poor. The average number of hours worked by Americans has increased by 39 a year since 1990 (International Labor Organization 2004). More hours spent working leaves less hours to spend hunting.

Wright et al. (2001), report that work and family commitments were consistently viewed as constraints by respondents. Miller et al. (2003) report that 21% of respondents cited lack of time as their biggest personal constraint to hunting.

A study of Alabama residents found that 51% of former hunters quit because of a lack of time (Mehmood et al. 2003). Similarly, respondents with a positive attitude towards hunting perceive family and time as the biggest constraints to hunting (Backman et al. (1993).

The 2001 FHWAR asked people who had quit hunting in the last three years the reasons for doing so. The results were 46% quit for family or work and 44% did not have enough time.

Regarding attitudes, respondents whose hunting remained stable or decreased reported an increase in anti-hunting attitude and a low preference for hunting as a leisure activity (Wright et al. 2001). Backman et al. (1993) suggest that negative experiences on public hunting land may explain why respondents stopped hunting and formed negative attitudes towards the activity. Mehmood et al. (2003) found that 12% of former hunters changed their mind after participating because they thought it was cruel to animals.

Backman et al. (1993) found that non-participants who had a negative attitude towards hunting had significantly higher education, were more likely to have parents who held negative attitudes towards hunting, and were less likely to live in a rural residence.

Regarding strength of attitude, Mehmood et al. (2003) found that 73% of former hunters had taken 1 to 5 trips when they last purchased a hunting license. This could indicate that they may have purchased a hunting license for a single event or lack avidity. In this case, the 73% of former hunters may hold a low-involvement attitude towards hunting.

Similarly, Wright et al. (2001) found that infrequent hunters were significantly more likely to quit than moderate or frequent hunters.

Regarding changing interest, hunting has a lot more competition than 30 years ago. Organized activities are much more prevalent. Year round athletic seasons infringe on the time which used to be set aside for outdoor pursuits. Video games are of particular concern. As people spend more time communing with technology and less time communing with nature, their interest in nature may wane. Indeed, Backman et al. (1993) found that lack of interest explained 12.6% of the variance in hunter participation.

Demographics

Regarding demographics hunters are predominantly younger, higher income, white males, who live in rural settings more than former hunters or non-hunters (Mehmood et al. 2003). Similarly, Floyd et al. (2002) found that gender and race were the most consistent predictors of hunting license purchases in Texas. Income, age, and population size of residence also had an impact but to a lesser extent. These findings are consistent with research conducted by The U.S. Fish and Wildlife Service (FHWAR). According to the FHWAR (2006), initiation rates (the number of hunters that hunted for the first time) have declined in nearly every socioeconomic category including geographic region, gender, ethnicity, income level, and population density. The decline in initiation rates is especially pronounced for men, low income consumers (under $40,000), African Americans, urbanites, and hunters residing in the Northeast. Being raised in or exposed to a hunting culture is critical to initiating new hunters to the sport. This enculturation to hunting is much more likely to occur in a rural setting (Responsive Management/NSSF 2008).

Hunting retention rates were similar. Low income hunting consumers were more likely to quit hunting as were urbanites, the elderly, and males.

By the year 2050 the U.S. will be older, more ethnically diverse, and more urban (Dwyer 1994). Clearly, if the demographic profile of hunters does not change the decline is likely to continue.

THEORETICAL FOUNDATIONS FOR THIS STUDY

The Model of Consumer Decision-Making is used to organize this study. Here, we model the hunting consumer as a rational problem solver seeking information and making decisions. (Engel, Blackwell, and Miniard 1994). Consumers move through a series of sequential steps in order to make consumer choices. For this study, the application of the model to our work is as follows:

- ♦ Problem Recognition – Why do people hunt?
- ♦ Information Search – Who initiated them into the sport?
- ♦ Evaluation of Alternatives – What competes with hunting for their time?
- ♦ Choice – Who chooses to hunt (Demographic profile)? How frequently do they hunt?
- ♦ What type of game do they hunt? Where do they to hunt? How far do they travel to hunt?
- ♦ Post Purchase Evaluation – What are the constraints to future hunting behavior?

METHODOLOGY

Data Collection

The data for this study were collected via an online questionnaire that was posted at http://www.eastmans.com/, which is the official website of Eastman's Hunting Journals, *The Magazine for Western Trophy Hunters since 1987*. A total of 228 hunters responded to the questionnaire in a non-random process (i.e., convenience).

PRESENTATION OF RESEARCH FINDINGS

Problem Recognition

Why do you hunt? Responses appear in Table 1.

As can be seen from Table 1, hunters have many motivations. For these big game hunters the challenge of the hunt (82.5%) is the most cited reason for hunting. A majority of hunters also hunt for meat, recreation, to be close to nature, trophies, fellowship, and family time.

Analysis of Variance (ANOVA) was used to determine the impact of personal characteristics such as age, gender, race, income, residence, and where one hunts on why they hunt. The sample of 228 hunters yielded 1 woman, 3 Hispanic, 1 African American, 1 American Indian, and 1 Asian hunter. These cell sizes are too small for further analysis and thus, have been eliminated. The significant results appear in Table 2.

Table 1: Why do you Hunt?	
Variable Name	Percent Response
Challenge	82.5%
Meat	79.8%
Recreation	77.2%
To be close to nature	76.8%
Trophy	62.3%
Fellowship	56.1%
Spend time with family	54.0%
Wildlife Management	41.7%

Table 2: ANOVAs (Hunter Motivation)			
Dependent Variable	Independent Variable	F-Value	P-Value
Meat	Age	1.814	.002
Trophy	Age	1.411	0.53
Game Management	Own Land	6.851	.009

A post hoc analysis indicates that younger respondents are more likely to hunt for meat or trophies than are older hunters. Hunters who hunt their own land are significantly more likely to hunt to manage game than hunters who do not hunt their own land.

Information Search

Who initiated you into hunting? Responses appear in Table 3.

Table 3: Who initiated you into hunting?	
Variable Name	Percent Response
Family	85.4%
Friend(s)	7.72%
Myself	6.75%

Clearly, hunter initiation is the province of family and friends. On average each hunter in the sample has initiated 6.48 (mean) hunters into the sport with a standard deviation of 12.9.

Evaluation of Alternatives

What competes with hunting for your time? Responses appear in Table 4. Work and Family are clearly the biggest competitors for a hunter's time. Household chores came in a distant third which could also be counted as a work or family issue.

Table 4: What competes for your time with hunting?

Variable Name	Percent Response
Work	83.8%
Family	70.6%
Household chores	18.0%
Fishing	11.0%
Volunteering	7.5%
Spectator sports	3.1%
Golf	1.3%

Choice

Who hunts? A complete demographic profile appears in Table 5.

Table 5: Demographic Profile of all Respondents

Item		Responses
Residence	Rural:	128 (56.1%)
	Suburban:	66 (28.9%)
	Urban:	34 (14.9%)
Age	Mean:	41.27 years
	Std. Dev.:	12.04 years
	Range:	14-71 years
Income	Mean:	$78,248.95
	Std. Dev.:	$40,664.363
	Range:	$0 – 250,000
Race	White:	219 (97.4%)
	Hispanic:	3 (1.3%)
	African American:	1 (.4%)
	American Indian:	1 (.4%)
	Asian:	1 (.4%)
Gender	Male:	222 (99.6%)
	Female:	1 (.4%)

Consistent with previous research on American hunters (e.g. Mehmood et al. 2003), this sample is predominantly rural, white males with above average incomes.

How frequently do you hunt? Responses appear in Table 6.

Table 6: How frequently do you hunt?

Hunting Frequency	Percent Response
Less than 5 times per year	9.7%
5 to 10 times per year	15.0%
11 to 15 times per year	13.7%
16 to 20 times per year	13.7%
More than 20 times per year	47.8%

This sample is very avid as indicated by nearly 50 percent (47.8%) hunting more than 20 times per year. Analysis of Variance (ANOVA) was used to determine whether where you hunt, why you hunt, what you hunt, how far you travel to hunt, residence, age, or income affect hunting frequency. The significant results appear in Table 7.

Table 7: ANOVAs (Hunting Frequency)

Dependent Variable	Independent Variable	F-Value	P-Value
Hunting Frequency	Distance Travelled	4.341	.005
Hunting Frequency	Small Game	9.305	.003
Hunting Frequency	Own Land	8.953	.003
Hunting Frequency	Private Land	6.011	.015
Hunting Frequency	Residence	3.634	.028
Hunting Frequency	Private Access	8.020	.005
Hunting Frequency	Time	3.254	.073
Hunting Frequency	Recreation	9.989	.002

The frequency with which an individual hunts increases if they hunt small game, travel a short distance, have a rural residence, or hunt either their own land or private land. Similarly, respondents who hunt more frequently perceive time and access to private land as less of a constraint to future hunting than those who hunt less frequently. Lastly, hunters who responded that they hunt for recreation hunt less frequently which indicates that recreational hunters are less avid than those who hunt for other reasons.

What type of game do you hunt? Results appear in Table 8.

Table 8: What do you hunt?	
Variable Name	Percent Response
Big Game	100%
Birds	62.7%
Small Game	53.9%

One hundred percent of this sample hunts big game. This is not surprising since respondents filled out the questionnaire on a big game hunting website from the Western United States, which has abundant big game. Over half of the sample hunts more than 1 type of game.

Where do you hunt? Responses appear in Table 9.

Table 9: Where do you hunt?	
Variable Name	Percent Response
Public land	93.4%
Private land with permission	46.9%
Own land	17.5%
Private lease	10.1%
Hunting club	4.8%

As can be seen from Table 9, this sample hunts public land heavily. Nearly half hunt a combination of public and private land.

How far do they travel to hunt? Responses appear in Table 10.

Table 10: On average, how far do you travel to hunt?	
Variable Name	Percent Response
More than 120 miles	42.5%
61 to 120 miles	23.2%
30 to 60 miles	21.5%
Less than 30 miles	12.7%

Nearly two thirds of the sample travel over 60 miles to hunt. More than forty two percent travel more than 120 miles to hunt. Less avid hunters may be less likely to travel the required distance to hunt.

Post-Choice Evaluation

What are the biggest constraints to future hunting? Responses appear in Table 11.

Table 11: What will limit your hunting in the future?

Variable Name	Percent Response
Time	48.2%
Public crowding	44.3%
Private access	40.8%
Bonus points	39.0%
License costs	38.2%
Lotteries	32.9%
Public access	32.5%
Lease costs	20.6%
Regulations	19.3%
Equipment costs	18.4%
Lack of quality game	18.4%
Lack of hunting partner	14.0%
Health	11.0%
Safety on public land	10.1%
Lack of interest	1.3%

Access and Opportunity

Five of the top seven constraints to future hunting are access/opportunity related. The perceptions of this sample are that *public crowding* (44.3%), *access to private land* (40.8%), *bonus points* (39.0%), *lotteries* (32.9%), and *access to public land* (32.5%) will limit their future hunting. To a lesser extent, r*egulations* (19.3%), *lack of quality game* (18.4%), *lack of a hunting partner* (14.0%), and *safety on public land* (10.1%) are perceived access constraints that will limit future hunting.

Cost

The biggest cost constraint to future hunting is *license cost* (38.2%), followed by *lease cost* (20.6%), and *equipment cost* (18.4%).

Individual Constraints

The personal constraint of *lack of time* (48.2%) is perceived as the biggest obstacle to their future hunting, followed by *health* (11.0%), and *lack of interest* (1.3%).
Analysis of Variance (ANOVA) was used to determine whether perceived differences of hunting constraints were based on personal characteristics such as age, income, and residence. The significant results of this analysis are presented in Table 12.

Table 12: ANOVAs (Future Hunting Constraints)

Dependent Variable	Independent Variable	F-Value	P-Value
Public Access	Age	1.421	.050
Safety public land	Age	1.432	.046
Health	Age	1.568	.017
Equipment Cost	Income	1.426	.056
Equipment Cost	Residence	2.759	.066

Regarding age, older hunters perceive access to public hunting land and safety on public hunting land as a bigger constraint to their future hunting than do young hunters. Lastly, older hunters perceive personal health to be a bigger constraint to their future hunting than younger adults. Regarding income, lower income hunters are more likely to perceive the cost of hunting equipment to be a constraint to their future hunting than do higher income hunters. Rural residents were less likely to perceive equipment cost as a constraint to future hunting than suburban residents.

CONCLUSIONS

Consistent with previous research (e.g. Miller et al. 2003), the biggest constraints to future hunting are access, cost, individual constraints, and demographic trends. The biggest constraint to future hunting is time or lack there of.

Three of the four biggest constraints to future hunting are access related. Public crowding is the biggest of these followed by access to private land, bonus points, lotteries, and access to public land.

To a lesser extent cost is perceived as a constraint to future hunting, particularly license cost. This is a bigger problem for low income hunters.

Consistent with previous research this sample of big game hunters is predominantly white, upper income, rural males. As mentioned previously, by the year 2050 the U.S. will be older, more ethnically diverse, and more urban (Dwyer 1994). Clearly, if the demographic profile of hunters does not change the decline is likely to continue.

Finally, travel distance, residency, and hunting private land or one's own land are access issues that affect hunting frequency primarily for hunters who have urban or suburban residency, travel long distances, or hunt public land.

IMPLICATIONS

The sport of hunting is in decline in the United States. This decline is self-perpetuating in that fewer hunters leave fewer hunting mentors to initiate new hunters. The decline in hunting participation is problematic for individuals, communities, businesses, and resource management agencies which may no longer experience the social, economic, ecological, and cultural benefits of hunting.

Currently the sport of hunting is 12+ million strong and enjoys broad public support. However this is not the time for those who have a stake in hunting to get complacent. There are 12 million people in the U.S. that belong to animal rights groups, which are gradually merging into one group, The Humane Society of the United States (HSUS), which has a war chest of over $120 million annually (Lasorta 2007). Total annual anti-hunting funding is in excess of $200 million (Swan 2008).

Wayne Pacelle, President and CEO of the HSUS is quoted as saying, "If we could shut down all sport hunting in a minute, we would. Our goal is to get sport hunting in the same category as cock fighting and dog fighting. Our opponents say that hunting is tradition. We say traditions change." Pacelle well knows that he cannot end all hunting tomorrow. Instead, he campaigns to end it one species, method, or jurisdiction at a time (Lasorta 2007).

A deer hunter in Mississippi may not care if Maine bans the spring bear hunt anymore than a Maine hunter cares if Washington bans trapping. If hunting is to be viable for future generations, these disparate groups must support each other, because anti-hunting groups with the backing of Hollywood celebrities care about each of these battles in the war to end hunting. They use national money to win battles against local unorganized hunters. Like most in-roads to freedom, the losses are gradual (Johnson 2009).

In 1850, hunting was a major part of English culture. In the 1900s personal interests shifted from active participation in sport to spectator sports such as football. As the number of hunters declined and the number of animal rights activists increased so did their clout. In the last 10 years most types of hunting have been restricted or banned by referendum to the point that only bird and rabbit hunting remain (Hoyle et al. 2007).

And American hunters are far from united. Wealthy big game hunters have different priorities than small game hunters who hunt close to home. The NRA sponsors hunting programs and lobby's governmental agencies, but less than 20% of hunters are NRA members.

RECOMMENDATIONS

The results of this research indicate that access, cost, personal constraints, and demographic trends are contributing to the decline in hunting participation. If the United States continues to shed 100,000 hunting consumers a year, then the critical mass needed to protect the U.S.'s hunting industry against anti-hunters may be lost. And getting into the woods isn't enough. Hunters, businesses in the hunting industry, and fish and wildlife agencies need to unite to save wildlife, their habitats, and their hunting heritage.

A good first step for stakeholders in the hunting industry is to create awareness among hunting consumers that there is a decline in hunting participation, *and* there are well-organized, well-funded forces who would like to see the sport end.

Secondly, all stakeholders in the hunting industry need to consider the hunting opportunities of others. If hunting is to survive it may be necessary for hunting consumers to sacrifice personally for the good of all, and ultimately the sport. For example, recruiting others to hunt your "spot" may decrease the amount of game available for you to personally harvest in the short-run, but increasing the number of hunters will increase yours' and future generations' ability to hunt in the long-term. Recruiting individuals that aren't raised in a hunting culture is a very challenging marketing task. They simply are not as interested. Therefore, in the short term the low hanging fruit for marketers in the hunting industry is retaining avid hunters and enlisting them as foot soldiers to recruit and initiate new hunters in the name of saving the sport. It is particularly important for hunters to initiate their own children and grandchildren. If hunting skips a generation, there is a very good chance that the industry will lose a hunting family. Promotions should focus on the benefits of quality family time spent with nature.

Secondly, less avid/infrequent hunters are more likely to quit the sport than avid/frequent hunters. Marketers and governmental agencies need to find a way to increase the satisfaction of this segment maybe by focusing on the fact that hunting offers many benefits such as a challenge, food, being close to nature, fellowship, etc. Similarly, initiation strategies can focus on aspects other than the "kill" such as the challenge, being close to nature and quality time with family and friends.

In the long-term, policy makers need to focus recruiting efforts on women and minorities particularly those of Hispanic dissent. This may lead to some racial tension, but the hunting industry cannot thrive in the long run without changing the demographic make-up of its customers.

Clearly a lack of time was the biggest constraint to future hunting in this study. Business or government leaders cannot control the amount of discretionary time available to hunters. However, they can have an impact on the importance that people place on their time spent hunting. Promotions can focus on "Make the time to hunt the benefits to you and future hunters are well worth it." Another finding of this study was that hunting competed with work and family for a hunters' time. These need not be mutually exclusive. For a majority of this sample hunting is family time.

The cost of a hunting license is the variable that state and federal wildlife agencies have the most short term control. While it is true that hunting licenses are price inelastic, it is recommended that state and federal agencies do not take advantage of this fact to increase total revenue. While this would create a much needed short-term boost to state budgets, the long-term effect of losing more hunters and thus more hunting mentors to recruit and initiate new hunters would accelerate the hunting decline.

Business or government leaders cannot control per capita discretionary income. They can however play a key role in keeping hunting affordable to lower and middle income earners. Business leaders can produce products and services that are targeted to limited income hunters. Government agencies can keep the cost of hunting down by keeping license fees low, and by keeping access to public land convenient and affordable. Programs that have been successful in this endeavor include 21 states that have hunter access programs that involve states paying private landowners to allow public hunting on their land. Vermont has three landowner appreciation dinners each year.

Many hunters exit the sport due to age and/or health reasons. They should be recruited to mentor young hunters into the sport. Hunting provides an ideal means to bridging a generation gap and ensuring a hunting family stays one. Promotions can focus on watching the magic of hunting through the eyes of a child.

Both hunters and anti-hunters are passionate about the sport. However, the majority of the U.S. public supports hunting. According to Moyer (2007) 78% of Americans support hunting, up from 73% in 1995. When asked about hunting for food or wildlife management, public support increases to 80%. When asked about hunting for sport or trophy collection, support plummets. In this study hunting for food is important. Programs that feed the poor may help to keep public opinion in the favor of hunters.

Every hunting stakeholder plays a role in the long-term battle for public opinion. It is imperative that hunters behave ethically. While the majority of hunters do behave ethically, the opponents of hunting use the most unethical practices of hunters to turn public opinion against the sport. This tactic helped turn the tide against many forms of legal hunting in England (Hoyle et al. 2007). If hunters practice fair chase, respect game, habitat, property, regulations and other hunters, there will be less ammunition for anti-hunting advocates. Ethical hunters are less likely to ruin the hunting experience for others than are unethical hunters which may have an impact on the perception of public access and safety.

The future of hunting is up to everyone who cares about hunting. If a hunter doesn't think they have the time to be pro-active in the fight to preserve their hunting heritage . . . just think of all the free time they'll have if their hunting privileges are taken away due to their complacency.

LIMITATIONS OF THE RESEARCH

The data for this study were collected in a non-random process and are thus, not representative of all hunters. Questions regarding license cost did not distinguish between in-state and out-of-state fees which are much higher.

FUTURE RESEARCH

Future Research should determine the impact of cost on both in-state and out-of-state hunters. Future research should explore how the actual number of hours worked impacts hunter frequency. Also, this study focused on the problems facing the American Hunter. Research that is global would help determine which issues are national and which are global in nature.

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