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TABLE OF CONTENTS

RELATIONSHIP BETWEEN CORPORATE PHILANTHROPY AND CONSUMER LOYALTY – THE MEDIATING ROLE OF GRATITUDE, TRUST AND COMMITMENT: SOUTH KOREAN CONSUMER PERSPECTIVES

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ABSTRACT

Corporate philanthropic activities, such as charitable donations, have become common business practice. But while academics have sought to verify the direct relationship between corporate philanthropy (CP) and corporate performance in terms of reputation, there has thus far been relatively little research that aims to identify the underlying reasons as to how CP improves a firm's performance. Therefore, this study tests the relationship between CP and consumer loyalty, which leads in the final analysis to financial success. In addition, this study aims to investigate the mechanisms, which have been largely unexplored, through which CP influences consumer loyalty. To investigate the proposed hypotheses of this study, we recruited subjects in South Korea and tested a structural equation model. The results of our study indicate that CP is significantly related to consumer loyalty, and is mediated by gratitude, trust, and commitment. Specifically, consumers tend to feel gratitude towards firms that divert at least a portion of their resources to CP. In addition, consumers who feel gratitude are prone to show a high level of trust and commitment towards such corporations in order to reciprocate those firms' CP efforts. As these findings suggest, commitment elicited by gratitude and trust leads to consumer loyalty. This research contributes to expanding the scope of CP research by verifying the effectiveness of CP on consumer loyalty.

INTRODUCTION

Several years ago, researchers suggested that the main goal of a profit-oriented firm was to attract consumers. Given that the current market has become so competitive, various researchers now claim that the main objective of a firm must be to capture and retain consumers. To achieve this goal, companies must seek ways to retain their consumers over the long term (Boora & Singh 2011). As such, many firms have begun to introduce corporate philanthropy, such as charitable donations, as a business strategy (Godfrey 2005). Specifically, the activity of corporate philanthropy introduces social concerns as an essential part of a firm's strategic marketing. For example, the 2013 expenditure on charitable giving of just 261 companies, including major companies in the Fortune 500, reached over $25 billion, and the proportion of profits given to charitable donation has been significantly increasing over the last few years (Giving in Numbers: 2014 Edition CECP)

Presently, corporate philanthropic activities are relatively easy to find. Firms fulfill their philanthropic responsibilities by contributing corporate resources such as financial donations, employee time, and facilities for humanitarian programs or causes. From a legal perspective, these activities are voluntary, not obligatory. However, society expects (or pressures) corporations to be involved in these altruistic activities as a means of "giving back" to the society. These societal pressures compel companies to implement appropriate philanthropic activities. Consequentially, corporations seek to establish a favorable corporate image and create a positive relationship with consumers that contribute to improving corporate value (Yoon, Gürhan-Canli & Schwarz 2006), by responding to consumers' social concerns.

With the rising adoption of corporate philanthropic activities by business practitioners, academics are paying increasing attention to corporate philanthropy (Brammer & Millington 2005). However, over the past couple of decades, there has been some debate over the relationship between corporate philanthropic activities and corporate performance (Godfrey 2005). In particular, scholars have focused on the substantial or empirical effect of corporate philanthropic activities on corporate performance in terms of corporate reputation. For instance, Williams & Barrett (2000), examining the influence of corporate philanthropic activities on corporate reputation, found that corporate philanthropy significantly enhanced corporate reputation. Brammer & Millington (2005), analyzing the determinants of corporate reputation among large UK companies, concluded that philanthropic expenditures improved corporate reputation, although the level of reputation enhancement varied from industry to industry. Hsu (2012), studying the persuasive impact of advertisement by focusing on corporate social activities, found that a company's advertisement of its social initiatives had positive effects on customer satisfaction, corporate reputation, and brand equity. This research verified the link between corporate philanthropic activities and corporate reputation.

However, the underlying reasons as to why corporate philanthropic activities have positive impacts on corporate performance have not yet been determined, as far as the authors are aware. To understand the effect of corporate philanthropy on corporate performance, understanding the processes of how corporate philanthropy enhances corporate performance will offer more insight than simply investigating the direct link between corporate philanthropy and corporate performance.

Therefore, this research addresses the key question of the mechanisms that make corporate philanthropic activities effective in enhancing consumer loyalty toward a firm. Although the ultimate goal of any firm is to maximize profit, consumer loyalty contributes to the attainment of this goal in the long run. The present study investigates the effect of corporate philanthropy on consumer loyalty, which in turn leads to corporate financial success.

This research contributes to the literature as follows. First, in contrast to previous studies, it investigates the underlying mechanisms that reveal how corporate philanthropy influences consumer loyalty. Specifically, this research introduces various cognitive (i.e. trust) and emotional responses (i.e. gratitude) as mediators that had not been considered in previous research, and investigates the link between corporate philanthropy and consumer loyalty. Existing research regarding corporate philanthropy has not, as of this writing, considered a process driven by consumer emotion. As such, the model developed in this paper contributes to an enhanced understanding of the link between corporate philanthropy and consumer loyalty. Second, this study investigates the model in the Korean context. Given the fact that most previous research on corporate philanthropy has been conducted in the United States, the results of this study will suggest that the link between corporate philanthropy and corporate

performance is more internationally robust. Finally, this research suggests that charitable activities induce trust in consumers.

THEORETICAL FOUNDATION AND RESEARCH HYPOTHESES

Corporate Philanthropy

Historically, for-profit enterprises have been criticized by many for their single-minded pursuit of profit maximization and lack of inherent ethics, both in product manufacturing and in respect for employee rights. But today, it is widely recognized that organizations need to concern themselves with more than just financial profits and other overt indicators of business success. They are expected to pay more attention to their diverse stakeholders: employees, the community and especially consumers, as well as investors and creditors (Brammer & Millington 2005). Therefore, many companies are expected to return a portion of their profits to their stakeholders, and recently, corporate charitable donations have become a crucial tool for promoting and shaping a company's image (Brammer & Millington 2005; Williams & Barrett 2000). This has led to the concept of corporate philanthropy.

To define corporate philanthropy, related terms such as Corporate Social Responsibility (hereinafter referred to as CSR) require clarification. CSR involves the performance of business to implement socially responsible actions through: (1) ethical employment and labor practices, (2) contact with local communities that may be influenced by corporate policies and products, (3) investment in social infrastructure, (4) contribution to the environment, and (5) contribution to general economic development (Kanji & Chopra, 2010). These activities are mainly classified as economic, legal, moral/ethical, or philanthropic activities (Godfrey 2005; Maignan & Ferrell 2000). Philanthropy represents one dimension of CSR.

Philanthropy differs from other dimensions of CSR as it involves a voluntary CSR manifestation, while economic, legal, or moral/ethical CSR dimensions involves societal obligations imposed on the firm (Godfrey 2005; Hsu 2012). Since the core aspect of philanthropy is an unconditional voluntary transfer of corporate wealth such as cash or other assets, there is no explicit reciprocal exchange between a corporation and its beneficiaries (Godfrey 2005). If CSR is classified merely as "good behavior," corporate philanthropy is "good behavior above and beyond what is expected" (Godfrey 2005, p.778). In corporate philanthropy, a giver does not expect beneficiaries to reciprocate the donation. Thus, corporate philanthropy differs from cause-related marketing, where the goal is to enhance corporate performance as well as promote worthy causes at the same time (Godfrey 2005; Vlachos, Tsamakos, Vrechopoulos & Avradmidis 2009).

Corporate philanthropy contributes to the establishment of a favorable corporate reputation among stakeholders, including general consumers (Williams & Barrett 2000). Several researchers argue that corporate philanthropy plays a significant role in enhancing corporate reputation (Brammer & Millington 2005; Godfrey 2005; Williams & Barrett 2000). Since corporate reputation is the collective opinion of a corporation formed by its stakeholders, a positive reputation is expected to contribute significantly to long-run corporate financial performance by enhancing perceived product quality among consumers, raising employee productivity, improving employee retention or recruitment, and increasing the firm's value (Brammer & Millington 2005).

Previous research on corporate philanthropy has mainly concentrated on the direct relationship between philanthropic activities and corporate reputation (Brammer & Millington 2005; Godfrey 2005; Williams & Barrett 2000). Undoubtedly, corporate reputation is an important construct related to corporate performance. However, verifying the relationship between philanthropic activities and consumer loyalty is revealing, to say the least. Therefore, this research undertakes to investigate the relationship between corporate philanthropy and consumer loyalty.

Corporate Philanthropy and Gratitude

Gratitude is an emotion that arises when a beneficiary perceives that a benefactor has deliberately acted to positively influence the beneficiary's welfare (Fredrickson 2004). Other researchers have focused on three particular moral functions of gratitude (Emmons & McCullough 2004). The first function, moral barometer, represents the expression of gratitude that allows beneficiaries to recognize when benefits have been intentionally directed toward them. The second function, moral motive, reflects the expression of gratitude that boosts an individual's need to contribute to the prosperity of the benefactor. Moral reinforcement, the third function of gratitude, is the phenomenon by which those experiencing feelings of gratitude are more willing to act pro-socially afterwards (McCullough, Kilpatrick, Emmons & Larson 2001).

Gratitude provides an emotional basis for reciprocal behavior (Becker 1986; Palmatier, Jarvis, Bechkoff & Kardes 2009). Palmatier et al. (2009) argue that gratitude is composed of affective and behavioral components. The affective component involves the feelings of gratitude generated when people perceive themselves as having been intentionally given a benefit from a benefactor, while the behavior component refers to actions such as reciprocal behavior derived from feelings of gratitude (Emmons & McCullough 2003; Palmatier et al. 2009). Expressions of gratitude indicate that an exchange has been accomplished and that the potential for future exchanges may exist (McAdams & Bauer 2004). Gratitude expression also promotes a recipient's need to act more pro-socially toward the benefactor, which in turn eventually creates a relational strengthening cycle between the two parties (Palmatier et al. 2009).

Although psychological research has investigated the role of gratitude within the discipline of positive psychology, the topic of gratitude has not received much attention in the area of marketing (Snyder & Lopez 2002). A few studies on equity theory or distributive justice pondering the principle of reciprocity (Adams 1965; Morale, 2005) have argued that consumers and firms are aware of relative rewards and concomitant costs during continuous exchanges (Adams 1965; Morales 2005). These studies also argue that when consumers perceive the rewards to be unexpectedly higher than their related costs, they are stimulated to restore equity by compensating the merchant at some cost to themselves, such as by purchasing more. That is, negative/uncomfortable feelings of deficit eventually induce a positive reaction to reciprocate favors (Morales 2005).

However, there have been no marketing studies investigating the role of consumer gratitude in the context of corporate philanthropy. Gratitude is a typical emotional response when a person benefits from another, which is the basis of reciprocal behavior for developing and maintaining relationships (Palmatier et al. 2009). A giver's action that is perceived to be unintentional creates little gratitude; conversely, when the action is perceived to be intentional, it creates a feeling of gratitude (Palmatier et al. 2009). In the relationship marketing context, Palmatier et al. (2009) provide evidence of the active features of gratitude, and suggest that

companies that invest in relationship marketing enjoy greater levels of gratitude and reciprocity from their consumers. In addition, they argue that the corporate profit derived from increased sales during the period of receiving gratitude is a reflection of consumer reciprocity. Combining a firm's heightened effort to improve consumer welfare with consumer gratitude, Morales (2005) suggests that consumers will reward companies even when consumers do not directly or personally benefit. Even in cases where a firm's philanthropic efforts are not considered to improve product quality, they have a significant influence on consumer gratitude toward the firm, which in turn invokes in consumers the idea of rewarding companies in diverse ways (Morales 2005).

Conclusively, corporate philanthropy characterizes a greater intentional effort on the part of the firm to improve consumer welfare. Investing a significant quantity of resources into corporate philanthropic activities may enhance consumer perception that the firm is making a noticeable effort to enhance consumer welfare, which eventually leads to enhanced consumer gratitude. Therefore, we suggest the following hypothesis:

> *H1   Corporate philanthropy will have a positive influence on gratitude.*

Corporate Philanthropy and Trust

The concept of trust, which is strongly established in the field of management and marketing research, has many dimensions and can be employed on various levels of analysis (interpersonal, intergroup, and inter-organizational) (Schoorman, Mayer & Davis 2007). The particular importance of trust can be found in the context of risk. Certainly, trust can be understood as an eagerness to participate in situations involving risk or the willingness to count on the other party. In short, trust allows parties in a relationship to take risks. In the absence of other management systems in a relationship, trust is considered critical for relationship maintenance (Castaldo, Perrini, Misani & Tencati 2009, Schoorman et al, 2007).

Trust has been examined from two different perspectives (Geyskens, Steenkamp, Scheer & Kumar 1996; Moorman, Zaltman & Deshpande 1992). On one side, trust has been considered as a behavioral component: the willingness to rely on a partner. On the other side, trust may be analyzed as an emotional component, and has been also affiliated with a set of attributes: competence, honesty and benevolence (Coulter & Coulter 2002). Competence is defined as the consumer's perceptions of the seller's ability and skills to develop a good relationship and satisfy client needs. Honesty is the perception that the firm will honor its stated promises and be forthright (Doney & Cannon 1997). Benevolence describes the belief that one of the counterparts, either the company or the consumer, is interested in the welfare of the other. In other words, trust reflects one party's confidence that the other party is trustworthy, credible and righteous (Ganesan 1994). Qualities such as honesty, responsibility, benevolence and comprehension are associated with trust (Casalo, Flavian, & Guinaliu 2007). Trust, which can be also viewed in terms of outcomes, is the belief that the other party will act to bring positive outcomes; or at least, will not act unpredictably to produce negative outcomes. Indeed, positive results are anticipated from a party that is reliable and has a high level of integrity (Morgan & Hunt 1994).

In brief, trust can be defined as a trustor's expectation that the trustee is willing to honor promises and fulfill obligations. This expectation is based on the level of competence, honesty, altruism, and goodwill projected on the trustee (Castaldo et al. 2009) in the framework of a relationship, its outcomes and possible risk situations (Schoorman et al. 2007).

In relationship marketing, Palmatier et al. (2009) suggested that there is a direct relationship between corporate investment in relationship marketing and consumer trust. Also, Brown (1998) found that CSR actions as well as a firm's reputation for fairness in its relations with consumers and other stakeholders are positively related to consumer trust, commitment to the relationship and willingness to continue a long lasting relationship.

Although several studies have examined the direct relationship between CSR and trust, consumer trust has been identified as a mediating variable in various fields, e.g., social psychology, management, marketing, and service evaluation (Vlachos et al. 2009). Also, past studies have found that a firm's efforts (relationship management investment) have a significant impact on trust and the overall evaluation of a company (Palmatier et al. 2009). For instance, Vlachos et al. (2009) examined the question of whether CSR motives influence the evaluation of CSR, and found that CSR based on benevolent, sincere motives influenced consumer trust toward a corporation and positive evaluation of its CSR activities. This line of research implies that corporate efforts to enhance consumer welfare influence the level of consumer trust. Therefore, consumers may exhibit a high level of trust toward a corporation that voluntarily invests in philanthropic activities. Following this logic, we propose the following hypothesis:

H2   *Corporate philanthropy will have a positive influence on trust.*

Gratitude and Trust

As mentioned previously, gratitude is defined as an emotion that appears when a transaction is undertaken, while trust is defined as a cognitive appraisal toward a targeted object relating to competence, honesty or benevolence that the object possesses. Thus, it is necessary to investigate which construct is an antecedent of the other in order to understand the relationship between gratitude and trust.

The relationship between emotion and cognition has been a subject of debate (Mathews & MacLeod 1994). Some scholars have argued that emotion and cognition are completely independent of each other (Zajonc 1980), while others have strongly contended that cognition is significantly related to an emotional process, and this claim has been finding favor among scholars (Izard 1993; Mathews & MacLeod 1994). The stream of research supporting the close relationship between cognition and emotion has revealed that emotion can trigger certain types of cognitive appraisals. For instance, Mueller (1992) demonstrated that negative emotions such as anxiety lower the ability to perform complicated cognitive activities. Also, several researchers have revealed that high levels of depression or anxiety facilitate the selective encoding of information (Mathews & MacLeod 1994; Powell & Hemsley 1984). Although these studies were conducted in different contexts, their commonality is that cognition is very often influenced by emotion.

In addition, existing research regarding trust suggests that emotion is tightly associated with cognition (Palmatier et al. 2009). For instance, individuals first evaluate feelings that they have toward another person, and then decide whether they trust this person or not (Jones & George 1998). Indeed, while they may believe that they are rational, people are frequently prone to rely on emotions when making crucial decisions. Previous research has suggested that emotional responses play a significant effect on cognitive evaluation toward a targeted object (Pham 2007). Also, it has been found that feelings of gratitude for received benefit trigger the recipient's positive evaluation of the giver (Palmatier et al. 2009; Young 2006). Young (2006) argues that gratitude is an emotion that maintains relationships and gives a special significance to

upholding trust in those relationships. Palmatier et al. (2009) argue that since gratitude triggers positive evaluation and feelings, it also should positively influence the level of trustworthiness toward the giver. Indeed, benevolence or altruistic behavior toward others functions as the foundation for affect-based trust because emotional connections build trust, particularly through caring for others and their welfare (Palmatier et al. 2009). Therefore, we propose that:

> *H3   Gratitude will have a positive influence on trust.*

Gratitude and Commitment

Based on the concept of commitment in social exchange and organizations, commitment may be understood as two parties believing that a continuous relationship between each other is significantly valuable, to the extent that both will take the necessary steps to support and maintain it (Morgan & Hunt 1994). There are many definitions of commitment; however, all of them propose two main dimensions: calculative commitment and affective commitment. Calculative commitment is more rational, and is concentrated on the economic aspects of a transaction such as the presence of sunk or switching cost (Casalo et al. 2007). Consumers involved in a calculative commitment are likely to continue the relationship with the other party because terminating the relationship may lead to value depreciation of resources that have been invested in the relationship (Casalo et al. 2007). On the other hand, affective commitment is based on emotions (Casalo et al. 2007) and evolves through cooperation or a particular engagement that a consumer has with a company (Gustafsson, Johnson & Roos 2005). Affective commitment, a dominant dimension in most marketing research, assumes that both parties have a high level of interest in preserving and continuing the relationship for an extended period of time. Thus, affective commitment can be defined as a consumer's desire to continue the relationship (Casalo et al. 2007). This paper focuses on the affective component in the definition of commitment, and suggests a relationship between gratitude and commitment.

Gratitude is an emotional response for benefits received, and accompanies the reciprocal behavior of returning at least some of the benefits (Palmatier et al. 2009). Gratitude-based reciprocity is a fundamental component of maintaining relationships. In consumer-corporate relationships, heightened corporate efforts to enhance consumer welfare such as philanthropic activities generate gratitude, which in turn leads to enhanced consumer commitment toward the firms in the form of gratitude-based reciprocal behavior (Morales 2005; Palmatier et al. 2009). That is, if a corporation invests resources for consumer benefit, consumers will likely feel gratitude and subsequently may reciprocate by increasing trust and committing themselves to the organization, even though difficulties may appear at some point in the relationship history of exchange (Cialdini & Goldstein 2004). Therefore, consumer gratitude and the accompanying desire to reciprocate will lead to a commitment toward a corporation. Therefore, we proffer:

> *H4   Gratitude will have a positive influence on commitment.*

Trust and Commitment

Many researchers have argued that trust and commitment are positively associated (Casalo et al. 2007; Palmatier et al. 2009). Specifically, trust enhances commitment in a relationship (Casalo et al. 2007). A relationship based on trust from both parties creates sufficient value to commit the parties to the relationship (Casalo et al. 2007). If one party exploits the

vulnerabilities of the other, the perceived risk relating to subsequent transactions, and thus their relationship, will increase. However, if two parties build trust, they can decrease the level of perceived risk related to their relationship, and mutually build a commitment to maintain it. Indeed, trust is essential to relational exchange and is found to be the backbone of a strategic partnership, since parties desire to cooperate only with trustworthy partners (Morgan & Hunt 1994). Addressing this issue, Casalo et al. (2007) found a direct relationship between trust and commitment in the context of internet transaction. Additionally, Palmatier et al. (2009) noted that trust influences commitment toward a corporation in relationship marketing. Thus, it is posited that trust is a main antecedent of commitment (Morgan & Hunt 1994). Accordingly:

> H5   *Trust will have a positive influence on commitment.*

Commitment and Loyalty

Loyalty is a multi-dimensional construct that can be measured through a consumer's purchasing frequency and the amount of products purchased from one company (Liang & Wang 2008). In general, the existing research suggests three approaches to loyalty measurement: (1) Behavioral measurement defines loyalty in terms of the number of repeated purchases from the same company. This measurement has a limitation in that repetitious purchase behavior does not necessarily represent psychological involvement with the company. (2) Attitudinal measurement, defining loyalty as affective or psychological attraction toward a company, measures the level of consumer engagement and the strength of attachment. (3) Composite measurements of loyalty evaluate consumer preferences, the ability to change products, frequency and quantity of purchase. By combining the previous two measurements, this methodology produces more accurate results in loyalty evaluation (Darsono & Junaedi 2006).

Commitment involves consumer willingness to undertake strong and reliable relationships with an organization. Since commitment reflects a consumer's voluntary decision to engage in a long-term relationship with a corporation, it plays a significant role in enhancing loyalty (Evanschitzky, Iyer, Plassmann, Niessing & Meffert 2006). Significant research in diverse fields argues that commitment is best described as an emotional component of loyalty, and suggests that an increase in commitment should lead to an increase in behavioral intention, which ultimately results in enhancing consumer loyalty (Chiou & Droge 2006; Evanschitzky et al. 2006; Palmatier et al. 2009). Thus, a positive link between consumer commitment and consumer loyalty is proposed, as follows:

> H6   *Commitment will have a positive influence on loyalty.*
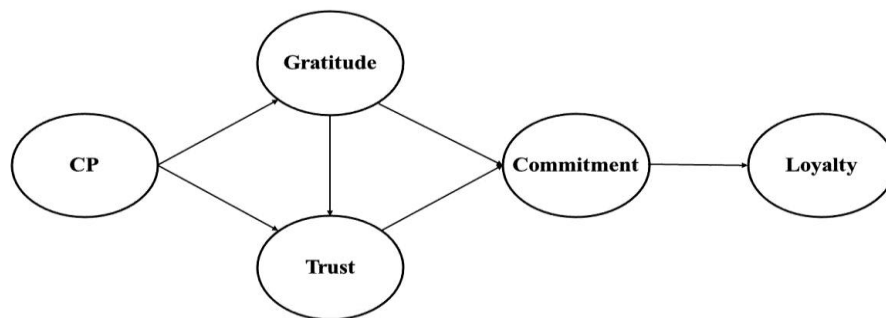
Figure 1 The Proposed Model

METHODOLOGY

Data Collection

Data was collected in two large cities in South Korea, Seoul and Gwangju, through the participation of 171 business school students and 203 general consumers in the survey conducted for this study. In terms of demographics, slightly more than half were male (male: n=203 vs. female: n=171), and 83.7% (n=302) had a high school education or higher. The average age of the respondents was 34.6 years. The respondents in the general consumer group had various occupational backgrounds: housewives (n= 54), corporate managers (n=69), engineers (n=25), self-employed (n=36), schoolteachers (n=10) and others (n=9).

Measures

Corporate philanthropy (hereinafter referred to as CP) is a manifestation of the societal expectations of corporations. Given the uniqueness of the cultural and business environment in which Korean corporations conduct their businesses, further effort to develop measurement items was required. In order to gain insight into Korean consumer expectations concerning CP activities, five items were generated to assess CP activities based on previous studies (Park, Lee & Kim 2014): (1) "This company gives adequate contributions to charities," (2) "This company forms partnerships with local schools and community organizations to do charitable work," (3) "This company encourages its employees to actively participate in community affairs," (4) "This company supports local sports and cultural activities," and (5) "This company encourages and supports employees to obtain additional education (e.g., MBA, English enhancement programs)." CP items were measured on six-point Likert type scales (1=Strongly disagree; 6=Strongly agree).

Gratitude is a fundamental social component of human interaction that provides an emotional foundation for reciprocal behavior. In our study, we used an existing three-item scale for gratitude adopted by Morales (2005) and Palmatier et al. (2009), considering the interactive relationship between company and consumer. They were: (1) "I feel grateful to this company," (2) "I feel thankful to this company," and (3) "I feel appreciative to this company," and the items were evaluated on a six-point Likert type scale (1=Strongly disagree; 6=Strongly agree).

Items for trust toward a company were drawn from previous studies (Ferrin, Kim, Cooper & Dirks 2007; Ganesan 1994; McKnight, Choudhury & Kacmar 2002; Pavlou & Dimoka 2006; White 2005). They were: (1) "This company is sincere," (2) "This company is honest," and (3) "This company is trustworthy." The items were evaluated using a six-point Likert type scale (1=Strongly disagree; 6=Strongly agree).

The study also used the existing three items for corporate commitment developed by Morgan and Hunt (1994). The commitment construct was designed to capture identification with the company ("proud to belong"), psychological attachment ("sense of belonging"), and concern with long-term welfare ("care about the company's long-term success"). The items used a six-point Likert type scale (1=Strongly disagree; 6=Strongly agree).

Finally, consumer loyalty was measured using the following two dimensions: recommendations to others and repurchase intentions (Cronin & Taylor 1992). The items likewise used a six-point Likert type scale (1=Strongly disagree; 6=Strongly agree). Taylor,

Hunter & Longfellow (2007) note that for services extending over long periods, measuring loyalty in terms of actual buying behavior may be inadequate. As such, future purchase intent is a commonly used surrogate measure (Lacey 2007).

For this study, it was necessary to specify a corporation about which respondents could provide their evaluations and beliefs. In order to enhance the generalizability of the study's findings, two well-known, large corporations were chosen. One of them is Korea's leading electronics company, while the other is a telecommunications company whose market share in Korea is over 40%. The total sample was divided into two, and each half was asked to provide their responses about one of the two companies. For the final data analysis, responses from the two groups were aggregated.

ANALYSIS AND RESULTS

Data analysis was conducted in three phases. The first phase involved item purification and reliability analysis. The second phase undertook measurement analysis (i.e., factor structure confirmation) involving the items of CP initiatives, gratitude, trust, commitment and consumer loyalty. In the third phase, the proposed structural relationships among the key constructs (see Figure 2) were estimated, and the results were used to test H1 to H6. In the final phase, the final model was examined.

Reliability and Validity

The assessment of measurement properties (reliability and validity) for the proposed CP initiatives, gratitude, trust, commitment and consumer loyalty scale with 16 items and the subsequent item purification were conducted through an iterative procedure (Bohrnstedt, 1983; Kim & Lee, 1997). The item purification process resulted in 15 items (one CP item was eliminated). Cronbach's alpha reliability coefficient was first calculated for the items of each construct. Cronbach's alpha in this study turned out to be .801 at the minimum and .886 at the maximum (see Table 1), which indicates good internal consistency.

In addition, exploratory factor analysis was conducted to analyze the validity of the measurement variables. Using principal component analysis, the varimax rotation method, one of the orthogonal rotations, ensured independency among the factors.

No constructs were exempted as a result of the analysis, and factor loadings for each concept were all above .65 (see Table 1). More specifically, the average trait variances accounted for by each item were as follows: 67.7% for CP, 75.26% for gratitude, 71.6% for trust, 76.9% for commitment, and 89.7% for loyalty. According to Bagozzi and Yi (1991), trait variance greater than 50% is regarded as strong evidence for convergent validity. Discriminant validity among the five variables was examined by performing a χ^2 difference test between a model where all factor correlations were fixed at 1.0 and an unconstrained model. The constrained model showed a significantly poorer fit compared to the unconstrained model ($\Delta\chi^2=1205.67$, df=10, p<0.001). This suggests that the five variables were distinct from one another.

Table 1 RESULTS OF EXPLORATORY FACTOR ANALYSIS							
Variables	Items	Factor loading					Cronbach's α
CP Activity	1. cp1 2. cp2 3. cp3 4. cp4	.797 .821 .652 .807					.839
Gratitude	1. gra1 2. gra2 3. gra3		.817 .744 .736				.835
Trust	1. tru1 2. tru2 3. tru3			.787 .810 .765			.801
Commitment	1. com1 2. com2 3. com3				.793 .830 .776		.850
Loyalty	1. loy1 2. loy2					.806 .838	.886
Eigen values % of variance cumulative %		6.546 43.637 43.637	1.826 12.175 55.812	1.075 7.166 62.979	1.065 7.099 70.078	.849 5.663 75.741	

Correlation among Constructs

In accordance with the factor analysis results, Pearson correlation analysis was conducted to verify mutual relationships among the constructs and their unidimensional characteristics. The results revealed that there was a positive relationship among all constructs, as shown in Table 2, and these were in accordance with the relative direction among the presented variables.

Table 2 CORRELATIONS AND DESCRIPTIVE STATISTICS OF KEY CONSTRUCTS							
	Mean	SD	1	2	3	4	5
1. CP	3.68	.86	1.00				
2. Gratitude	3.71	.94	.669*	1.00			
3. Trust	4.30	.87	.404*	.549*	1.00		
4. Commitment	4.44	.90	.445*	.531*	.652*	1.00	
5. Loyalty	4.12	1.11	.523*	.644*	.533*	.593*	1.00

Measurement Model

In the subsequent stage, the five-factor structure encompassing the 15 items was subjected to confirmatory factor analysis (CFA) using LISREL VIII (Jöreskog & Sörbom 1993). The overall model fit as indicated by the χ^2 statistic fit (χ^2=142.62, df=80, p<0.001) was unsatisfactory. However, given the χ^2 test's sensitivity to sample size and our relatively large sample size (n=374), attention was focused on fit measures that are less sensitive to sample size (Bentler, 1990); namely, the comparative fit index (CFI), the goodness of fit (GFI), the adjusted goodness of fit (AGFI), and the normed fit index (NFI). For the measurement model, the CFI, GFI, AGFI, and NFI values were all deemed satisfactory, equaling 0.979, 0.951, 0.927, and 0.953, respectively. Convergent validity was assessed using significance and magnitude of factor

loadings. The magnitudes of factor loadings ranged from 0.69 to 0.92, and all loadings were significant (p<0.01).

Table 3
COMPOSITE RELIABILITY AND CONFIRMATORY FACTOR ANALYSIS

Variables	Items	Standardized loading	t-value	Measurement error	C.R	AVE
CP Activity	1. cp1	.82	18.26*	.33	.844	.579
	2. cp2	.83	18.72*	.31		
	3. cp3	.60	12.00*	.64		
	4. cp4	.77	16.79*	.40		
Gratitude	1. gra1	.83	18.25*	.32	.837	.632
	2. gra2	.77	16.59*	.41		
	3. gra3	.79	17.16*	.38		
Trust	1. tru1	.81	17.15*	.35	.804	.579
	2. tru2	.78	16.49*	.39		
	3. tru3	.69	13.93*	.53		
Commitment	1. com1	.79	17.42*	.37	.824	.611
	2. com2	.87	19.95*	.24		
	3. com3	.77	16.65*	.41		
Loyalty	1. loy1	.92	21.20*	.15	.839	.723
	2. loy2	.86	19.28*	.26		
Fit	χ^2=142.62, df=80(p=.000), GFI=.951, AGFI=.927, NFI=.953, CFI=.979, RMR=.041					

Note: *p<.001

Structural Model

To test the hypotheses in this study, we estimated the fit and parameters of the model through covariance structural analysis using LISREL VIII (Jöreskog & Sörbom 1993). LISERL analysis revealed satisfactory model fitness, as indicated by the CFI, GFI, AGFI and NFI values of 0.957, 0.927, 0.896 and 0.931, respectively. The results of a path analysis on the structural model are shown in Table 4. As expected, the chi-square test was significant (χ2=220.65, df=84, p<0.001). Given the overall acceptable fit of the model, the estimated path coefficients were then examined to evaluate the hypotheses.

Table 4 shows that the empirical results largely support the conceptual framework proposed in this study. First, there is evidence that CP initiatives positively impact consumer gratitude; therefore, hypothesis H1 was supported, as expected. An unexpected finding was the relationship between CP and consumer trust. Although it was hypothesized (H2) that CP would have a positive relationship with consumer trust, this was not supported. As hypothesized (H3; H4), gratitude positively contributed to consumer trust and commitment in the current research setting. Furthermore, trust also appears to have a positive impact on consumer commitment. Thus, hypothesis H5 was supported. Finally, commitment had a significant positive influence on consumer loyalty (H6).
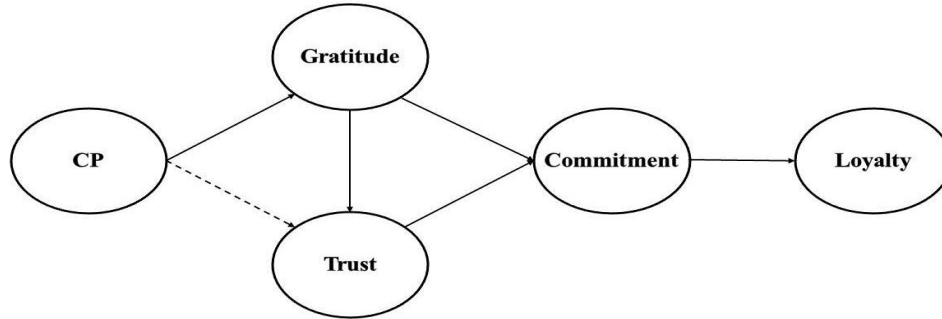
Figure2 Hypothesized Structural Model (t-value)

	Table 4 ASSESSMENT OF THE EFFECTS OF EXOGENOUS AND ENDOGENOUS CONSTRUCTS			
	Hypothesized relationship	estimate	t-value	conclusion
H1	CP → Gratitude	.68	9.71***	supported
H2	CP → Trust	.07	.90	rejected
H3	Gratitude → Trust	.50	5.41***	supported
H4	Gratitude → Commitment	.32	5.03***	supported
H5	Trust → Commitment	.50	6.81***	supported
H6	Commitment → Loyalty	.65	9.37***	supported
χ^2=220.35, df=84(p=.000), GFI(.927), AGFI(.896), NFI(.931), NNFI(.946), CFI(.957), RMSEA(.066)				
Note: ***p<.001				

Mediation Test

Using the Bootstrapping test method, the mediation effects of gratitude and trust were tested for a link between corporate philanthropy and consumer loyalty. Bootstrapping is a statistical resampling method that estimates the parameters of a model and their standard errors strictly from a sample (see, e.g., Efron 2003; Preacher & Hayes 2004). The indirect effect, which is of primary interest in a simple mediation model, is quantified as the product of the direct effect of IV on DV and the direct effect of IV on DV through MV is medium (mediation value = value), and a 95% confidence interval around the unstandardized, bootstrapped estimate of indirect effect confirms that it is statistically significant (CI 95% = LLCI value, ULCI value; Bollen & Stine 1990).

The results of our bootstrapping analysis reveal that each of the three paths reflected a positive relationship, as shown in Table 5, supporting the existence of mediation between corporate philanthropy, trust, commitment and loyalty.

Table 5 PATH COEFFICIENTS AND INDIRECT EFFECTS				
Path	Value	CI_{low}	CI_{high}	Sig.
CP → Gratitude → Trust	.2260	.1439	.3021	p<.05
CP → Gratitude → Commitment	.2063	.1230	.2950	p<.05
Gratitude → Trust → Commitment	.1878	.1334	.2544	p<.05

DISCUSSION

Corporate philanthropic activities are conduits by which corporations integrate their markets' concerns and expectations into corporate values and operations for the purpose of wealth creation as well as the betterment of society (Berger, Cunningham & Drumright 2007). Whereas there is sufficient evidence suggesting a significant positive relationship between CP and corporate reputation, the existing CP literature offers little explanation as to how CP results in corporate performance in terms of consumer loyalty. The present study supports an understanding of the relationship between CP and consumer loyalty by considering the role of consumer gratitude, trust and commitment as mediators of the CP-consumer loyalty link.

Our research suggests that CP's influence on consumer loyalty is more complex than the straightforward approaches that have been analyzed thus far by other researchers. Specifically, existing research has shown that CP conducted by a company may lead to higher firm performance, although it is mediated by other consumer behaviors.

This study provides evidence that CP positively impacts consumer gratitude. Even though a company's effort to be more socially responsible does not influence the quality of its products and services, it does have a significant effect on consumer gratitude and reciprocal responses toward it. Consumers realize that CP is a voluntary action by an organization that aligns with their own moral views. Thus, even if they are exploited in the quest to market products, consumers react with feelings of gratitude. Consequently, the overall attitude toward the firm changes positively, and consumers are induced to identify with the firm. Consumers not only exhibit more reciprocal behavior toward a corporation, but also feel more satisfied with products produced by an organization that is evaluated as socially responsible.

Ironically, the link between CP and consumer trust was not supported in this research setting, an unexpected result that may have been caused by the characteristics of the research. Attitudes toward the companies considered in our research may be biased by the specifics of the Korean market and the companies considered. Organizations evaluated in this research were well-known, large Korean corporations, which on many occasions have been perceived by consumers as engaging in monopolistic activities, inspiring anti-corporate sentiments. Specifically, this unexpected result might be caused by Korean consumer perceptions that such large-scale corporations may be engaged in activities that are unethical, if not illegal. These results are very interesting in the Korean context. Nevertheless, trust has still been indirectly influenced by a company's CP.

Secondly, gratitude has been found to positively influence both trust and commitment. Gratitude is an emotion that maintains consumer-company relationships and puts a special significance on upholding trust, as well as strengthening consumer commitment toward an organization. Also hypothesized, and well known in the marketing literature, the relationship between trust and commitment was proved and likewise met our expectations. Thus, because commitment entails vulnerability, consumers will seek only trustworthy companies to pair with.

Finally, in terms of loyalty, a positive and significant relationship between consumer commitment and loyalty was found. This research has found that consumer allegiance and behavioral consistency toward a firm is preceded by a willingness to maintain a strong relationship with a company and the likelihood of prolonging it.

On previous occasions, various researchers have studied the direct effects of CP initiatives on consumer loyalty. The present research provides strong arguments that through

socially responsible actions, companies not only generate loyalty to themselves but also activate diverse positive consumer behavior mechanisms. Responses such as gratitude, trust and commitment mediate the relationship between CP initiatives and eventually lead to consumer loyalty.

Several limitations of this research should be mentioned. First, this study's construct relied on consumer perceptions. As such, no distinction was made between companies that are actually socially oriented and those that convincingly pretend to be. This problem has been observed in many studies on CP, because consumers and other stakeholders cannot always know what transpires within an organization. In this way, consumer perceptions may be distorted by factors that are difficult to measure. Second, our data refer to only two companies, in a specific area of business (electronics and telecommunication companies). It is legitimate to ask whether the same results would hold in other business environments. Finally, it is important to mention the uniqueness of the cultural and the business environment in which Korean corporations transact business, as well as the monopolistic influence of corporations with a major market share. These two factors may distort consumer perceptions of the firms' respective CP activities.

In summary, we see our study as a first step in a new approach toward examining the interplay between CP and consumer loyalty. Further studies are required to ascertain that this study's conclusions are not predicated on national, industry, and other contextual factors involved in the particular case examined. At the same time, we believe that we have proved that considering CP as a trigger not only for certain consumer behavior but for the entire mechanism of consumer behavior is a promising line of inquiry.

ENDNOTES

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HOW MARKETING ORGANIZATIONS CAN BENEFIT FROM BIG DATA ADVERTISING ANALYTICS

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ABSTRACT

Propelled by the growth in commercial usage of the internet by companies and customers, Big Data and Advertising Analytics have emerged as a scientific and marketing discipline which gathers, analyzes, and extracts informational value from business-to-customer online interaction. Jobs, Aukers, & Gilfoil (2015) studied this emerging discipline and developed a consolidated typology of the firms operating in the ecosystem. It is evident from this work that customer-facing companies (digital advertisers) could be confused about Big Data service offerings and affordability of firms, how to use them to drive their marketing strategies, or how they can be used to improve marketing efficiency and effectiveness. Key findings from the present research indicate which digital advertisers can most benefit from Big Data, and by how much. More specifically, findings indicate minimum advertising spend levels required to benefit from each type of Big Data firm, the expected return on advertising spend for each, as well as critical factors for successful engagement. Insights relating to costs and performance expectations are also distilled from in-depth, semi-structured interviews with key executives from 24 Big Data and Advertising Analytics firms. This research concludes that Big Data firms can potentially add value if properly matched with the right digital client. Depending on the type of Big Data firm used, cost of entry can range from $5,000 to $100,000 a month, while mean advertising efficiency savings range from a low of 20% to a high of 35%.

INTRODUCTION

Propelled by the growth in commercial usage of the internet by companies and customers, Big Data has emerged as a scientific and marketing discipline which gathers, analyzes, and extracts informational value from massive amounts of business and customer online interactions. The growth of publicly available unstructured data is immense and pervasive – and it is growing at an accelerated pace according to Jonathan Shaw (2014). Shaw makes the case for Big Data:

> Data now stream from daily life: from phones and credit cards and televisions and computers; from the infrastructure of cities; from sensor-equipped buildings, trains, buses, planes, bridges, and factories. The data flow so fast that the total accumulation of the past two years—a zettabyte—dwarfs the prior record of human civilization (Shaw, 2014, p. 30).

Many companies and institutions have quickly recognized the value of harnessing Big Data. Allouche (2014) suggests that applying the science and discipline of Big Data to the massive amounts of unstructured marketing data can leverage that data to innovate their advertising programs. He also suggests that it is important to help companies advertise to customers for the things they want and use - without being annoying. Forbes Magazine (Whitler, 2015) supports the virtues of Big Data and the analysis of that data using Advertising Analytics. Advertising Analytics, a term popularized in the academic literature by Nichols (2013), refers to the set of capabilities that allows marketing firms to make sense of Big Data, ultimately enabling the measurement of an advertising campaign's impact on their business.

Jobs, Aukers, and Gilfoil (2015) studied this emerging Big Data/Advertising Analytics discipline and developed a consolidated framework and typology of the firms operating in the ecosystem. It is evident from this work that, even though the ecosystem is thriving and rapidly evolving, the discipline is complex and sometimes difficult to understand. While there are some clear lines of distinction in the types of Big Data and Advertising Analytic firms in the ecosystem, there are some blurry lines, overlap, and interdependence between the constituent firms. Furthermore, some marketing clients are still not convinced about the overall value of Big Data (Ross, Beath, & Quaadgras, 2013), while others are questioning the affordability of Big Data and Advertising Analytic firms, the steepness of their learning curves, how to use them to drive their marketing strategies, or how they can be used to improve marketing efficiency and effectiveness (Purohit, 2014; IBM, 2013; Duke CMO Survey, 2013; Moorman, 2013). Purohit (2014), in particular, suggests that there is a strong enough incentive to overcome the barriers to using Big Data, provided that companies understand the power of this data and analytics to deliver higher throughput, better value for customers, and the immaculate growth in the global economy.

While the potential power of Big Data and Marketing Analytics can readily be detailed, a key challenge lies is integrating Big Data into a client company's overall strategy. It requires a significant commitment of resources in terms of money, staff, and time - and the organization needs a plan on how to execute. A recent McKinsey report (Biesdorf, Court, & Willmott, 2013) underscores this point while noting that CIO's must also stress the need to completely remake company data architectures and applications. The report concludes that the missing step for most companies is spending the time to understand how data, analytics, frontline tools, and people can come together to create business value.

The problem being addressed in this research endeavor is that the Big Data and Advertising Analytics ecosystem is complex and still evolving. While there is much hype about the industry and its promises to enhance marketing (advertising) program efficiencies and effectiveness, many potential marketing clients (i.e. CMOs and their organizations) lack much needed information to become engaged with the ecosystem. This research was designed to specifically answer the following key questions:

1. What are the minimum advertising spend levels required to engage the services of each type of Big Data/Advertising Analytics firm in the ecosystem?
2. What are the advertising spend "break-even" thresholds for engaging each type of firm?
3. What percent savings (increased efficiency) can be expected from specific advertising spend levels with each firm?
4. What are the critical factors a company needs to address in order to participate in this Big Data ecosystem?

LITERATURE REVIEW

The Era of Big Data

The era of Big Data is well underway. Computer scientists, physicists, economists, mathematicians, political scientists, bio-informaticists, sociologists, marketers, and other scholars are clamoring for access to the massive quantities of information produced by, and about people, things, and their interactions (Boyd & Crawford, 2012). The Big Data movement is typically about analyzing trends, making connections between large amounts of data from multiple sources, identifying complex patterns of behavior, and drawing inferences and conclusions – with the intent of making strategic and tactical decisions and optimizing outcomes. Big Data, for example, can enable researchers to foresee deadly infections, predict building fires, and anticipate the best moment to buy a plane ticket, see inflation in real time and monitor social media in order to identify trends (Mayer-Schönberger & Cukier, 2013).

From a marketing and customer perspective, the academic literature in the last three years has produced many articles, guidelines, and case studies that largely support the notion that Big Data, Advertising Analytics, and data mining are here to stay (Davenport et al., 2013; Erevelles et al., 2015; Fulgoni, 2013; Tirunillai, & Tellis, 2014; Wan et al., 2014). The top story of the year 2012 from Advertising Age is simply titled "Data Dominates". Advertising Age suggests that no two words have had such an impact on the industry since "social media".   It further contends that Big Data is relevant to the bottom line, and that companies cannot get by with a guru for Big Data - an actual scientist is needed (Advertising Age, 2012).

The term "Big Data", according to Manovich (2011), has historically been used in the sciences to refer to data sets large enough to require supercomputers, but what once required such machines can now be analyzed on desktop computers with standard software. There is little doubt that the quantities of data now available are often quite large but that is not the defining characteristic of this new data ecosystem (Manovich, 2011).

Zikopoulos, Eaton, deRoos, Detusch, and Lapis, (2012) in a recent book entitled *Understanding Big Data: Analytics for Enterprise Class Hadoop and Streaming Data (IBM)*, state that the term itself is somewhat of a misnomer; it implies that pre-existing data is somehow small or that the challenge is in the sheer size. The authors contend that neither of these assumptions are necessarily true and further suggest that Big Data applies to "information that can't be processed or analyzed using traditional processes or tools." (Zikopoulos et al, 2012).

Perhaps the most comprehensive academic definition of Big Data is offered by Boyd and Crawford (2012) who define Big Data as a cultural, technological, and scholarly phenomenon that rests on the interplay of 3 factors:

1. **Technology**: maximizing computation power and algorithmic accuracy to gather, analyze, link and compare large data sets.
2. **Analysis**: drawing on large data sets to identify patterns in support of economic, social, technical and legal claims.
3. **Mythology**: the widespread belief that large data sets offer a higher form of intelligence and knowledge that can generate insights that were previously impossible with the aura of truth, objectivity, and accuracy.

While the amount of data currently available to firms is massive, it is useless unless it can be analyzed and interpreted by the firm for meaningful insights and actions. Harvard Magazine editor, Jonathan Shaw reports that it is not the quantity of data that makes Big Data revolutionary, rather it is what we can do with the data - via improved statistical, computational methods and "big" algorithms - that makes it so compelling (Shaw, 2014).

Big Data Implications

The implications of Big Data go much further than the PC or even the mobile phone. Zikopoulos et al. (2012) state that the Big Data era is in full force because the world is changing, and that through instrumentation, humans are more connected with the world and can sense more things. The authors further contend that, if humans can sense more things, they will tend to store at least some of that data. "Through advances in technology, people and things are becoming increasingly interconnected – and not just some of the time, but all of the time. The interconnectivity rate is a runaway train" (Zikopoulos et al, 2012, p. 4).

Big Data is an enabler – and, amongst other things, it is enabling the effective and efficient use of advertising budgets (spend). Advertisers are shifting significant budgets away from traditional media to digital advertising through a variety of online media channels. These advertisers are also demanding more accountability and measurement of advertising campaign impact on their business - regardless of the campaign form or format. Advertising Analytics is designed specifically to address these types of concerns and is touted for its ability to make sense of Big Data in the digital advertising arena. Advertising Analytics was first popularized in the academic literature by Nichols (2013) in a Harvard Business Review article. Nichols defines Advertising Analytics as "…a set of capabilities that can chew through terabytes of data and hundreds of variables in real time...". He posits that this allows companies to "create an ultra-high-definition picture of their marketing performance, to run scenarios, and then change ad strategies on the fly" (Nichols, 2013, p. 62).

According to DiResta (2013), there's a sense among many in the technology community that marketing is an industry that's locked in the past. The marketing industry, DiResta contends, is well aware of the need to adopt faster feedback loops and nimble campaign strategies - made possible by Advertising Analytics and Big Data; industry conferences typically feature panels on ramping up digital infrastructure, aligning CMO and CIO goals, and tying spend to outcomes. Marketers do recognize the importance of data, DiResta purports, but big brands care a great deal about emotional resonance, and the trend toward personalization makes targeted storytelling more complex. It is this complexity that further underscores the need for Big Data and Advertising Analytics (DiResta, 2013).

Online advertising has historically been used more as a vehicle to generate a direct response/sales transaction and less as a tool for building brand equity. This trend is changing and has further implications for Big Data/Advertising Analytics. Increased online advertising for brand purposes will shift yet a higher percentage of advertising budgets online. The *Nielsen 2013 Online Advertising Performance Outlook Report* corroborates this idea of using digital media as a brand development channel.

> Digital media continues to develop as a branding medium, growing beyond its
> roots as a channel of interest solely to direct response marketers. Today, it appears
> that branding in the online medium appears to have come of age, as spending for

online brand advertising in 2013 is projected to rival that of direct response advertising. What's more, growth projections for branding exceed those of its performance-based sibling (Nielsen, 2013, p. 2).

The current authors have reviewed both popular and academic literature which supports the idea that the era of Big Data is upon us and that it is growing at an unprecedented rate. It has not however, been widely accepted or thoroughly understood in marketing circles. Indeed, many marketing executives are not prepared for its arrival nor do they know how to engage with Big Data experts. These and other issues are discussed below.

Big Data Shortcomings

The 2013 *Global C-Suite Study* produced annually by IBM illustrates concerns about Big Data; the report discusses Big Data as it applies to Chief Marketing Officer (CMO) strategy. Big Data, IBM reports, is the "buzz" and digital is now the "new normal". The IBM study authors discuss the Big Data explosion that is underway, identify key problems that have arisen, and argue that companies need to change the way they work with their clients in a continuous virtual cycle (IBM, 2013). Figure 1 from the IBM report depicts the CMO challenges in coping with this growing Big Data and related Social Media trend. The percentage of CMOs who feel underprepared to deal with Big Data increased from 71% to 82% from 2011 to 2013 while the percentage of CMOs who remain underprepared in the Social Media space has essentially remained constant (67% down from 68%) during the same time period.

Overwhelmed: More CMOs now feel underprepared for the data explosion

Virtual barrier: CMOs have made very little progress in coping with social media

2011
71%
Felt underprepared

2013
82%
Feel underprepared

2011
68%
Felt underprepared

2013
67%
Feel underprepared
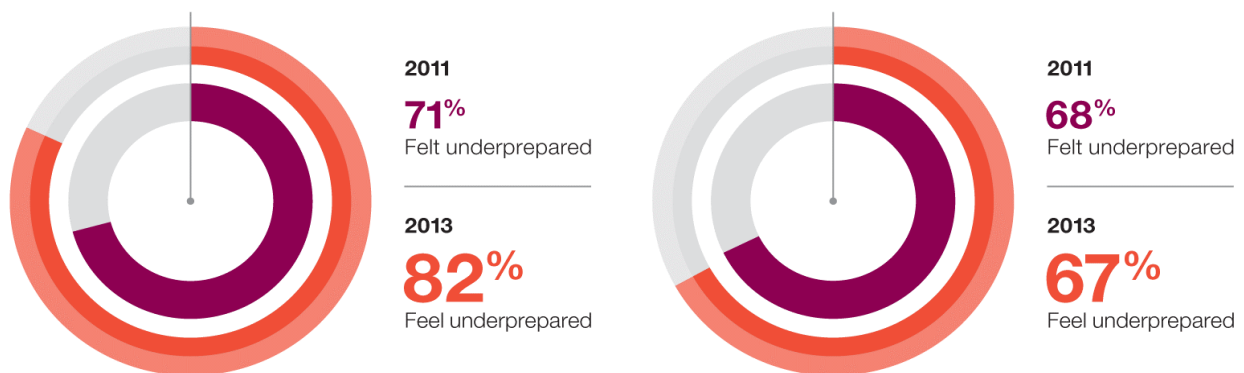
Figure 1 Impact of Big Data trend on Chief Marketing Officers (CMOs)

Despite the reported increases in digital ad spend and the growing "data explosion", there are reasons to be concerned that Big Data is not delivering on its full strategic potential. At a broad level, there are plenty of industry observers who are skeptical that Big Data offers much strategic value to firms. A recent Harvard Business Review article entitled, "You May Not Need Big Data After All" (Ross, Beath, & Quaadgras, 2013) causes the reader to stop and pause. The article purports that many companies who have embarked on the Big Data quest have little to show for their efforts. Furthermore, the authors suggest, most companies who travel down the Big Data road don't really want to even be in the Big Data world. They just want the fruits of its

promise—better insights for improved decision making. According to Ross et al., it would be naïve to assume that the investment in hardware, software and people would automatically create solutions from Big Data. The competencies and skill sets to do this are in short supply and lacking in most companies (Ross et al, 2013).

The 2013 annual Duke *Chief Marketing Officer (CMO) Report* adds to the list of Big Data shortcomings. When asked to report the percentage of projects in which their companies use (available or requested) marketing analytics, CMOs report a low 30% usage rate. This number has decreased from 37% the previous year. So while companies are spending more on Big Data, less of it is being used (Duke CMO Survey, 2013). Christine Moorman, senior contributor to the Duke CMO study, adds insights (in an article with Forbes) as to root causes of this utilization gap. Moorman sites ten potential sources that the current authors suggest could be classified as **procedural** (i.e. top executives are not modeling the use of Big Data), **strategic** (i.e. inadequate view of the bigger picture in which analytics help drive marketing strategy), and **informational** (i.e. users do not have sufficient training about analytics; nor do they have relationships with analytics producers). Moorman suggests that going after these sources of Big Data's utilization gap is a good first step for companies. "Maybe then," she says, "we'll see a new hashtag—#bigdatause—that heralds the impact of Big Data, not just its size" (Moorman, 2013).

It is interesting to note that many of Moorman's gap items are directly or indirectly informational in nature – they seem to suggest that there is a fundamental lack of understanding about what Big Data means, how it can be applied, or even if it should be applied by a CMO. The gap items also call out the need for better communication between Big Data players and their prospective users, and the development of a value proposition that shows how Big Data services are affordable up front, address a targeted set of CMO needs, and can ultimately be impactful as a growth tool or simply as a means to improve CMO operational efficiencies. The present study is an exploratory attempt to bridge some of these informational gaps.

Embracing the Big Data Ecosystem - Forging a New Direction for Small/Mid-Size Marketing

Given the prevailing velocity of change and the growing volume of usable unstructured data, the authors believe that many marketers will ultimately be forced out of their comfort zone. This is particularly true for small (defined here as less than $25,000 monthly ad spend) and medium (between $25,000 and $100,000 monthly ad spend) sized client companies who likely have limited marketing budgets and staff. These organizations may want to move forward with Big Data campaigns but are often paralyzed about where to start. Moreover, many of these organizations aren't even aware that they will be vetted by the Big Data firms as the firms qualify their own marketing and sales funnels to optimize both time and client profit potential.

Jobs et al. (2015) have previously provided a consolidated framework and typology of the emerging Big Data ecosystem as it relates to marketing communication. Figure 2 provides a diagram of the framework presented in that research – followed by a brief refresher of key terms. These are provided in order to reinforce the point that not all Big Data players are the same and have different roles in the ecosystem, to create a backdrop for the presentation of interview data in the current study, and to stimulate discussion in the Methods and Results/Analysis sections.
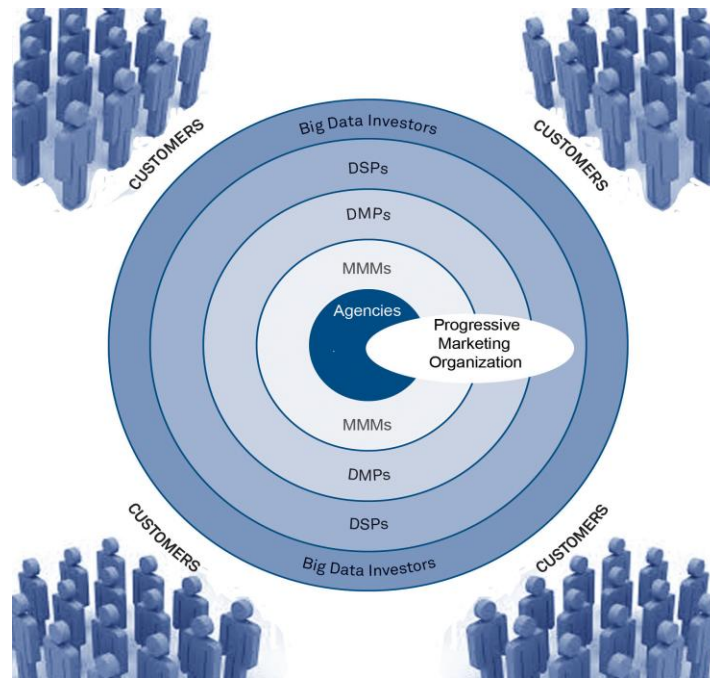
Figure 2: Classification Framework for Big Data Ecosystem

Big data investors come in many forms. The larger firms are typically from the high tech or media sectors. One example of a high tech Big Data investor is Google. Google focuses on products and services that drive internet traffic and internet ad revenue. Big Data investors such as Google, Adobe, e-bay, AOL and others are currently buying up Big Data specialty companies.

Demand Side Platforms (DSP) - A DSP is used to purchase advertising in an automated fashion. DSP's are most often used by advertisers and agencies to help them buy display, video, mobile and search ads.

Data Management Platforms (DMP) - DMPs integrate customer CRM data and any of the following: large public databases, broadcast feeds from Nielsen or Rentrack, economic data, public competitor data and more. DMPs typically rely on third-party cookies to help target segments and link third-party behavioral data to first-party data and personal information.

Bottom-up Media Mix Modelers (MMM) – Bottom-up MMMs are online-focused attribution and predictive analytics service companies who also integrate traditional broadcast data into their analysis of customer purchasing behavior from different advertising channels.
Digital and Full-Service Agencies - Digital agencies focus primarily or exclusively on internet advertising content, creative and techniques. Full service agencies provide creative strategy and traditional offerings; however they also may maintain a digital practice with subject matter experts in a variety of online skills. Full service agencies may also have partnerships (outsourcing arrangements) with digital agencies.

Purpose of this Research

The era of Big Data is here and in full swing. Big Data, together with Advertising Analytics, have made their mark and have been shown to be impactful in the business and academic literature. Shortcomings, however, have been identified and have been alleged to be due, at least in part, to an information gap. The primary purpose of this research is to bridge this information gap. More specifically, this research seeks to determine the minimum advertising spend required to benefit from Big Data and Advertising Analytics firms, the expected percent return on advertising spend (including breakeven points to recoup expenditures), and critical factors a company needs to address in order to participate in this ecosystem.

METHODS

This research was designed to understand the Big Data and Advertising Analytics industry through the lens of companies that make up the industry and their experiences with digital advertiser clients who use their services. This was accomplished through primary research using semi-structured in-depth telephone interviews with executives and key informants within these industry firms.

The industry is complex with many companies and types of companies making up a continuum of specialties, therefore understanding the sample frame was important (Jobs et al., 2015). In order to understand the industry as the industry defines itself, a number of steps were taken to identify and triangulate the types of companies and which companies make up the industry. Three criteria were used to select companies for inclusion in the sample and study: (1) keyword Google search, (2) expert industry secondary research industry analyst report, and (3) cross-referenced identified industry partners.

The first criteria for inclusion in the sample came from a keyword Google search conducted on May 15, 2014, which contained the following six industry terms: (1) advertising analytics companies, (2) interactive attribution vendors, (3) predictive analytics + advertising, (4) data management platform, (5) demand side platform, and (6) real time bidding + advertising.

The second criteria for inclusion in the sample were companies that appeared in the Forrester Wave™ Reports analyst reports (Gualtieri, 2013; Gualtieri & Curran, 2014) about external Big Data and analytics. Forrester Wave™ segments companies with a primary focus on internal data analytics, internal data mining, and warehousing were excluded.

The third criteria was the identification of partners appearing on websites of the firms identified through the Google search and Forrester analyst report. In this industry, it is standard practice for a company to list companies that partner with them to serve digital advertiser end clients. These companies represent a set of industry services that the company does not offer itself but are important to offer to their client base. This step was important to triangulate the type of companies in the industry and additional specific companies to include in the sample.

Twenty-four companies were identified and agreed to participate in the study. E-mails and phone calls were made to each of the companies. An equal representation of the types of companies in the industry was achieved in the sample. The snowball sampling method (Gall, Borg, & Gall, 1996) was utilized for identifying key informants for the in-depth executive qualitative interviews within identified companies. All informants were executives and content experts with knowledge of the industry makeup and landscape, industry direction, as well as their company's capabilities, product and service offerings, and understanding of their client base and

client needs. Each interview was a semi-structured in-depth qualitative interview conducted via conference call and lasting between 45 and 60 minutes in length. A qualitative interview guide was utilized. The qualitative interview guide is contained in the appendix. Responses from all interviews were captured. Following the interviews, content analysis was conducted from the responses to identify and understand convergent and contextual data.

Limitations

The study was limited by the following factors:

1. Informants were chosen through non-probability sampling that places limitations on the generalizability of the study findings.
2. The small sample size (n=24) was a function of a new and growing field with a limited number of qualified informants.
3. Informant responses were shaped by their understanding of their specific digital advertiser client base.
4. This study was a snapshot in time for a rapidly evolving industry and cannot be predictive of where the industry may head.
5. The relative immaturity of the Big Data and Advertising Analytics field, combined with its rapid evolution, yielded a relatively sparse amount of available academic theory.

RESULTS & ANALYSIS

Table 1 shows a summary of the interviewee data indicating monthly and annual Advertising Spend (Lowest/Median/Mean) as well as estimated Percent Savings (Lowest/Median/Mean) as reported by each Big Data company type. Percent savings, in this study, was defined as the estimated percent improvement in media efficiency that can be expected by the average qualified customer from using a Big Data company's analytical services.

Company Type	Mean Percentage Savings	Median Percentage Savings	Lowest Percentage Savings	Mean Monthly Minimum Spend	Median Monthly Minimum Spend	Lowest Monthly Minimum Spend	Mean Annual Minimum Spend	Median Annual Minimum Spend	Lowest Annual Minimum Spend
Table 1 EXPECTED SAVINGS (RETURN) AND SPEND THRESHOLDS BY SERVICE TYPE									
DSP*	27%	30%	10%	$11,666	$5,000	$5,000	$75,000	$60,000	$60,000
DMP	20%	20%	10%	$33,333	$25,000	$25,000	$399,996	$300,000	$300,000
Bottom-up MMM	29%	25%	10%	$12,500	$5,000	$5,000	$150,000	$60,000	$60,000
Digital Agency Type 2**	23%	15%	15%	$10,000	$10,000	$7,000	$84,000	$120,000	$84,000
Digital Agency Type 1**	35%	45%	10%	$100,000	$100,000	$100,000	$1,200,000	$1,200,000	$1,200,000

* These costs do not include the human capital (time, training) and are not presented as full service solutions
** There are two agency spend thresholds indicating two tiers of digital agencies

The above data indicate that the average minimum annual spend for Big Data customers ranges from $75,000 for DSPs to $1.2M for Type 1 Digital Agencies. Type 2 Agency

customers' minimum annual spend averages $84,000, while bottom up MMMs and DMPs annual minimum spends average $150,000 and just under $400,000 respectively. It is interesting to note that the lowest reported annual minimum spends for Bottom-up MMMs, DSPs, and DMPs are appreciably lower than the mean minimum spends by $90,000, $15,000, and $100,000 respectively.

Table 1 also depicts interviewee reports of client savings reflected as percent savings on their annual advertising spend. Average percent savings range from 20% for DMPs to 35% for Type 1 Digital Agencies. Type 2 Digital Agencies, DSPs, and Bottom-up MMMs' savings are reported by informants to be 20%, 23%, and 27% respectively. Minimum reported percent savings are 10% for customers of all service types except Type 2 Digital Agencies which are 15%.

In order to translate the data obtained in Table 1 to a breakeven threshold level of spend in order to be qualified as an attractive client for each Big Data service provider, a general formula was developed and applied to the data in Table 1. The general formula, as applied to all service provider types, divided the median annual ad spend by the lowest percent savings. This number was then added to the median ad spend to form a qualification threshold for each Big Data service type. Note that this is the most conservative calculation. A more aggressive firm could substitute the median percentage savings for the lowest percentage savings and effectively lower the annual spent threshold. Also note that DSP break-even thresholds were not calculated due to the complexity of determining the human capital element which may vary from firm to firm. Calculations and break-even thresholds for all other service types are shown in Figure 3. The reported break-even threshold for doing business with a Bottom-up MMM is $660,000 annually. Thresholds increase from there – Type 2 Digital Agency and DMP annual thresholds are $1.32M and $3.3M respectively. The break-even threshold for Type 1 Digital Agency engagement is considerably larger at $13.2M per year.

If a firm's annual advertising spend is qualified by each specific service provider as high enough, based on these break-even calculations, the firm should seriously consider utilizing the respective Big Data service. It is important to note that the authors have not researched the impact on savings when computing multiple company or service types.   The authors' calculations are based on the median reported percentage savings for each individual service *ceteris paribus* in Table 1.

Digital Agency Type 1
$13,200,000 =
($12,000,000/.10) + $12,000,000)

Data Management Platforms (DMP)
$3,300,000 =
($300,000/.10) + $300,000)

Digital Agency Type 2
$1,320,000 =
($120,000/.10) + $120,000)

Bottom Up Media Mix Modeler (MMM)
$660,000 =
($60,000/.10) + $60,000)

General Formula For Calculating Break Even Thresholds - All Service Types
(Median Annual Spend on Advertising Analytics Service / Lowest Percentage Savings)
+ Median Annual Spend on Advertising Analytics Service.
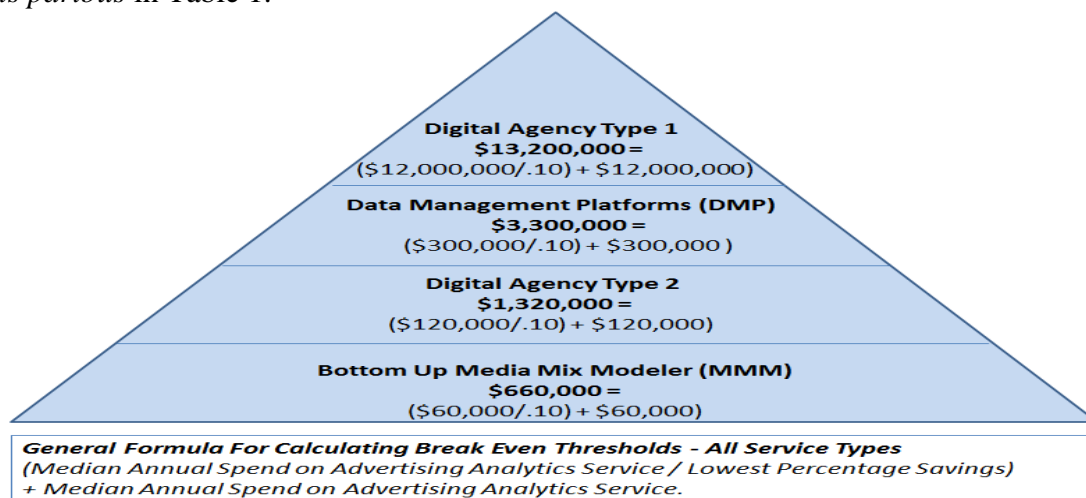
Figure 3 Qualifying Spend Thresholds (Break-Even) by Service Type

DISCUSSION

This study was designed to answer the following four questions:

1. What are the minimum advertising spend levels required to engage the services of each type of Big Data/Advertising Analytics firm in the ecosystem?
2. What are the advertising spend "break-even" thresholds for engaging each type of firm?
3. What percent savings (increased efficiency) can be expected from specific advertising spend levels with each firm?
4. What are the critical factors a company needs to address in order to participate in this Big Data ecosystem?

Minimum Advertising Spend Levels, Break-even Thresholds, and Expected Savings by Service Type

Progressive marketing organizations who want to tap into the Big Data and Advertising Analytics movement to enhance their marketing communication programs must choose from a complex array of agency models in the ecosystem. These marketers must then determine the extent to which they will have direct relationships with any of the Big Data players in the ecosystem. This decision will most likely be a function of advertIsing spend, internal resources, level of sophistication of the firm, industry sector in which they operate and extent to which they are vetted as qualified by the service provider. Data from this study provide some detail on the advertising spend levels required to participate in this Big Data ecosystem; data also suggest typical returns on those spend levels as measured by percent savings and point to some strategic considerations related to engaging Big Data and Advertising Analytics players.

Minimum advertising spend levels, break-even thresholds, and expected savings results are discussed below for each type of Big Data service provider interviewed in this study.

DSPs – As illustrated in Table 1, Demand Side Platforms require a minimum annual advertising spend of $60,000. While the spend savings for this group ranged from a low of 10% to an average of 27%, the authors did not calculate an annual spend threshold for DSPs due to the complexity of the human capital element related to purchasing advertising via automated DSP technology. Firms who are evaluating agencies would be wise to learn which DSP platforms the agency is using – as they often partner - and how the agencies propose to add value to the firms' marketing program. Some firms may see a savings benefit in purchasing advertising directly via DSP platforms while others may not see the benefit of direct involvement or may choose not to expend the effort.

Bottom-up Media Mix Modeling (MMM) - Probably the most challenging strategic decision for firms with smaller annual advertising budgets is whether to select a Bottum-up MMM agency or a Type 2 Digital Agency (Figure 3). Bottom-up MMM agencies require a minimum annual adversing spend of $60,000. Using the 10% conservative spend savings from Table 1, this results in a break-even ad spend threshold of $660,000. Qualitative interview data suggest that Bottom-up Media Mix Modeling (MMM) firms lend themselves best to business-to-consumer (B2C) companies with large consumer sales funnels or companies looking for the

easiest way to first engage a Big Data or Advertising Analytics firm. In addition to the break-even data which might entice marketing clients to MMMs, informants indicate that most companies at the lower advertising spend levels do not have a clear picture of the impact of marketing communications (MARCOM) impressions and touchpoints along the prospect to customer journey. The interview data also suggest that MMMs can help with this by tagging the client's website and other MARCOM collateral to capture information associated with prospect impressions (attribution). This tagging is statistically correlated with transactional conversions also known as acquisitions. Big Data executives describe this as the modeling piece of MMM and indicate that the digital advertising world typically measures advertising success in terms of cost per acquisition (CPA). They also suggest that, by adjusting the media spend based on what is working and what isn't, the firm ultimately saves money on CPA.

Digital Agency (Type 1 & Type 2) – As indicated in Table 1, there are two tiers of digital agencies –differentiated largely by spend thresholds. Type 1 Digital Agencies are the largest players in the ecosystem. They require a minimum annual advertising spend of $1.2M but can achieve a minimum of 10% to 45% savings in advertising spend efficiency. Conservatively, that means the break-even threshold for using Type 1 Digital Agencies tops the list in Figure 3 at $13.2M ad spend. Type 2 Agencies, on the other hand, are well within the reach of firms with smaller advertisement budgets; Type 2 firms require only a $60,000 annual spend but can achieve a 15% to 23% savings in ad spend efficiency. Using conservative savings calculations of only 10% reduction in advertising costs (less than the 15% to 23% reported), the break-even point for Type 2 Digital Agencies is a much more reasonable $1.32M. It is important to understand that the decision to use Type 1 and Type 2 Digital Agency services is not always purely based on a break-even analysis. Other considerations include the tools that digital agencies use, the type of work that is done in-house vs outsourced agency partners, and industry sector expertise. According to study informants, Digital Agencies focus almost exclusively on internet advertising content creative and techniques for both B2C and business-to-business (B2B) markets.

DMPs – From an advertising spend perspective, Data Management Platforms are the second largest players in the ecosystem. They require a minimum annual advertising spend of $300,000 and, according to study informants, can achieve a minimum of 10% to 20% savings in advertsing spend efficiency (Table 1). Conservatively, this means the break-even threshold for marketing organizations who want to use DMPs (Figure 4) is $3.3M. DMPs are well suited for firms with larger budgets – many typically exceed the referenced annual break-even threshold. From a review of the qualitative interview data, the authors learned that consumer packaged goods industry (CPG) firms are the heaviest users of DMP services. DMPs also tend to work well for most B2C marketers with large volume. Industries such as travel and financial services also fit this criteria.

Critical Factors Necessary to Participate in the Big Data Ecosystem

A cursory review of data has identified five key factors that must be addressed to enhance the likelihood of success in the Big Data and Advertising Analytics ecosystem:
1. Information and education about Big Data and Advertising Analytics service providers
2. Executive buy-in and support
3. Incorporation of Advertising Analytics as part of the CMO strategy
4. Organizational politics, turf issues, ownership of IT infrastructure and data
5. Establishment of basic marketing performance metrics and standards

Information, Education, and Executive Support - As stated in the literature review, the Duke CMO Survey (2013) and Moorman (2013) suggest that there is a utilization gap in the emerging Big Data Advertising Analytics industry. Moorman specifically cites ten potential reasons for the under usage of Big Data which current study authors classified as procedural, strategic, and informational. The authors further posit that informational gaps are particularly pervasive and can contribute to limited executive buy-in. The current interview study strongly supports this notion of critical information gaps and the need to fill them. Quantitative interview results from this study have hopefully closed a few of these gaps pertaining to the appropriate selection of a Big Data and Advertising Analytics agency, expected efficiencies from each, and break-even thresholds for minimum required advertising spends. Although it was never specifically asked during the interview process, one third of respondents cited executive buy-in to Big Data and Advertising Analytics as a recurring challenge. Most respondents also cited a concern over general awareness and acceptance of new performance metrics in addition to an overall lack of knowledge about Big Data and Advertising Analytics as key reasons that a firm may not buy into Big Data engagements.

The marketing executive buy-in challenge is both understandable and unfortunate. It is understandable because the CMO could be out of a job if sales drop due to a factor outside of marketing's control, or unfairly assumed to have dropped due to an ongoing Big Data transformation. Reluctance to buy-in may also hinge on the lack of understanding and comfort zone within the ecosystem. It is unfortunate in that delaying adoption of Advertising Analytic tools and techniques is ultimately likely to put the organization at a competitive disadvantage given the steepness of the organizational learning curve and increased usage by potential competitors in the market. Adoption of these analytical technologies is not "plug and play" as there are no agreed upon standard marketing key performance indicators. Each marketing organization needs to learn which strategies, techniques and partner agencies work best for them given their unique set of goals and MARCOM objectives.

Advertising Analytics and CMO Strategy – Executive support is crucial in order to transform an organization's traditional MARCOM strategy to one utilizing Big Data Advertising Analytics. Moorman (2013) cites that potential users of marketing analytics may not even have a strategic planning process or marketing decision making process that builds in a step to incorporate available analytics. The need for a structured step-by-step process was echoed by informants in this study. Moorman notes that there is a need to use marketing analytics strategically to create new growth and not just penetrate existing markets. She suggests that companies want to use Big Data more strategically, but they fail to collect the deep, non-

quantitative, insights about customers that provide the bigger picture into which analytics need to be placed. Informant commentary also corroborate this notion that marketing executives see the strategic value of Big Data Marketing Analytics but still need to be convinced that roadblocks to implementation can be overcome. Frequently cited roadblocks include perceived cost barriers, complexity issues, and organizational politics.

Organizational Politics, Advertising Analytics and Information Technology Turf – One of the key Advertising Analytics utilization gaps mentioned in the Duke CMO Survey study (2013) appears to be largely organizational in nature and involved turf wars between marketing and information technology (IT). Two issues that were often cited by Big Data informants were IT infrastructure security and inter-departmental politics. Both of these factors can derail the otherwise sound Big Data Advertising Analytics strategy and execution. The core of this friction may involve authority and control over technology infrastructure, and specifically, the firm's website and other online assets. Top management must ensure that the marketing and IT/infrastructure organizations work well together to successfully implement the new analytical techniques.   Consider, as an example, a firm's marketing department who wants to fund/implement a media mix modeling program with a third party vendor - to improve visibility of the program's performance as it moves down the sales funnel. The marketing group may require cooperation and resources from the website security people in IT to implement the program via tagging and capturing cookie data as prospects and customers interact with the website. If the IT department won't cooperate, citing web security or quality issues, the marketing group may not be able to effectively argue against the IT pushback or provide additional funding for IT safeguards. Study informants support the notion that client executives need to facilitate resolutions to these kinds of conflicts and encourage cooperation and shared outcomes if Big Data Advertising Analytics is to prevail and help their business.

Mandate for Basic Marketing Performance Metrics and Standards - Once marketing executive buy-in is obtained, study informants suggest that an additional challenge relative to Advertising Analytics basics must be overcome. The challenge is an organizational learning function that involves either training existing marketing staff and/or hiring new employees that are adept at developing and implementing Big Data Advertising Analytics concepts. Additionally, establishing critical baseline data of existing marketing activity, where possible, enables the continuous advertisement improvement and refinement process. Big Data executives report that this can be a challenge - depending on the skills and experience of the existing staff. Transforming to a new model of Big Data Advertising Analytics can create anxiety in task-oriented staff and take them out of their comfort zone and skill set. Informants suggest that, in many cases, Big Data programs will lead to increased visibility and accountability for decisions that staff will make based on this data. Executive management must address this by providing adequate training, incentives, and in some cases, re-organizing to ensure that marketing department and/or team leaders are motivated to change the operating environment. Study authors recognize that organizational transformation is a long-term process and suggest that properly selected partnerships with appropriate digital agencies will help enable this transformation.

According to the Big Data executives, there are also limited industry performance standards for web related MARCOM. If an organization is heavily dependent on traditional media measures such as Cost per Thousand Advertising Impressions (CPM) or Gross Rating Points (GRP), the CMO may not be able to reconcile new, non-standard performance

measurements such as Cost Per Acquisition (CPA) discussed in the Bottum-up MMM profile. This challenge, according to study informants, must ultimately be resolved. Although there are no agreed upon universal standards in place for digital analytics today, from a sheer market dominance perspective, Google Analytics is the most used platform for digital analytics tools and a leader across multiple business market categories (TrustRadius, 2014). Google Analytics received high marks for its customizable metrics dashboards and effectiveness at tracking customers and conversions (Akhtar, 2014). It has been suggested by Akhtar that Google's popularity can be attributed to the fact that it's available for free and offers numerous powerful features. It is possible that as the industry matures and agreed-upon key performance indicators start to crystalize, the Google influence will be significant.

CONCLUSION

The authors believe that utilizing the services of a bottom-up MMM is the logical first step into the Big Data and Advertising Analytics arena for most advertisers with lesser budgets. MMMs vary in the size of the accounts they handle, industry sectors where they are most experienced, the level of integration into traditional media tracking, and the nature of the algorithms and metrics they use to model a client's business. With all those variations and seemingly complex factors, a firm could easily deduce that selecting the right MMM is too onerous and financially risky. We posit that it is risky not to select one - in spite of the complexity and variations. An alternative first step for more risk-averse firms is to learn to tag their website and link their other MARCOM collateral to the website tags. This can be tricky and certainly not seemless, but it may be enough for some companies to get started.

FUTURE CONSIDERATIONS

Further research is needed to codify a solution set to the Duke CMO Survey utilization gaps – especially the procedural and strategic gaps not fully discussed in the current exploratory study. Research focused on these gaps may save organizations significant amounts of time and money by avoiding mistakes in strategy and Big Data and Advertising Analytics vendor selection. It will also help executives minimize career risk by partnering with rigorous and best in class third party firms who specialize in using data and analytics in order to transform their corporate vision and marketing strategy into reality. The authors' next research project will be the development of a system that can be used to match companies to "best fit" Big Data service providers. The system will profile typical companies seeking Big Data relationships and explore advertising spend, organizational goals, business sector, staff size and expertise, existing digital analytics processes, geography, and ongoing agency relationships.

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APPENDIX A
Interview Questions

1. How do you classify yourself in this market segment?
     i. An advertising agency (digital or otherwise) selling advertising analytics software analysis from programs you obtained from a 3rd party?
     ii. A company specializing in producing predictive analytics software for marketing attribution and reallocation analysis but not a "traditional" or "digital" advertising agency
     iii. An established software development company in another field that has created advertising attribution and/or predictive analytics software for the purpose of licensing to other companies?
     iv. Other
2. What is the minimum monthly required spend for a firm to be considered large enough for your advertising analytics services?
    1. What percent improvement in media efficiency, can the average qualified customer expect from using your analytical services?
         i. How do you measure media efficiency?
         ii. CPM, CTR, GRP, increased sales, other?
         iii. How do you measure campaign success?
    2. Other than utilizing your advertising analytics services, what other variables/factors are likely to impact a typical client's media efficiency?
    3. What is your typical client profile in terms of revenue and industry sector?
    4. What percentage of advertising spend do you recommend a typical client spend for online marketing vs. traditional.
         i. Does your recommendation vary by industry sector?
         ii. How much does online spend usually increase in percentage terms after they use your services?
    5. What metrics are most commonly used as a baseline attribution measurement for each media channel your clients used?
    6. What media channels are generally most effective from your professional experience in terms of media efficiency or campaign success as you previously defined it?
    7. What key performance indicators (e.g. CTR, Leads, Time spent, other) do you think best correlate to sales.
         i. Stated differently can Advertising Analytics 2.0 companies help tell us where a prospect is in the sales funnel?
    8. Does your firm integrate traditional media performance with online (i.e. digital, social, internet) performance in doing attribution analysis?
         i. How?
    9. What are the most important elements/variables to consider in performing "what if" optimization algorithms?
    10. How long of a time lag can go by before a channel assist is difficult to measure?
    11. Who do you consider your competitors?
    12. What is your job title and role in your company?

CUSTOMERS' DETERMINATION OF SERVICE QUALITY AND SATISFACTION IN A RETURN/REPAIR PROCESS: A QUANTITATIVE STUDY

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ABSTRACT

Improving a service process, such as the merchandise return and repair process, is crucial for manufacturers that desire to improve overall satisfaction and be competitive in the marketplace. In most service-based organizations, customers' perceptions of quality and satisfaction are key performance metrics. Historically, however, manufacturers have not developed services systematically even though the financial benefits of effective service processes are significant. While much research exists on service quality, no researcher has focused on how a power tool manufacturer might best increase customer satisfaction through improved return/repair processes.

This study first provides a brief review of the extensive literature on service quality and customer satisfaction. Then, literature on the return and repair processes of manufacturers is reviewed. The results of a survey of customers for a major manufacturer of power hand tools is described. Using the expectancy disconfirmation and SERVQUAL models, a gap analysis is conducted and hypotheses are tested that address the five dimensions of service quality and expectations and perceptions of performance. Results identify the most important service quality dimension and customer expectations and performance on that dimension relative to others. Results also indicate that customer satisfaction is related to perceptions of service quality and that customers' expectations of service quality exceed their perceptions even though they are generally satisfied.

The practical and theoretical contributions to the literature on service quality and satisfaction are important. Practically, this study gives recommendations to manufacturers desiring to improve their service processes by identifying relevant service quality attributes and assessing the relationship between perceived service quality and customer satisfaction. Theoretically, the merits and concerns of the use of the SERVQUAL instrument are discussed, and suggestions for academic researchers wanting to improve service quality and customer satisfaction measures are offered.

INTRODUCTION

Improving a service process, such as the merchandise return and repair process, is crucial for organizations that desire to be competitive in the marketplace. Morrison-Coulthard (2004) stated in most service-based organizations, customers' perceptions of quality and satisfaction are key performance metrics. "Service quality and customer satisfaction are commonly recognized as pivotal determinants of long-term business success" (Busacca & Padula, 2005, p. 543). Researchers have shown that dissatisfied customers will defect following a negative experience and that negative word-of-mouth impacts market share (Hays & Hill, 1999).

Historically, manufacturers have not developed services systematically even though the financial benefits of effective service processes are significant. While much research exists on

service quality, no researcher has focused on how a power tool manufacturer might improve return/repair processes and increase customer satisfaction.

As such, this study will demonstrate the use of SERVQUAL and the important and relevant managerial implications it has for manufacturers of power tools that offer return/repair processes, a context in which research has not been conducted. At the same time, researchers need to acknowledge the theoretical concerns with the SERVQUAL instrument, so this study offers suggestions for future research to improve the conceptualization and measurement of service quality and customer satisfaction. This study first provides a brief review of the literature on the return and repair processes of manufacturers, service quality, customer satisfaction, and the use of the SERVQUAL instrument. Then, the results of a survey of customers for a major manufacturer of power hand tools is described, with practical and theoretical contributions for manufacturers and academic researchers discussed.

LITERATURE REVIEW

Return/Repair Service by Manufacturers

In a survey of manufacturers, retailers, and wholesalers/distributors, Stock and Mulki (2009) analyzed the state and nature of the product returns process and concluded that product returns processing did not assume a high level of importance within organizations and was generally a "part-time" activity (p. 50). However, some leaders are attempting to differentiate their manufacturing companies in the marketplace and develop a competitive advantage by providing value-added services (Behara, Fontenot, & Gresham, 2002; Hill et al., 2002). Financial benefits of service process improvement for manufacturers are the potential service revenue, high service margins, and the stability of service revenue (Sawhney, Balasubramanian, & Krishnan, 2004). The average margin of products is about 1%, while typical after sales services, including repair, have margins of about 10% (Cohen, Agrawal, & Agrawal, 2006; Sawhney et al., 2004). But, leaders in manufacturing companies have not developed services systematically, nor has much research been conducted on service development in manufacturing companies (Gebauer et al., 2008). If manufacturers are going to improve the level of service they offer, how service processes are designed and re-engineered should be considered (Hill et al., 2002).

Despite the costs to manufacturers and retailers, Petersen and Kumar (2010) contend that companies that were seen by customers as providing satisfactory product returns would experience positive effects on future purchases by customers and long-term profits. In a study of a business-to-consumer company that sells products through many different channels (Internet, catalogs, telephone, retail outlets), Petersen and Kumar (2009) concluded that, "product returns are inevitable but by no means evil" (p. 48). Petersen and Kumar (2009) found that a customer's product return behavior positively affects future buying behavior and that a firm can maximize profit when allowing for a moderate number of product returns.

Gebauer (2007) examined the development of service processes in manufacturing and classified the services into product-related and customer-related. The main objective of product-related services is to ensure proper product functioning, and includes such activities as training, inspection, spare parts, and repairs. Repair service is considered a product-related service as it directly affects the quality of the product in the eyes of the customer. Customer-related services, on the other hand, solve a customer problem and include such activities as financing, consulting, or operating machinery on behalf of customers. For return and repair of power hand tools, it should

be noted that customers may view repair as a product service, but the return aspect of that service may be evaluated as a customer-related service.

Behara et al. (2002) conducted a case study of a power tools manufacturer in which customers who purchased the company's power tools from an established national retail chain stores were surveyed. The relationship between the independent variables of maintenance, product pre/post-use, in-store pre-sale information, and product characteristics and the dependent variables of satisfaction, consumers' likelihood to recommend the product, and consumers' intentions to repurchase the product was tested (Behara et al., 2002). Relevant to this study is Behara et al.'s (2002) maintenance component, which included ease of maintenance, availability of parts, good warranty terms, availability of local service centers, and the availability, ease of contact, and helpfulness of the manufacturer's customer services. Behara et al. (2002) found that maintenance issues had a significant impact on a customer's intended decision to repurchase the product.

Gebauer, Ren, Valtakoski, and Reynoso (2012) believe that significant gaps in service strategies of manufacturers exist and that more useful guidance for future managerial practice is needed. They call for additional research on specific industrial and geographic contexts, theoretical explanations of service strategies, and financial consequences of services in manufacturing, and write, "the evolutionary process whereby manufacturing companies respond to customers, competition and growth pressures by developing a variety of relevant and pertinent service offerings at the equipment, asset and process levels requires a wide-range of organizational transformational – capabilities to create a positive impact on firm performance" (Gebauer, et al., 2012, p. 131).

Customer Satisfaction and Service Quality

Customer satisfaction is "the customer's overall feeling of contentment with a customer interaction" (Harris, 2010, p. 2). Customer satisfaction is a construct that has a long history in marketing literature (Bearden & Teel, 1983; Churchill & Surprenant, 1982; Fornell, Johnson, Anderson, Cha, & Bryant, 1996; Oliver, 1980). Researchers have extensively studied customer satisfaction, with the primary research conducted by Anderson et al. (1994, 1997), Anderson (2000), Cronin and Taylor (1992), Cronin, Brady, and Taylor (2000), Fornell (1992), and Fornell et al. (1996). The scholars emphasized customer satisfaction as it relates to market share, productivity, value, and profitability.

A common model of customer satisfaction is the expectancy disconfirmation model in which it was proposed that customer satisfaction results from a consumer's comparison between expectations and perceived performance (Oliver, Rust, & Varki, 1997). Customers' expectations are based on beliefs about performance from prior experience and/or communications about the product or service that imply a certain level of quality. When perceived performance falls short of customers' expectations, *dissatisfaction* results and when perceived performance exceeds customers' expectations, *delight* results (Oliver et al., 1997).

What is common in previous customer satisfaction research are the constructs of quality, service, and satisfaction and how the constructs are related. Cronin, Brady, and Hult (2000) summarized much of the previous research by indicating that researchers reported conflicting results in much of the literature and that no researchers simultaneously compared the impact of the three pillars (quality, service, and satisfaction) on service encounter outcomes. While the body of knowledge concerning customer satisfaction is extensive and the constructs are important, what is most relevant to the current study is that service quality is but one component of customer

satisfaction and that it may have some effect on satisfaction. For example, Meng and Elliott (2009) tested relationships between perceived service quality, the potential costs of consumers switching from one service provider to another, and customer satisfaction. Meng and Elliott (2009) found that enhancing perceived service quality increased consumers' perceived switching costs and that service quality had a significant impact on customer satisfaction.

Service quality is "the degree to which an event or experience meets an individual's needs or expectations" (Hung, Huang, & Chen, 2003, p. 79). The definition of service quality provided by Hung et al. (2003) was consistent with Parasuraman, Zeithaml, & Berry (1988) who stated that "perceived quality is the consumer's judgment about an entity's overall excellence or superiority" (p. 15). Researchers focusing specifically on service quality cited its growing importance to company leaders seeking a competitive advantage (Cronin & Taylor, 1992; Gebauer, Krempl, & Fleisch, 2008; Hays & Hill, 1999; Hung et al., 2008; Zeithaml et al., 1990). "Most companies agree that customer service quality provided to their target customers affects global business performance to some degree and becomes one of the crucial strategies in a company" (Hung et al., 2003, pp. 79-80). For service-based organizations, perceptions of service quality and satisfaction are key performance metrics (Morrison-Coulthard, 2004).

Parasuraman, Zeithaml, & Berry (1985) identified a common set of criteria used by customers to evaluate service quality, regardless of the service. Customer perceptions of tangibles, reliability, responsiveness, assurance, and empathy in the service process determine levels of customer satisfaction (Parasuraman, Berry, & Zeithaml, 1991), and are reflected in the SERVQUAL instrument, a widely used assessment of service quality shown to be valid and reliable and widely accepted as a standard for measuring service quality (Foster, 2010) and determining customer satisfaction (Souca, 2011). Consistent with the need for organizational learning, the criteria can be measured by company leaders distributing customer surveys concerning the quality of the service the customer receives (Zeithaml et al., 1990). Customers identify the areas in which the company succeeds and the areas in which the company fails (Zeithaml et al., 1990).

Service quality has been shown to be one component of customer satisfaction (Churchill & Suprenant, 1982; Gagliano & Hathcote, 1994; Kettinger & Lee, 1994; Parasuraman et al., 1991). Parasuraman et al. (1985, 1988) and Cronin and Taylor (1992) proposed that service quality was an antecedent of customer satisfaction. There is significant customer satisfaction research in which researchers indicated service quality as a contributor to overall customer satisfaction (Al-hawari, 2008; Bitner, 1990; Bolton & Drew, 1991a, 1991b; Carman, 1990; Chumpitaz & Paparoidamis, 2004; Garikaparthi, 2014; Kettinger & Lee, 1994; Mosahab, Mahamad, & Ramayah, 2010; Shammot, 2011; Sureschandar, Rajendran, & Anantharaman, 2002). As Garikaparthi (2014) writes, "…customer satisfaction is a result of service quality and satisfaction of the customer will determine the future intentions and behavior of the customer towards the service and the provider" (p. 1140). In a meta-analysis, Carrillat, Jaramillo, & Mulki (2009) found that service quality has a large effect on customer satisfaction, attitudinal loyalty, and purchase intention, concluding that service quality plays a vital role in a company's efforts to build long-term relationships with customers.

The SERVQUAL Model

The SERVQUAL scale is a popular, widely used assessment of service quality (Foster, 2010). A listing of recently published research found in electronic databases such as ABI/Inform demonstrates that the use of SERVQUAL is alive and well today. SERVQUAL has been adapted and applied to measure service encounters in a wide variety of contexts. Recently, this includes healthcare (Mecev & Goles, 2015), tourism and hospitality (Kim-Soon, Rahman, & Visvalingam, 2014), higher education (Foropon, Seiple, & Kerbache, 2013), and banking (Patel, 2014). It is also been applied in several countries, including the U.S. (Jones & Shandiz, 2015), China (Zhang, Xie, Huang, & He, 2014), Australia (Woods & Morgan, 2014), and others. In a meta-analysis, Carrillat, Jaramillo, & Mulki (2007) found that SERVQUAL is an adequate and valid predictor of overall service quality. From a practical perspective, the managerial implications of SERVQUAL are important. "The purpose of SERVQUAL is to serve as a diagnostic methodology for uncovering broad areas of a company's service quality shortfalls and strengths" (Ladhari, 2009, p. 175).

But SERVQUAL is not without its criticisms and concerns. Several studies have reviewed the merits and concerns of SERVQUAL (Asubonteng, McCleary, & Swan, 1996; Buttle, 1996; Ladhari, 2009; Polyakova & Mirza, 2015) and a variety of debates about various aspects of the SERVQUAL instrument exists. Ladhari (2009) discusses these issues, which include the use of difference scores, the reliability of the model, its convergent and discriminant validity, its predictive validity, an emphasis on process rather than outcome, the hierarchical nature of the constructs, the use of reflective versus normative scales, the applicability of the scale across service contexts, the applicability of the instrument to the online environment, and the applicability of the instrument in different cultural contexts.

Regarding the use of SERVQUAL in the online environment, Tate and Evermann (2010) argue against the instrument's use. "ServQual, with origins in the marketing literature and developed for face-to-face encounters before the widespread use of the internet, is by far the most popular instrument for measuring the quality of face-to-face service delivery" (Tate & Evermann, 2010, p. 60). "…we argue that ServQual is not appropriate for measuring service quality in computer-mediated self-service provision and does not provide a sound foundation for research into online service quality" (Tate & Evermann, 2010, p. 62).

Recently, the reflective versus normative debate has also received some attention. Collier and Bienstock (2009), for example, propose that service quality may be more appropriately conceptualized by having formative rather than reflective indicators. While their study developed an e-service quality model (not SERVQUAL) and addressed the idea of model misspecification, Collier and Bienstock (2009, p. 292) acknowledge that their study is "an exploratory study that took place in only one setting" and "additional research in service quality and model misspecification is required to increase the external validity of these findings."

Carlson and O'Cass (2011) assessed alternative theoretical frameworks of e-service quality, addressing the issue of reflective versus formative indicators of service quality. Carlson and O'Cass (2011, p. 268) acknowledge that "with the exception of the work by Collier and Bienstock (2006, 2009) and Francis (2009), conceptualizations of e-service quality primarily adopt (either implicitly or explicitly) a reflective perspective to the measurement." They examined a *dimensions* (reflective) versus *antecedents* (formative) modeling approach to e-service quality and tested three models – e-service quality dimensions viewed as dimensions only, as antecedents to a global evaluation of e-service quality, or as a formative configuration – in predicting behavioral intentions. "The results supported all three models and provided slightly stronger support for the formative model" (Carlson & O'Cass, 2011, p. 281).

More recent research (Gusti & Sihombing, 2013) found that the reflective model is better than the formative model in measuring e-service quality. Gusti and Sihombing (2013) concluded that the "reflective model is shown as the suitable model for measuring e-service quality" (Gusti & Sihombing, 2013, p. 104). Given the differing opinions and empirical findings, as Ladhari (2009, p. 188) states, "it is increasingly apparent that future studies need to explore the service-quality construct as a formative construct rather than a reflective judgment."

Regardless of the theoretical concerns with SERVQUAL, researchers continue to apply the instrument in various service contexts and SERVQUAL continues to be relevant for organizations wanting to improve service quality and customer satisfaction. As Ladhari (2009, p. 191) writes, "Nevertheless, despite the apparent shortcomings of the SERVQUAL scale, many researchers and practitioners continue to find that the instrument is useful for measuring service quality… After reviewing the numerous applications and critiques of SERVQUAL, the present study concludes that, despite legitimate concerns about the validity of the scale, it remains a useful tool for measuring and managing service quality."

METHODOLOGY

The literature on the SERVQUAL model is extensive and analysis of data can take many forms, including dimension-by-dimension analysis to identify the dimensions on which customers place importance and those on which customers perceive a company to perform well or poorly (Souca, 2011). For example, Matzler, Renzl, and Rothenberger (2006) found that the five dimensions of service quality differ in their relative importance as drivers of overall satisfaction in the hotel industry. To provide practical recommendations, a SERVQUAL gap analysis was conducted. The importance and perceptions of service quality dimensions were analyzed so that managers of return/repair processes may draw conclusions about how to improve service quality and customer satisfaction.

Researchers have found a positive relationship between service quality and overall customer satisfaction (Al-hawari, 2008; Bitner, 1990; Bolton & Drew, 1991a, 1991b; Carman, 1990; Chumpitaz & Paparoidamis, 2004; Kettinger & Lee, 1994; Mosahab et al., 2010; Shammot, 2011; Sureschandar et al., 2002). However, literature reviewed indicates manufacturers do not place a priority on service quality processes such as return/repair. As such, we believe that the expectations of customers of the power tool manufacturer in this study will exceed perceptions of service quality delivery (Kano et al., 1984, 1996). Therefore, hypotheses tested in this study regarding customers of the return/repair process for power hand tools include:

H1   Customers' perceptions of service quality are positively associated with their levels of satisfaction.
H2   Customers' expectations of service quality exceed their perceptions of service quality delivery.

While hypotheses about service quality and satisfaction using the expectancy disconfirmation and SERVQUAL models have been tested in previous literature, they have not been addressed in the context of manufacturers of power tools that offer return/repair processes. If supported, together the results of the hypotheses tests suggest important managerial implications; while the positive relationship between perceptions of service quality and satisfaction may be supported (as previously hypothesized in the literature), a finding that expectations of service quality exceed perceptions may indicate dissatisfaction (Kano et al., 1984, 1996) and, in turn, suggests much room for improvement in service quality and satisfaction exists in this context.

Sample

For the quantitative study, the population was 3,000 service center customers who used an authorized or company-owned repair center within the last 42 months and whose emails were currently in the company's customer database. The company provided access to 350 customers and replacement emails for the customers whose contact information changed or was no longer available. The required sample was generated using a systematic sampling method with every 4th name from the population of 2,000 emails chosen starting with the 3rd name on the list. Using an Internet-based sample size calculator (Creative Research Systems, n.d.), a required sample of 341 was determined. The parameters were a population of 300 at 95% confidence level and a confidence interval of 5. A manufacturer representative provided e-mail addresses for the customers from the company's database of authorized and factory-owned service center customers.

Data Collection

Customers were contacted by email delivered by Qualtrics, an established survey research company, via email addresses provided by the power tool manufacturer. If a customer agreed to participate in a survey, the customer was directed to the online survey by a link provided in the e-mail soliciting participation. Initially, customers were asked to provide their consent for participating in the survey. Reminder e-mails were sent twice, with one e-mail sent 1 week after the initial e-mailing and the other e-mail sent 2 weeks after the initial e-mailing.

Survey Measures

The SERVQUAL scale (Parasuraman et al., 1988, 1991; Zeithaml et al., 1990) was used to assess current customers' expectations regarding return/repair services and their perceptions of the manufacturers' performance in return/repair services. In addition, customers assessed the relative importance of five dimensions of service quality as proposed by Parasuraman et al. (1991): tangibles, reliability, responsiveness, assurance, and empathy. The authors of the SERVQUAL instrument granted permission to use the scale.

The SERVQUAL instrument is valid and reliable, and widely accepted as a standard for measuring service quality (Foster, 2010). Further, the scale consists of 45 items so the scale can be completed quickly. Finally, the scale has a standardized analysis procedure (Foster, 2010). While some scholars found the SERVQUAL instrument not to be adequate for delivering the most consistent results for all service environments (Cronin & Taylor, 1992), Ladhari (2009) found that SERVQUAL remained a very robust mechanism for examining service quality.

The SERVQUAL consists of 22 items that are used to measure customer expectations regarding a type of service process, along with a matching set of company-specific measures of customer perceptions of performance and a question to measure the relative importance of the five dimensions of service quality (Parasuraman et al., 1991; Zeithaml et al., 1990). For each item assessing customer expectations or perceptions, a seven-point scale from 1 = *strongly agree* to 7 = *strongly disagree* was used. Lower scores indicate higher expectations or perceptions within each dimension because of the way the survey questions were coded.

The survey items for measuring expectations and perceptions are grouped into the five dimensions (Parasuraman et al., 1991; Zeithaml et al., 1990). The *tangibles* dimension has four

scale items in each set, the *reliability* dimension has five items, the *responsiveness* dimension has four items, the *assurance* dimension has four items, and the *empathy* dimension has five items (Parasuraman et al., 1991; Zeithaml et al., 1990). The relative importance of each dimension is assessed by asking a customer to allocate 100 points among the five dimensions, with the more important dimensions receiving the greater number of points (Parasuraman et al., 1991; Zeithaml et al., 1990).

In this study, the reliabilities for expectations and perceptions on each of the five SERVQUAL dimensions were above 0.70, which indicated a high level of internal consistency for the scale. The coefficient alpha values for the expectations subscales were .91, .94, .93, .95, and .93 for tangibles, reliability, responsiveness, assurance, and empathy, respectively. Coefficient alpha values for the perceptions subscales were .95, .91, .91, .93, and .90 for tangibles, reliability, responsiveness, assurance, and empathy, respectively.

A one-item, seven-point Likert-type scale was used to measure customer satisfaction with service quality (Mengi, 2009). The scale was from *strongly agree* to *strongly disagree* and assessed customers' responses to "I am satisfied with the service of the service center."

Demographic information was also collected including the specific authorized or factory-owned service center used, primary industry (for example, contractor, electrical), company size (as measured by number of employees), and type of tool repaired. The demographic information was used to determine whether differences occurred across varying customer segments.

RESULTS

Description of Sample

Of the completed surveys, 191 customers (23.8%) used a factory-owned service center in the last 42 months, while 156 (19.5%) used an authorized service center. The total sample size was 347. For the 347 customers who used a service center for their tool repair, 71 different authorized service centers were used and more than 17 factory-owned service centers were used (13.8% of customers selected "other" factory-owned service center besides those listed by geographic location, but did not specify that location). The type of tool repaired, the primary industry, and the company size are found in Tables 1 through 3.

SERVQUAL Gap Analysis

Following the instructions for calculating a weighted SERVQUAL score provided by Zeithaml et al. (1990, p. 177), a gap analysis for each SERVQUAL dimension and a combined SERVQUAL across all dimensions was conducted to assess the company's overall quality of service as perceived by customers. The customers' perceptions of the importance of each dimension and performance of service on each were compared, allowing areas of service improvement to be identified. The weighted gap analysis was conducted for each dimension of tangibles, reliability, responsiveness, assurance, and empathy, considering the importance of each dimension to customers. The relative importance of each dimension was assessed by having customers allocate 100 points "among the five features according to how important each feature is to you." The customers were instructed to allocate more points to those dimensions that are more important to them, and to make sure that the points entered for each dimension add up to 100. The results are presented in Tables 4 and 5.

Table 1 TYPE OF TOOL REPAIRED		
Type of Tool	Frequency	%
Cordless Drill	108	31.1
Cordless Other	49	14.1
Corded Drill	20	5.8
Corded Sawzall	18	5.2
Corded Bandsaw	7	2.0
Corded Other	18	5.2
Total	220	63.4

Note: 127 responses (36.6%) contained missing data.

Table 2 PRIMARY INDUSTRY OR LINE OF BUSINESS		
Industry/Line of Business	Frequency	%
Electrical	31	8.9
Plumbing	21	6.1
Mechanical & HVAC	18	5.2
General Contractor	24	6.9
Elevator	2	0.6
Heavy Contractor	9	2.6
Building Maintenance	18	5.2
Demolition	1	0.3
Metal/Ironworker	8	2.3
Specialty	34	9.8
Do It Yourselfer	43	12.4
Occasional/Around the Home	12	3.5
Total	221	175.4

Note: 126 responses (36.3%) contained missing data.

Table 3 COMPANY SIZE (NUMBER OF TOTAL EMPLOYEES)		
Number of Employees	Frequency	%
Under 10	105	30.3
10 to 19	21	6.1
20 to 49	19	5.5
50 to 99	15	4.3
100 to 149	14	4.0
150 to 499	16	4.6
500 to 999	4	1.2
1,000 to 4,999	7	2.0
5,000 to 9,999	8	2.3
10,000 to 14,999	0	0.0
15,000 to 25,000	1	0.3
25,000 or more	3	0.9
Total	213	61.5

Note: 134 responses (38.6%) contained missing data.

Dimension	Average Importance Weight	Average SERVQUAL Score	Average Weighted SERVQUAL Score	Overall SERVQUAL Score
Table 4 **SERVQUAL GAP ANALYSIS**				
Tangibles	14.06 ($sd = 9.78$)	.39 ($sd = 1.05$)	.04 ($sd = 0.12$)	
Reliability	31.14 ($sd = 16.55$)	.25 ($sd = 0.75$)	.08 ($sd = 0.34$)	
Responsiveness	20.64 ($sd = 9.49$)	.18 ($sd = 0.79$)	.04 ($sd = 0.15$)	
Assurance	17.49 ($sd = 6.86$)	.24 ($sd = 0.72$)	.04 ($sd = 0.10$)	
Empathy	16.67 ($sd = 9.30$)	.24 ($sd = 0.77$)	.03 ($sd = 0.13$)	
OVERALL				.24 ($sd = 0.71$)

SERVQUAL Items for Each Dimension:

Tangibles

1. The service center has modern-looking equipment.
2. The service center's physical facilities are visually appealing.
3. The service center's employees are neat-appearing.
4. Materials associated with the service (such as pamphlets or statements) are visually appealing at the service center.

Reliability

5. When the service center promises to do something by a certain time, it does so.
6. When you have a problem, the service center shows a sincere interest in solving it.
7. The service center performs the service right the first time.
8. The service center provides its services at the time it promises to do so.
9. The service center insists on error-free records.

Responsiveness

10. Employees of the service center tell you exactly when services will be performed.
11. Employees of the service center give you prompt service.
12. Employees of the service center are always willing to help you.
13. Employees of the service center are never too busy to respond to your requests.

Assurance

14. The behavior of employees of the service center instills confidence in customers.
15. You feel safe in your transactions with the service center.
16. Employees of the service center are consistently courteous with you.
17. Employees of the service center have the knowledge to answer your questions.

Empathy

18. The service center gives you individual attention.
19. The service center has operating hours convenient to all its customers.
20. The service center has employees who give you personal attention.
21. The service center has your best interests at heart.
22. Employees of the service center understand your specific needs.

Table 5
PAIRED SAMPLES *t* TEST RESULTS COMPARING AVERAGE WEIGHTED SERVQUAL SCORES

Comparison	Mean	N	Std. Deviation
Tangibles vs. Reliability	.04 .08*	207	.12 .34
Tangibles vs. Responsiveness	.04 .04	206	.12 .15
Tangibles vs. Assurance	.04 .04	198	.12 .10
Tangibles vs. Empathy	.04 .04	203	.12 .13
Reliability vs. Responsiveness	.08 .04*	200	.34 .15
Reliability vs. Assurance	.08 .04*	195	.35 .10
Reliability vs. Empathy	.08 .03*	197	.35 .13
Responsiveness vs. Assurance	.04 .03	196	.16 .10
Responsiveness vs. Empathy	.04 .03	199	.16 .13
Assurance vs. Empathy	.04 .04	191	.10 .14

*Significant differences between the means compared at $p < .05$.
Note: Lower means indicate higher expectations or perceptions given the question coding (1 = strongly agree to 7 = strongly disagree).

Revealed in the gap analysis was meaningful information regarding the return/repair of power hand tools. First, the dimension that is most important to customers is reliability, followed by responsiveness, assurance, empathy, and tangibles, respectively. Second, the weighted SERVQUAL scores indicate the customers' perceptions of service quality on each dimension. According to the paired-samples *t* tests, the average weighted SERVQUAL score for reliability is significantly different from the other dimensions. Customers believe reliability is the most important dimension, and their perceptions of the service centers' performance on reliability was the lowest relative to the other dimensions.

In addition, overall SERVQUAL scores were computed and compared across demographic segments. Independent samples *t* tests compared the means of type of service center used (factory-owned or authorized) and company size (small–less than 10 employees – or large–10 or more employees) on the overall SERVQUAL score. No significant difference was found for type of service center used ($t(173) = -0.76$, $p > .05$). The mean of the factory-owned service centers ($m = 0.21$, $sd = 0.78$) was not significantly different from the mean of authorized service centers ($m = 0.29$, $sd = 0.57$). No significant difference was found for company size ($t(166) = 0.57$, $p > .05$). The mean of the small (those with fewer than 10 employees) companies ($m = 0.25$, $sd = 0.88$) was not significantly different from the mean of large (those with 10 employees or more) companies ($m = 0.19$, $sd = 0.44$). One-way analysis of variance was conducted to compare the means of the primary industry and the type of tool repaired on the overall SERVQUAL score. No significant difference between primary industry (electrical, plumbing, mechanical & HVAC, etc.) was found ($F(11,161) = 0.62$, $p > .05$) or between type of tool repaired ($F(5,166) = 0.44$, $p > .05$).

The gap analysis reveals that customers place more importance on some service quality dimensions than others, and that their perceptions of a company's performance on some service

quality dimensions are higher than others. In addition, no differences between demographic segments were found. Customers' SERVQUAL scores were not significantly different with respect to the type of authorized service center, company size, primary industry, or type of tool repaired.

Hypothesis 1: Customer Satisfaction and Service Quality

To test Hypothesis 1, Pearson correlation coefficients were used to determine the strength of the linear relationship between customer perceptions of service quality for each of the five SERVQUAL dimensions and satisfaction. A positive correlation was found between customer satisfaction and tangibles (r(212) = .20, p < .01), reliability (r(212) = .44, p < .01), responsiveness (r(209) = .29, p < .01), assurance (r(202) = .32, p < .01), and empathy (r(211) = .31, p < .01). The correlation analyses provide support for Hypothesis 1 that states that customer perceptions of service quality are positively associated with their satisfaction with the service process. Specifically, the higher the customers' perceptions of tangibles, reliability, responsiveness, assurance, and empathy, the higher the level of customer satisfaction.

Hypothesis 2: Customer Expectations and Perceptions of Service Quality

To test Hypothesis 2, that expectations of service quality exceed perceptions of performance, paired-samples t tests compared customers' expectations of service quality to their perceptions of service quality on each of the five SERVQUAL dimensions. The results of the paired samples t tests are found in Table 6.

Table 6 PAIRED SAMPLES *t* TEST RESULTS FOR THE 5 SERVQUAL DIMENSIONS			
Comparison	Mean	N	Std. Deviation
Expectations of Tangibles vs. Perceptions of Tangibles	8.00 9.55*	213	3.93 4.40
Expectations of Reliability vs. Perceptions of Reliability	7.56 8.81*	210	3.90 4.12
Expectations of Responsiveness vs. Perceptions of Responsiveness	6.58 7.32*	209	3.37 3.37
Expectations of Assurance vs. Perceptions of Assurance	6.06 7.01*	201	3.21 3.29
Expectations of Empathy vs. Perceptions of Empathy	8.65 9.86*	208	4.06 4.17

*Significant differences between the means compared at *p* < .01.
Note: Lower means indicate higher expectations or perceptions given the question coding (1 = strongly agree to 7 = strongly disagree).

Significant differences between expectations and perceptions of tangibles (*t*(212) = -5.37, *p* < .001), reliability (*t*(209) = -4.88, *p* < .001), responsiveness (*t*(208) = -3.36, *p* < .001), assurance (*t*(200) = -4.69, *p* < .001), and empathy were found (*t*(207) = -4.54, *p* < .001). The paired samples *t* tests provide support for Hypothesis 2 that customers have higher expectations than perceptions of service quality. Specifically, customers' expectations of service quality on the five dimensions of SERVQUAL exceeded their perceptions of service quality. Kano et al. (1984, 1996) suggest that when expectations exceed perceptions, *dissatisfaction* may result. However, despite the

significant differences where expectations exceed perceptions, customers are generally satisfied with the level of service quality they have received, as shown in an examination of the overall mean for satisfaction with the return/repair process. Overall, customers were satisfied with the return/repair process ($m = 1.61$, $sd = .89$, $n = 220$) because the overall mean of 1.61 falls closer to "strongly agree" on the seven-point scale.

CONCLUSIONS AND IMPLICATIONS

This SERVQUAL study of a power tool manufacturer was designed to show customers' perceptions of the importance, expectations, and performance of service quality dimensions, and how service quality is associated with customer satisfaction in a return/repair process. The dimensions of service quality as defined by Parasuraman et al. (1980) were examined using statistical techniques used by a number of other researchers who have studied service quality (Ladhari, 2009; Souca, 2011).

A SERVQUAL gap analysis revealed that the company received the lowest performance scores in reliability, the dimension considered most important. Perceptions of service quality for each of the five SERVQUAL dimensions were found to be significantly related to customer satisfaction (providing support for Hypothesis 1). Customers' expectations of service quality exceeded their perceptions of company performance (providing support for Hypothesis 2) even though they were generally satisfied with the return/repair process. Previous literature has demonstrated that when expectations exceed perceptions, customers will generally feel dissatisfaction. However, in this study, customers have an overall level of satisfaction with the quality of service they receive.

Practically, this study can inform manufacturers in designing effective service processes, particularly return/repair. For example, Ladhari (2009) recommends that organizations:

1.   Use gap scores to identify areas of strength and weakness, and work to ensure that their level of service meets or exceeds customer expectations of service;
2.   Measure their company's service quality and then compare it with that of competitors;
3.   Track levels of expectations and perceptions over time, administering the instrument once a year;
4.   Adapt the SERVQUAL instrument to specific contexts; and,
5.   Be careful when using SERVQUAL in other countries and cultures.

The five dimensions of SERVQUAL were examined and it was determined that reliability, relative to the other service quality dimensions, is most important to customers. Unfortunately, in the company studied here, customers believed its performance in the reliability dimension was poorest.

Historically, research is limited and manufacturers have not developed services systematically (Gebauer et al., 2008) even though the financial benefits of effective service processes are significant (Cohen et al., 2006; Sawhney et al., 2004). Systematic methods, like the SERVQUAL model, for continual assessment of service quality and satisfaction across all customer segments should be implemented. "The most important aspect of service quality is continued evaluation of quality through regular information collection and analysis from customers and internal sources" (Garikaparthi, 2014, p. 1140).

Manufacturers should focus on improving areas of deficiency in service quality that customers perceive important and where their expectations exceed perceptions. As Garikaparthi (2014) writes, "…if over a period of time customer expectations are not met it would lead to losing

customers and gaining the attention and trust of a lost customer is doubly difficult and costly" (p.1140). A company whose leaders know which of the dimensions of service quality have higher levels of customer expectations should be able to more readily create service environments and experiences where those expectations can be met or exceeded. Then, improvements in service quality should lead to a corresponding increase in overall customer satisfaction.

Measuring customer satisfaction with the service process alone is not sufficient. In this study, customers were satisfied with the service process even though their expectations exceeded their perceptions of performance. We believe this finding may be the result of a halo effect whereby customers may have had positive perceptions of the company's brand of power tools being serviced and that these brand perceptions may have influenced customers' perceptions of service quality.

In addition to the important practical implications, this study has important theoretical considerations and suggests areas for future research. This study extends the research on the relationship between service quality and customer satisfaction. Consistent with previous literature, customers' perceptions of service quality performance are positively correlated with and drivers of customer satisfaction. However, inconsistent with previous research, the customers were satisfied with the return/repair process even though their expectations of service quality exceeded their perceptions of company performance. This finding lacks congruence with the expectancy disconfirmation model that proposes when perceived performance falls short of customers' expectations, dissatisfaction results, and when perceived performance exceeds customers' expectations, delight results (Oliver et al., 1997). Future research should incorporate the possibility of the aforementioned halo effect to determine to what extent and under what circumstances favorable brand perceptions influence service quality perceptions and, in turn, customer satisfaction.

Future research should also address the theoretical criticisms and concerns of SERVQUAL. For example, researchers continue to debate the conceptualization of service quality as having formative versus reflective indicators (Collier & Bienstock, 2009; Gusti & Sihombing, 2013). While we believe SERVQUAL continues to be relevant for organizations wanting to improve service quality and customer satisfaction, and researchers continue to apply the instrument in various service contexts, the theoretical concerns need to be given priority by academic researchers, including the model specification of SERVQUAL and the suggestion that SERVQUAL may not be appropriate for online service quality (Tate & Evermann, 2010). This is particularly important as service processes in various contexts are increasingly being transitioned to online. With respect to return/repair processes for some manufacturers, a portion of the service is being transitioned to online where a customer submits a request for service and receives appropriate documentation to begin the process. Continuation of the process may continue online as the manufacturer communicates with the customer and seeks evaluation of the service quality process after it is completed. We hope that as a result of researchers prioritizing the theoretical concerns, improved instruments for measuring service quality and customer satisfaction will result, helping organizations to better manage and improve these important outcomes beyond the current benefits of SERVQUAL.

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DIRECT AND INDIRECT EFFECTS OF MARKETING MIX ELEMENTS ON SATISFACTION

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ABSTRACT

The present study has developed a good fit model using Structural Equation Modelling which validates relationship between marketing mix elements and customer satisfaction through brand awareness. It proves that brand awareness is a strong mediating variable between marketing mix elements and customer satisfaction with respect to consumer durable sector. The relationship between marketing mix elements and brand awareness, and also that between brand awareness and customer satisfaction has been observed to be significant. Marketing mix elements do not have a significant effect on customer satisfaction but have indirect effect on it. Convenience sampling has been used to collect data from 350 consumers of durables products in Punjab (India).

Keywords: 4Ps, Brand awareness, Consumer durables, Marketing mix, Customer satisfaction.

INTRODUCTION

India is an emerging economy. The rapid expansion in its consumer durable market is one of the main driving forces behind the country's economic boom. According to Census of India (2011), more than half of the nation's population has an average age of less than 30 years. The capacity to spend of its youth and middle class is increasing day by day. Moreover, finance options are easily available now. All this is giving a needed fillip to the consumer durable market. With decrease in control of government over manufacturing and business sector and with the advent of policies related to liberalisation, privatisation and globalization, there has been a tremendous increase in competition. Technology has also improved manifold. Commoditisation is giving way to branding on a large scale. In order to create a market for consumer durables, the marketers are laying huge emphasis on marketing mix elements and creation of brand awareness.

Creating awareness about a brand is as important as enhancing customer's experience of the product/service. Without brand awareness, customers cannot or will not buy the brand, because they are simply not aware of brand's existence (Peter and Olson, 1996). Brand awareness and product-related attributes tend to create and reinforce the relationship between the customer and the brand (Suresh et al., 2012). The recall of a brand or its knowledge can be decisive in incorporating it into the small group of alternatives that will be in mind at the moment of choosing goods. Macdonald and Sharp (2000) have reiterated that brand awareness is an important factor that influences the purchase decision of customers. Customers' purchase intentions and decisions can also be influenced more if a product has higher brand awareness (Dodds et al., 1991; Grewal et al., 1998, Chi et al., 2009, Malik et al., 2013). According to Aaker and Day (1974), brand awareness, influenced by the advertising recall, affects the decision of purchase not only in the aspect of behaviour, but even at affective level. It forms positive

attitudes towards the product that lead to the purchase of the product and to obtain major quotas for the company.

Prior to choosing a product, many factors cross the mind of a consumer. Product features can also help customers to have a subjective judgment on overall product quality that make a product hold a salient differentiation and become a selective brand in customer's minds (Aaker, 1991). Products with higher brand awareness generally have higher market share and better quality perception.

Customer satisfaction is essential to long-term business success (Jones & Suh, 2000; Pappu & Quester, 2006). It is undoubtedly the key towards sustainable business development. A better understanding of the customers' priorities and needs amongst various quality dimensions is essential in effectively designing marketing mix elements. It may help organisations to understand how strategies can be altered or improved in order to satisfy customers. Ultimately, tryst with satisfaction aims at satisfying all such parameters that cross the mind of customers and creating a perception that a particular product best serves the needs of a customer.

A satisfied customer is lesser price sensitive; least influenced by competitors' attacks and remains loyal to the firm longer as compared to a dissatisfied customer (Kellar et al., 2012). Some researchers have indicated that the customers will be more satisfied by being able to find their brands in a high number of establishments (Ferris, Oliver & Kluiver, 1989; Smith, 1992). Ahmed & Rahman (2015) have emphasized that satisfaction of the customer can be increased through product differentiation. According to Dhurup et al. (2014), the marketing success of businesses depend on their ability to continuously enhance their products with competitive pricing and brand awareness strategies in order to improve brand loyalty and customer satisfaction.

The objectives of the present study are to explore: (1) the influence of marketing mix on brand awareness, (2) the effect of brand awareness on customer satisfaction, (3) the impact of marketing mix elements on customer satisfaction, (4) whether brand awareness mediates the relationship between marketing mix and customer satisfaction.

PROBLEM STATEMENT

Though a number of studies have been conducted to explore the relationship between brand awareness and specific elements of marketing mix, hardly any studies have been found in literature which analyzes the relationships between marketing mix elements, brand awareness and customer satisfaction. Such studies are fewer still in the context of consumer durables or Indian markets. This research makes an exploratory attempt to bridge the gap in literature and examines the relationships between marketing mix elements, brand awareness and customer satisfaction in the consumer durables market in Punjab (India). Since, this study deals with consumer durable products, marketing mix has been represented by 4Ps (Product, Price, Promotion and Place) out of the total 7Ps.

LITERATURE REVIEW

Davis, Golicic & Marquardt (2008) have emphasized that brand name is one of the important elements in brand awareness as name acts as a file cabinet in the mind of consumer which can be filed with linked names, facts and feelings. As a consequence, brand awareness affects purchase decision through brand association, and when a product owns a positive brand image, it will help in marketing activities (Keller, 1993). The product is of more value when it is branded than when it is unbranded because customers value those brands positively that enjoy a good reputation among the groups to which they belong or aspire to belong (Long and Shiffman, 2000).

Aaker (1991) have highlighted that if a brand name is recalled and recognised, it is because the company is carrying out an intensive and aggressive advertising campaign, it is possessing the best and multiple channels of distribution, it has been present in the market for many years, or is successful and being used satisfactorily by a great number of customers. A customer, who has not been directly exposed to the advertising impact of a known and familiar brand, but knows that many other customers are using it, believes that the brand is superior and attributes it to a great advertising effort.

Various studies in literature have explored relationship between advertisements and brand awareness. According to Rossiter and Percy (1987), advertisements create and increase brand awareness by exposing brands to customers. Krishnan and Chakravarti (1993) have proposed that a brand's likelihood of being included in customers' consideration set increases with advertising, thereby enhancing market performance of the brand. Brand awareness is also positively related to the advertising expenditure invested in brand (Yoo et al., 2000). Peter and Olson (1996) have also concluded that though advertising has the most favourable impact on brand awareness, different and various levels of brand awareness are required by the consumer while making a purchase decision. Other aspects of promotion, namely, publicity, personal selling, sales promotion, and price promotion might also have an effect on it.

Very few researchers have discussed the relationship between price promotion and brand awareness and their findings are not very similar. Inconsistency in findings may be due to the use of different measures of brand awareness and research contexts of various studies. Yoo et al. (2000) have found a negative relationship between price promotion and brand awareness for durable goods. They have observed that customers are equally aware of both high-priced and low-priced products. Customers use high-price as a quality signal to achieve decision efficiency even though low-price products give them more value. Keller (2008) has asserted that price promotion, in particular, affects the purchase decision of brand switchers and encourages product trials. Such product experiences enhance brand awareness. Srinivasan et al. (2008) have identified a positive relationship between brand awareness and price promotion as well as between advertising and distribution for convenience goods. The findings of Sedaghat et al., (2012) have suggested that promotional mix elements also have a positive effect on brand equity.

Some researchers have indicated that customers will be more satisfied by being able to find their brands in a high number of establishments (Ferris, Oliver, & Kluiver, 1989; Smith, 1992). A brand known by customers creates a feeling of pleasure and familiarity in them and it increases the probability of purchasing it from among alternatives (Aaker,1996). The recall of a brand or its knowledge can be decisive in incorporating it into a small group of alternatives that will be remembered while purchasing. The image in mind also vitally affects the buying decision (Aaker, 1991).Yoo et al. (2000) have emphasized that repeat brand exposure in stores improves customers' ability to recognize and recall the brand because the degree of intensity with which a

product is distributed plays an important role in affecting the decision of customers. Pappu & Quester (2006), in their study on satisfaction and brand equity, have found a positive and significant relationship between retailer awareness and consumer satisfaction for department stores and specialty stores. Srinivasan et al. (2008) have confirmed a positive association between brand awareness and distribution intensity. In their study, Alom and Haque (2011), have discussed the importance of distribution channels for customer satisfaction and retention.

Krishnan & Hari (2011) and Vyas (2011) have identified various factors through factor analysis model which are responsible for customer satisfaction in durable white goods. Their results have shown that factors, namely, repair, overall quality, product compatibility, competitive price, worthiness, reliability, usage experience, after-sales services, responsiveness, customer services, loyalty programs, warranty, pre-sales and sales person's behavior constitute key factors of customer satisfaction. According to Arham (2010), customer satisfaction can be increased and loyalty can be promoted by providing customers with honest, sincere, transparent and true information in promotional techniques.

RESEARCH METHODOLOGY

The present research has brand awareness as a mediator that links marketing mix elements to customer satisfaction. More specifically, it has been designed to investigate (1) the direct effect of the marketing mix elements on brand awareness, (2) the direct effect of marketing mix elements on customer satisfaction, (3) the direct effect of brand awareness on customer satisfaction and (4) the indirect effect of marketing mix elements on customer satisfaction mediated by brand awareness. It attempts the linkage of marketing mix elements to customer satisfaction through brand awareness using AMOS statistics.

In order to study these relationships, a conceptual framework has been proposed and mediation analysis has been carried out. Conceptual framework may be defined as an end result of bringing together a number of related concepts to explain or predict a given event, or give a broader understanding of the phenomenon of interest – or simply, of a research problem (Imenda, 2014). The general model has been presented in Figure I and the following hypotheses have been formulated.

H1: Marketing mix has a positive effect on brand awareness.

H2: Brand awareness positively affects customer satisfaction.

H3: Marketing mix positively affects customer satisfaction.

H4: Marketing mix has an indirect effect on customer satisfaction through brand awareness.

The measurement constructs include marketing mix elements, brand awareness and customer satisfaction based on a 5-point Likert scale (5: strongly agree, 4: agree, 3: neither agree nor disagree, 2: disagree and 1: strongly disagree). Due to a very large population size, probability sampling has not been considered. Instead, convenience sampling has been found appropriate to collect data from users of consumer durables belonging to the state of Punjab (India) through a pre-tested, structured and non-disguised questionnaire. In applied social sciences researches, there may be circumstances where it is not feasible, practically or theoretically, to do random sampling (Jain, 2012). Nevertheless, an attempt has been made to gather information from all strata of customers. Data were collected between July and October

2014. Out of 415 questionnaires, 350 fully filled questionnaires have been considered, the response rate being 84.33%.

Figure I
Proposed structural model of the effects of marketing mix elements on customer satisfaction
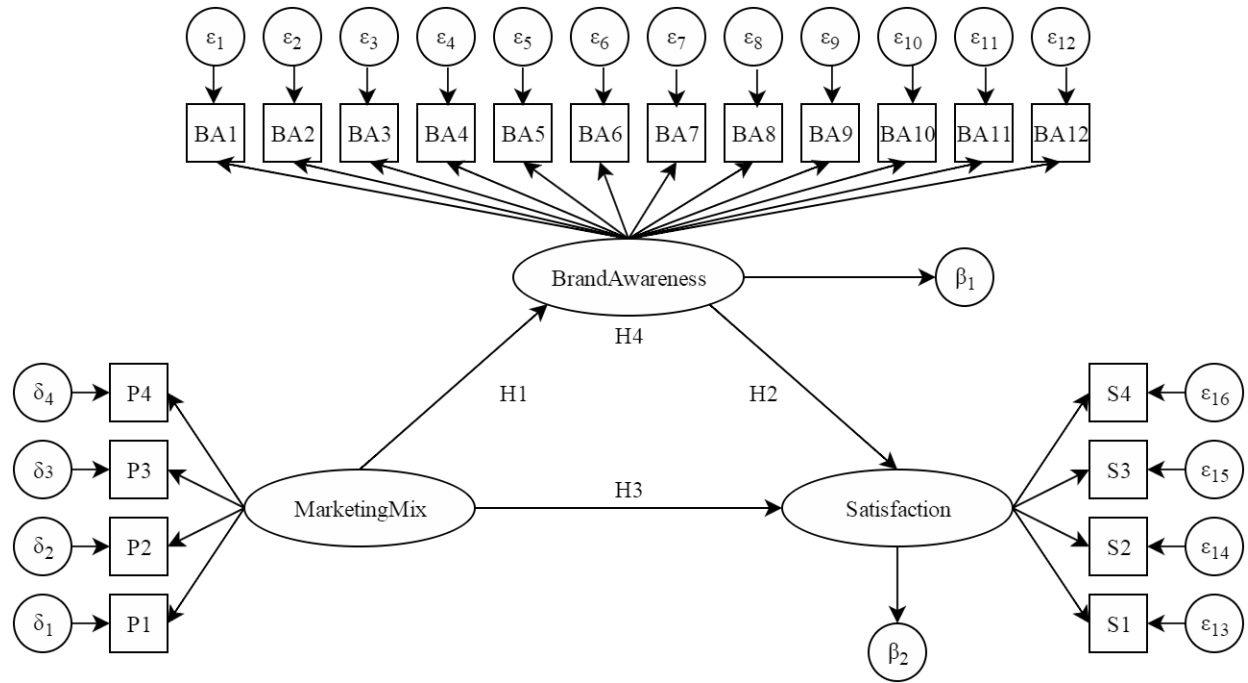
Validity and Reliability

The study is valid if its measures actually measure what they claim to and if there are no logical errors in drawing conclusions from the data (Garson, 2002). Validity of the constructs has been tested by the factor loading method. Table I shows the values of factor loadings of the constructs.

The study has also used Cronbach's alpha to check the internal reliability of the constructs used in the questionnaire. As shown in Table I, the value of Cronbach's alpha for marketing mix, brand awareness and customer satisfaction have been found to be 0.794, 0.713 and 0.820 respectively. According to Guielford (1965), when Cronbach's alpha is greater than 0.7, it shows the questionnaire has a relative high internal reliability. Since the values of Cronbach's alphas for all the constructs have been found to be higher than 0.7, it indicates that the questionnaire is reliable.

Dimensions	Statements	Factor Loadings	Cronbach's Coefficient Alphas
Table I **Reliability and Validity Statistics**			
Product	The product I have bought is a quality leader within its category	0.563	0.774
	The reliability of the product is very high	0.675	
	The product design is very attractive	0.823	
	The product is quite user-friendly	0.653	
	The product has very appealing features	0.718	
	The company offers a variety of products	0.653	
	The company offers warranty on good terms	0.573	
Price	I have bought the product at a reasonable price	0.578	0.733
	The overall price deal I have received is good	0.656	
	The point of purchase has provided me with more than one option of payment mode	0.724	
	The company offers options to buy on instalments	0.698	
	The company offers credit	0.577	
Promotion	The company promotes its products through print media like newspapers & magazines	0.531	0.791
	The company also promotes its products through outdoor advertising	0.566	
	The company communicates through TV and internet	0.750	
	It also uses social networking sites like Facebook, Twitter to advertise	0.651	
	The company advertises the product frequently	0.764	
	The company also sells directly through its sales force	0.540	
	The company often participates in exhibitions/trade fairs	0.513	
	The point of purchase carries out promotional activities	0.605	
	The salesperson has given me enough information about services	0.486	
	The website of the company provides sufficient information	0.484	
Place	The company sells its products through various channels	0.572	0.758
	The point of purchase stocks other well-known brands as well	0.652	
	The company offers its products through factory outlets	0.608	
	The point of purchase offers appealing ambience	0.616	
	The product was available at the desired time	0.498	
	The company is giving good after sales services	0.571	
	The process for contacting for after sales is simple	0.676	
	The results of after sales services are satisfactory	0.674	
Customer Satisfaction	I am satisfied with the product I have bought	0.767	0.713
	I am satisfied with the price I have paid to buy the product	0.833	
	I am satisfied with the way the product is being promoted	0.478	
	I am satisfied with the distribution and availability of the product	0.661	
Brand Awareness	I know what the brand looks like	0.760	0.820
	I can recognize the brand among other competing brands	0.730	
	I am aware of the brand	0.767	
	I know the brand	0.742	
	The brandhas a strong personality	0.682	
	The features and benefits of the product come to my mind quickly	0.756	
	When I think of the product category, the brand that comes to my mind is the one I have bought	0.774	
	I am able to recall the symbol/logo of the brand	0.648	
	The company has been able to create brand awareness in minds of customers	0.708	
	The company has been able to communicate the product features	0.734	
	The company has been able to differentiate the product from competing brands	0.765	
	The company has been able to generate a recall of brand benefits	0.713	

Initial Measurement Model Fit and Modification

Structural equation modeling has been used to estimate parameters of the structural model and to test research hypotheses. Prior to analysis, all assumptions for a successful application of the method have been checked and analyzed. The focus has been on all key findings in relation to initial measurement model fit along with confirmatory factor analysis (CFA). CFA incorporates uni-dimensionality and evaluates a data set by confirming the underlying structure on basis of theoretical background. This suggests simplification, modification and any required refinement in the measurement for theory testing and examining the level of fit.

Although model identification is the requirement for CFA, modification and standardized loadings (standardized regression weights) in AMOS output were the options to verify the dimensionality of the measurement or to verify the model fit. Modification Indices (MIs) are comprised of variances, covariance and regression weights. These indices have been examined during the evaluation of model fit. Anderson and Gerbing (1988) have suggested that under unacceptable, but converged and proper solutions, relating or deleting the indicator from the model are the preferred basic ways to re-specify the model. This means deleting an item and adding new path indicators are the best ways to get a better fitting model.

Initial Findings

1. The construct of 'Marketing Mix' consists of 30 items related to four sub-constructs, namely, Product, Price, Promotion and Place. These four sub-constructs have been subjected to CFA. The fit indices suggested a good fit with regards to adequacy of fit elevated χ^2, GFI, NFI, CFI and RMSEA provided in Table II.
2. Brand Awareness has been measured by a self-designed questionnaire which consisted of 12 items which were subject to CFA. The results have indicated a positive evaluation of the scale (Table II).
3. Customer satisfaction has also been measured with help of a questionnaire which consists of four questions subjected to CFA.

Testing the Default Model and Fit Indices

Following the evaluation and analysis of the measurement tools, an analysis of the structural model has been carried out. The default model has been proposed to verify mediating role of brand awareness between the independent and dependent variable (marketing mix and customer satisfaction respectively). By using valid and reliable constructs, the default model has been tested and assessed. To achieve the parsimonious fit between data and default model, all possible exogenous variables have been allowed to co-vary in the proposed structural model. Thus, the complete SEM model, including all its indicators has been tested. The fit indices of initial SEM test for the proposed hypothesis have been presented in Table II.

Table II Model Fit Indices of Measurement Model						
Level of Model Fit	**Overall Model Fit**					
	Model Fit Model Comparison					
Fit Measures*	**X^2/df**	**RMSEA**	**GFI**	**NFI**	**TLI**	**IFI**
MARKETING MIX	0.609	0.000	0.998	0.998	1.005	1.002
BRAND AWARENESS	1.953	0.052	0.960	0.954	0.966	0.977
CUSTOMER SATISFACTION	2.458	0.065	0.993	0.985	0.973	0.991
(*) RMSEA: Root Mean Square Error of Approximation; GFI: Goodness of Fit Index; NFI: Normalised Fit Index; TLI: Tucker Lewis Index; IFI: Incremental Fit Index						

Path Analyses

The path of independent variables (marketing mix) influencing customer satisfaction through brand awareness has then been analyzed. The path analysis has been conducted using AMOS 20.0 software for structural equation modelling (SEM), to find the path coefficients for all variables. It provides various methods for estimating structural equation models such as Maximum likelihood estimates, Unweighted least squares, Generalized least squares, Browne's asymptotically distribution-free criterion, Scale-free least squares and Bayesian estimation. It also provides various model fit indices such as goodness of fit, comparative fit indices and others evaluate how well the model fits the data. Measurement scales for the constructs have satisfied the minimum requirements of Cronbach's alpha coefficient. The measurement models of the SEM constructs have been evaluated using confirmatory factor analysis (CFA). They have been accepted on the basis of measures of fit, the statistical significance and the signs of the coefficients.

Figure I shows that brand awareness act as mediator variables between marketing mix elements and customer satisfaction. The default model moderately fits the data (X^2/df=2.666, GFI= 0.857, CFI= 0.890, NFI=0.851, RMSEA=0.081). Since, RMSEA was not significant; therefore, standardized regression weights of each item have been analyzed. The items with value below 0.63 have not been included for further analysis. The standardized regression weights have been shown in Table III. However, to further improve the fit, co-variance between error structures indicated in modification indices have been added. The co- variances have been added between ε1↔ε2, ε4↔ε5,ε1↔ε4.

Table III Standardized Regression Weights			
Standardized Regression Weights			**Estimate**
BrandAwareness	<---	MarketingMix	0.915
Satisfaction	<---	BrandAwareness	0.680
Satisfaction	<---	MarketingMix	0.207
SUMPLACE (P4)	<---	MarketingMix	0.807
SUMPMOTION (P3)	<---	MarketingMix	0.750
SUMPRICE (P2)	<---	MarketingMix	0.647
SUMPRODUCT (P1)	<---	MarketingMix	0.755
Satisfiedproduct (S1)	<---	Satisfaction	0.719
Satisfiedprice (S2)	<---	Satisfaction	0.693
Satisfiedpromotion (S3)	<---	Satisfaction	0.588

| Table III Standardized Regression Weights			
Satisfiedplace (S4)	<---	Satisfaction	0.662
BaLooksLike (BA1)	<---	BrandAwareness	0.692
BaRecognize (BA2)	<---	BrandAwareness	0.694
BaAware (BA3)	<---	BrandAwareness	0.718
BaKnow (BA4)	<---	BrandAwareness	0.721
BaStrongPersonality (BA5)	<---	BrandAwareness	0.700
BaComeToMindQuickly (BA6)	<---	BrandAwareness	0.673
BaComesToMindIBought (BA7)	<---	BrandAwareness	0.673
BaRecallLogo (BA8)	<---	BrandAwareness	0.597
BaCreateBrandAwareness (BA9)	<---	BrandAwareness	0.618
BaCommunicateFeatures (BA10)	<---	BrandAwareness	0.626
BaDifferentiate (BA11)	<---	BrandAwareness	0.578
BaRecallBenefits (BA12)	<---	BrandAwareness	0.674

After adding co-variances among error structures, the model has been found to be a good fit. The values for model fit have been given below (Table IV). Data confirms that the model is a good fit model (X^2/df= 2.412, GFI= 0.923, CFI= 0.922, NFI=0.916, RMSEA=0.064). It indicates an overall acceptability of the analyzed structural model since RMSEA < % 10 and GFI and NFI > %90 (Hu and Bentler, 1999). A bias-corrected bootstrap with 95% Confidence Interval (CI) also validates that the indirect effect of marketing mix to customer satisfaction [0.052, 0.171] is significant.

Table IV Structure Model Estimates	
Fit Measures	GFI=0.923, CFI=0.922, NFI=0.916, RMSEA=0.064, IFI=0.0949, AGFI= 0.894

The present study has also confirmed that marketing mix elements does not have a significant effect on customer satisfaction (H$_3$: β = 0.038, p>0.001) but has an indirect effect (H$_4$: β = 0.104, p<0.001) on it (Table V). Marketing mix elements have been found to be a significant predictor of brand awareness (H$_1$: β = 0.162, p<0.001). In addition to this, brand awareness significantly influences customer satisfaction (H$_2$: β = 0.661, p<0.001). The results show that it is a mediated model.

Table V Regression Weights				
	Estimate	S.E.	C.R.	P
Brand Awareness <---Marketing	0.162	0.013	12.610	***
Satisfaction<---Brand Awareness	0.671	0.174	3.861	***
Satisfaction<---Marketing Mix	0.038	0.030	1.256	0.209
S.E: Standard Error, C.R: Critical Ratio, *p<0.05, **p<0.01, ***p<0.001				

Figure II
Structural model of the effects of marketing mix elements on customer satisfaction
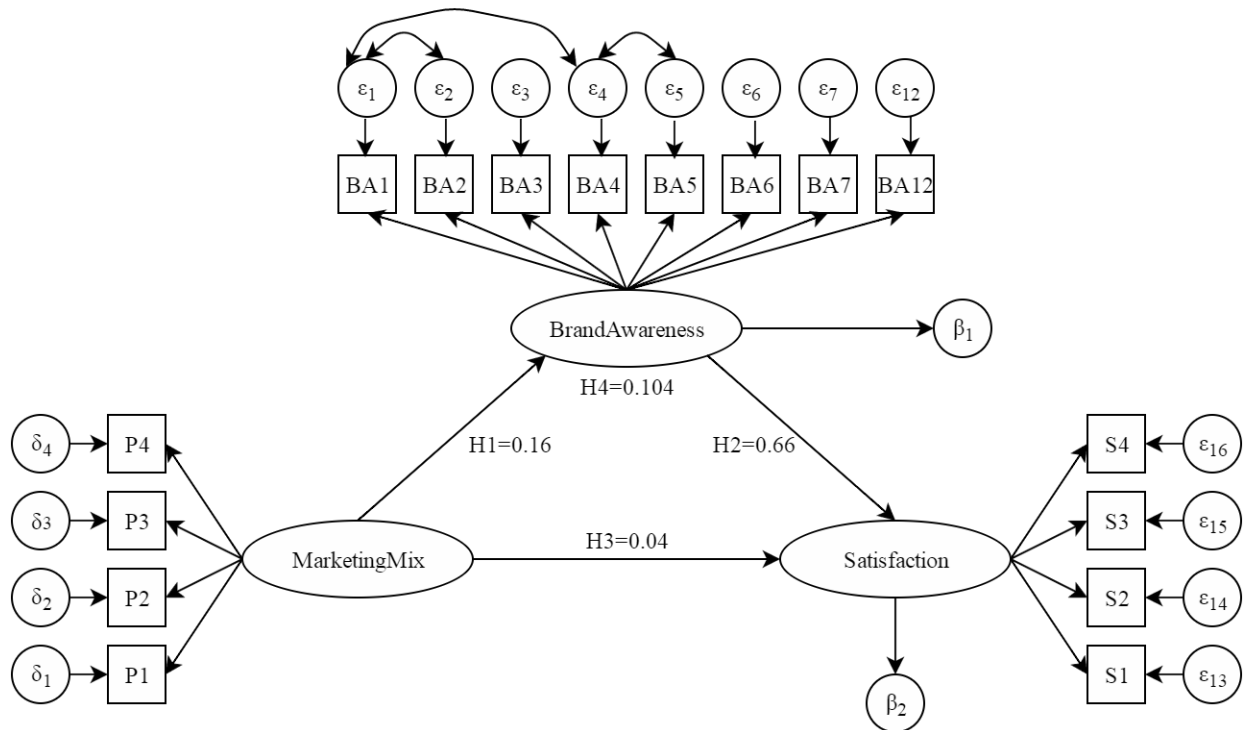
LIMITATIONS OF THE STUDY

This study focuses on only 4Ps of marketing mix because consumer durable products have been chosen as the context of study. Future studies may look at the effect of other Ps or any P individually on mediating and dependent variables. The scope of this study has been confined to the state of Punjab (India) in terms of geographical boundaries and consumer durables in terms of product categories. Convenience sampling has been used, due to which customers of all demographic segments may not have been equally represented. Instead of scales of some variables, individual items can also be subjected to CFA. More dependent variables in the context of some other industry, sector or region can also be studied. Brand loyalty, perceived quality, brand equity or some other variables could also be used as mediating variables.

CONCLUSION AND IMPLICATIONS

The present study has proposed a model to validate the relationship between marketing mix elements and customer satisfaction through brand awareness. It has been found to be a good fit model. Brand awareness has been found to be a strong mediating variable between marketing mix elements and customer satisfaction with respect to consumer durable sector. The relationship between marketing mix elements and brand awareness, and also that between brand awareness and customer satisfaction, has been observed to be significant. Marketing mix elements do not have a significant direct effect on customer satisfaction but have an indirect effect on it. Further, brand awareness has been found to partially mediate the effects of marketing mix on satisfaction.

It can thus be concluded that brand awareness is indeed critical for customer satisfaction. Customers are satisfied to a greater extent when they are familiar with a brand than when they are not familiar.

Since brand awareness and customer satisfaction are pre-requisites for customer retention and market leadership, marketers must make strong efforts to create brand awareness and focus on marketing mix elements effectively. Organisations need to implement a number of activities related to personal selling, advertising, direct marketing, public relations and sales promotions.

As regards product and pricing elements, organisations are expected to differentiate and offer user-friendly products at affordable prices. They need to develop products based on requirements of customers who can then choose from various options. Enabling customers to make payments through various modes or through instalments can help them purchase conveniently and without having to spend in one go. This may influence customers to identify themselves with a particular brand, buy it repeatedly and spread a positive word.

With respect to elements of place and promotion, effective tactics and strategies can help increase brand awareness. Customers want the products to be available at multiple outlets. Exhibitions/trade fairs are another way of pooling and displaying latest creations. People can know about different products under the same roof. Marketing managers can analyze and fully understand the complete dynamics of buying centre and the purchase background for their major customers. Promotions can also be done through social networking sites. Aggressive and varied marketing campaigns can also help in enhancing the satisfaction of customers. The importance of distribution channels and promotion has been brought out explicitly in this study.

Therefore, in the present competitive environment, marketers must try to evolve novel ideas to overcome fresh challenges. Steps can be taken to enhance brand awareness by capturing consumer mind space. This study attempts to reinforce the importance of brand awareness on satisfaction of customers in consumer durables industry. It is suggested that marketing managers can introduce new product features, offer attractive price deals, use innovative promotional tools and deploy multiple distribution channels. Strategies based on the four marketing mix elements to enhance brand awareness can definitely lead to customer satisfaction and possibly delight.

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PRODUCT DONATIONS IN CAUSE-RELATED MARKETING CAMPAIGNS

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ABSTRACT

The existing literature on Cause-Related Marketing (CRM) deals primarily with monetary donations, though many companies perform CRM campaigns that donate products. When firms donate products through CRM campaigns, there can be two types of donation: donating campaigned product itself and donating different product from the campaigned product. First, the study investigates factors firms should consider when donating the promoted product through the CRM campaign. Product type (frivolous vs. practical) and consumer characteristics (independent vs. interdependent self-construal) are introduced to explain consumer evaluations of the campaigns. The authors find that interdependent consumers have a more positive attitude toward campaigns of a practical product whereas independent consumers prefer campaigns of a frivolous product. Practical and academic implications are discussed; further, to add more practical implications for manufacturers of frivolous products, the fit between the promoted product and donated product was investigated in cases where the firm intends to donate a practical product.

INTRODUCTION

Pampers partnered with UNICEF and evaluated strategies ranging from monetary donations to food or water donations. Monetary donations were rejected after interviews with mothers, their primary target market, indicated that they viewed straight monetary donations suspiciously. As a result, Pampers created the "one pack=one vaccine" campaign instead of a 7 cent donation for each pack purchased (reorganized from Scott, Johnston-Louis, & Dolan, 2011).

Cause related marketing (CRM, hereafter) is one of the most popular methods firms adopt when they perform philanthropic activities (Lafferty & Edmondson, 2009). Since firms donate in proportion to consumers' purchase in CRM campaigns, researchers and marketers view this method to be smart business combined with corporate charity (Varadarajan & Menon, 1988). In this sense, numerous studies have been executed regarding CRM. Some researchers tried to find the best cause that fit to the firm or the promoted product (e.g., Barone, Norman, & Miyazaki, 2007; Liston-Heyes & Liu, 2010; Ross, Patterson, & Stutts, 1992; Sheikh & Beise-Zee, 2011), and other researchers focused on finding variables influencing the effectiveness of the campaigns such as product type (Strahilevitz, 1999), consumers' individual characteristics (e.g., Youn & Kim 2008), and message framing (e.g., Chang, 2012; Lafferty & Edmondson, 2009). In doing so, most of the research assumes that firms donate cash in proportion to consumers' purchase. Therefore, many studies deal with "monetary" issues in CRM. For example, Holmes and Kilbane (1993),

Moosmayer and Fuljahn (2010), and Pracejus et al. (2004) investigated the effect of donation magnitude (large vs. small amount of money). Chang (2008), Grau et al. (2007), Olsen et al. (2003), Pracejus et al. (2004) focused on donation quantifiers or donation framing (abstract vs. calculable vs. estimable vs. exact). However, many successful CRM campaigns in practice donate products or non-monetary items as well as money. Pampers was successful with the vaccine donation instead of a 7 cent donation, and TOMS shoes became a global brand by donating one pair of shoes for each consumer purchase of a pair.

In this sense, the present study deals with CRM campaigns that donate products rather than money. First, the study compares of the effects of cash and product donations in CRM campaigns. Secondly, and more importantly, the study aims to find strategic guidelines firms can follow when they donate products during a campaign. There are two types of products firms can donate through CRM campaigns. The first case is a donation of the promoted product itself. TOMS shoes, which donates a pair of shoes for each pair purchased is an example. In the second case, a firm donates a product different from the promoted product. The Pampers campaign mentioned above is one such example (diapers donating vaccines).

The present study is two folded: first, it focuses on the situation firms donate the promoted product itself. To investigate different effects of this type of CRM campaigns, the product type (frivolous vs. practical) and a consumer characteristic (self- construal: independent vs. relational) are introduced. Specifically, it is expected that consumers with independent self-construals will evaluate promotions of a frivolous product that donate a frivolous product more positively than those of a practical product donating a practical product whereas interdependent consumers will prefer practical product donations to frivolous products. Further, a comparison of the donation of high-fit vs. low-fit product is executed in case firms donate products different from the promoted product (more specifically, campaigns of a frivolous product that donate a practical product). In this case, the fit between the promoted product and the donated product is expected to play a great role in consumer evaluations. Two independent experiments are executed for each purpose.

HYPOTHESIS DEVELOPMENT

Product vs. Cash Donations in CRM Campaigns

A few researchers have found that cash and product donations have differential effects on consumers. For instance, Kim et al. (2011) found that product donations increase positive consumer attitudes toward the firm more than a cash donation. They adopted gift-giving research and argued that product donations satisfy criteria for best gifts more than a cash donation. Recipients consider a gift to be the best when the gift shows true donor sacrifice or effort and is tailored to the recipient's unique needs (Clarke, 2006). Products a company manufactures need energy and time, which are measurements of effort (Kim et al., 2011) whereas money is the outcome of efforts made for achieving other goals (Ellen et al., 2000). Moreover, a product can accommodate the recipient's needs and wants unlike money, which is readily exchangeable and liquid (Kim et al., 2011). Similarly, Ellen et al. (2000) argued that consumers prefer product to cash donations in joint issue promotions because they perceive that products need more effort and "the more effort a giver is seen as investing in the gift, the more generous and caring the giver is perceived to be" (Ellen et al., 2000, p 398).

Based on the results of previous studies, consumer evaluations of CRM campaigns are expected to be different for cash and product donations. Products are perceived as a better gift than

money. In addition, CRM campaigns with product donations are clearer than monetary donations that do not specify how the money will be spent: product donations are "simple, immediate, logical, and memorable" (Scott et al., 2011). Moreover, consumers will be less suspicious that the fund from CRM campaigns will be misused or abused when products are donated. According to Grau et al. (2007), consumers dislike ambiguous statements in donations and prefer to know exactly how their donations are used. In case of product donations, consumers better understand how the money is spent whereas monetary donations tend to be confusing because they are stated as a percentage of the sales price or profit (Chang, 2008).While some CRM campaigns present the donation as a dollar value (e.g., a $1 donations), this kind of donation statement does not make clear or obvious how the money will be spent from the consumers' perspective. Therefore,

> *H1   Consumers have a more positive attitude toward product donations than cash donations in CRM campaigns*

Donations of the Same Products as the Promoted Products

CRM researchers consistently found that the effectiveness of CRM campaigns can vary according to the product type the firm promotes: frivolous or practical. In case of hedonic, pleasure-oriented, or frivolous products, consumers feel guilt and pleasure together before, during, and after the purchase (Kivetz & Simonson, 2002; Strahilevitz & Myers, 1998). In contrast, consumers do not feel such emotions when they purchase utilitarian, goal-oriented, or practical products. Since frivolous products generate guilt in a consumers' mind, CRM campaigns tend to work well with these products because consumers can alleviate their feelings through purchase (Strahilevitz & Myers, 1998). This phenomenon is referred to as affect-based complementarity. Affect-based complementarity has been accepted well in academic in case where firms donate money to charities through CRM campaigns.

However, different consumer reactions are possible when firms donate products rather than money. When a firm producing frivolous products decides to donate their frivolous products through a CRM campaign, consumers can easily feel suspicious of the firm's motivation for CRM because the recipients of those products will not benefit much from the frivolous products. On the contrary, when firms with practical products donate practical products through a campaign, this can result in more positive evaluations from consumers because those products will give practical benefits to recipients and consumers are aware of it. In summary, donations of practical products might result in better evaluations than frivolous products.

Whether consumers prefer campaigns of frivolous products donating frivolous products or those of practical products donating practical products is expected to depend on consumer characteristics. More specifically, self-construal will decide which phenomenon happens when firms donate products. Self-construal is defined as "a constellation of thoughts, feelings, and actions, concerning the relation of the self to others and the self as distinct from others" (Singelis et al. 1999) and the literature suggests two fundamental dimensions. Among them, independent self-construal is defined as a "bounded, unitary, stable" self that is separate from social context (Singelis, 1994). The independent self reflects self-definition through one's unique traits, independent from others (Cojuharenco et al., 2012). They define themselves by the individual's unique abilities or attributes and by the importance of distinguishing themselves from others (Cross & Madson, 1997). Therefore, individuals with high independent self-construals focus on their own abilities, attributes, characteristics, or goals rather than the thoughts, feelings, or actions of others

(Singelis, 1994). Since they find it hard to empathize with others (Johnson & Chang, 2006), independent consumers are expected to evaluate CRM campaigns based on affect-based complementarity. In other words, they will evaluate CRM campaigns based on the promoted products. They will not think much about the recipients of the campaign and do not care the type of donated product. They rather focus on alleviating negative emotions coming from the purchase of frivolous products, resulting in preference of the campaigns of frivolous products.

On the contrary, individuals with high interdependent self-construals consider themselves related to or intertwined with others. Interdependent people define the self by an individual's status and relationship in a group and by the importance of harmony with others (Grace & Cramer, 2003). Therefore, they are attentive to others' feelings and try to "read the minds of others" (Singelis, 1994, p 581). Because of this trait, interdependent consumers are expected to evaluate CRM campaigns by focusing on donated products rather than promoted products, resulting in favor of donating practical products than ones donating frivolous products. They will focus on the recipients of the campaigns and evaluate the campaign based on how the campaign benefits the receivers instead of focusing on eliminating their own feelings. Therefore,

H2   *The type of product and consumers' self-construals have an interaction effect in CRM campaigns in which the promoted product is donated. More specifically, independent consumers will have a more positive attitude toward the CRM campaigns of frivolous products (donating frivolous products) than those of practical products (donating practical products) whereas interdependent consumers will have a more positive attitude toward the CRM campaigns of practical products (donating practical products) than those of frivolous products (donating frivolous products).*

STUDY 1

An experiment using print advertising was executed to test the three hypotheses. A 2 (money vs. product donation) X 2 (product type: frivolous vs. practical product) x 2(interdependent vs. independent self-construal) between subject design was used. First, product type was manipulated through a pretest. Manipulation of money vs. product donation was done by phrasing that the same product (or the same amount of money as the product) is donated through the campaign in the ad. Specific wording and phrasing can be found in the Appendix. Self-construal was measured and categorized ex post. Campaign attitude and participation intention was measured as dependent variables. The items for attitude and participation intention were borrowed from Grau and Folse (2007) and self-construal items were from Singelis (1994). Singelis originally suggested 24 items (12 for interdependent and 12 for independent), but one item, "I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am," was not used because the experiment was done in Korea and the item does not fit within the Korean culture.

Pretest

A pretest was performed to select frivolous and practical products. Six products from the previous studies (e.g., Chaudhuri & Holbrook, 2001; Hirschman & Holbrook, 1982; Strahilevitz, 1999) were used as a product pool: coffee, movie tickets, color cosmetics, toothpaste, laundry

detergent, and a painkiller. The pretest was executed in an advanced marketing class at a university located in a metropolitan area. A total of 62 students answered the questionnaire, with their ages ranging from 20–27 and a mean age of 23.3. The sex ratio was 45:55 (male: female). The measurement items for frivolous-practical products are adopted from Voss et al. (2003). The measurement items used 7-point scale.

Two products were selected from the pretest. The criteria for selection for a practical product were a high degree of utility and a low degree of frivolous attributes. For a frivolous product, the degree of frivolous attributes should be high and the degree of practical attributes low. Movie tickets and laundry detergents have been selected for the main experiment. Movie tickets are less practical (M= 5.7 vs. 5.9, t=54.77, p=.000) and more frivolous than laundry detergent (M=5.6 vs. 4.6, t=38.07, p=.000).

Analysis

Questionnaires were distributed at undergraduate and graduate business classes at a university in Korea. Four types of questionnaires were randomly mixed for distribution. In a questionnaire, a print ad was shown (see appendix for the advertisements), followed by dependent variables and measurement items of self-construals. Students were encouraged to participate in the survey voluntarily during the class break. In total, 599 responses were gathered across four cells: 128 for product donation of the frivolous product, 151 for product donation of the practical product, 164 for cash donation of the frivolous product, and 156 for cash donation of the practical product. Male students consisted of 52% and female student were 48% with average age of 24.36 ranging from 19 to 63.

ANOVA was run to test the first hypothesis. For this purpose, four cells were re-categorized into two: cash donation and product donation. As seen in Table 1, respondents had a more positive attitude when the firms donate their own product through the campaign than when they donate cash, supporting hypothesis 1 (F= 6.429, p=.011).

Table 1 ANOVA RESULTS FOR H1					
Dependent var.	Donation type	Mean	S.S.	D.f.	F
Campaign attitude	Product donation	5.49	15.332	1	6.429*
	Cash donation	5.17			

*p<.05

To test the second hypotheses, a categorization of interdependent and independent consumers was executed. For this purpose, exploratory and confirmatory factor analysis was done first for the 23 self-construal measurement items. The results are in Table 2. Among 23 items, two interdependent factors and three independent factors were omitted to make two factors. Independence and interdependence was summed by a mean value and used to categorize respondents. Respondents were categorized as interdependent if they score above the mean value for interdependent factors and below the mean value for independent factors, and as independent if they score above the mean value for independent factors and below the mean value for independent factors. Respondents who score high for both measures and score low for both measures were not used for the main analysis. The categorization resulted in 70 independent and 66 interdependent consumers among 279 respondents of the product donation questionnaire.

variables	items	Factor loadings (EFA)	estimate	S.E.	T value	SMC	Cronbach's alpha
	Table 2 **FACTOR ANALYSIS FOR SELF-CONSTRUALS**						
interdependent	It is important for me to maintain harmony within my group	.623	1.142	.175	6.538	.336	.716
	My happiness depends on the happiness of those around me	.472	.984	.204	4.834	.138	
	I would off my seat in a bus to my professor	.607	1.571	.228	6.877	.407	
	I respect people who are modest about themselves	.589	1.312	.197	6.664	.360	
	I will sacrifice my self-interest for the benefit of the group I am in	.472	1.007	.182	5.544	.200	
	I often have the feeling that my relationships with others are more important than my won accomplishments	.587	1.235	.204	6.055	.260	
	I should take into consideration my parents' advice when making education career plans	.421	.841	.195	4.317	.104	
	It is important to me to respect decisions made by the group	.591	1.041	.164	6.335	.301	
	I will stay in a group if they need me even when I am not happy with the group	.339	.838	.196	4.268	.101	
	If my brother or sister fails, I feel responsible	.524	1.000	-	-	.260	
independent	Speaking up during a class is not a problem for me	.543	1.000	-	-	.207	.723
	I am the same person at home that I am at school	.656	1.028	.192	5.349	.254	
	Being able to take care of myself is a primary concern for me	.551	.921	.170	5.404	.265	
	I act the same way no matter who I am with	.668	1.071	.198	5.414	.266	
	I prefer to be direct and forthright when dealing with people I've just met	.583	.971	.190	5.110	.216	
	I enjoy being unique and different from others in many respects	.557	1.057	.190	5.550	.295	
	My personal identity independent of others is very important to me	.502	.828	.151	5.474	.278	
	I value being in good health above anything	.426	.780	.154	5.078	.211	

χ^2=329.398, p=.000; NFI= .682, CFI=.774; RMSEA= .072, TLI=.711

Two-way ANOVA was run to test the interaction effect between self-construals and the type of product. Table 3 and Figure 1 shows that the product type and self-construals have an interaction effect (F=10.285, p=.002), consistent with hypothesis 2. Independent consumers have a higher attitude toward frivolous products than practical products whereas interdependent respondents have a higher attitude toward practical products.

Table 3 TWO-WAY ANOVA RESULTS FOR H2				
	S.S.	*d.f.*	Average S.S.	F
Model	20.432	3	6.811	4.122[*]
Product type	2.117	1	2.117	1.281
Self-construal	1.026	1	1.026	.621
Type X self-construal	16.993	1	16.993	10.285[*]
Error	218.096	132	1.652	
Total	4413.25	136		

[*] $p < .05$

Figure 1
INTERACTION EFFECTS BETWEEN CONSUMERS' SELF CONSTRUALS AND PRODUCT TYPE
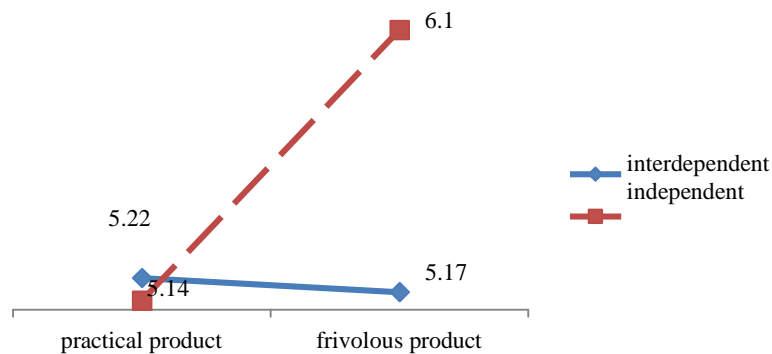
Discussion

Study 1 dealt with two issues. The first includes what types of donations firms should make through CRM campaigns. According to the result, a product donation of the same type as the promoted product is a better option than cash donations, consistent with the existing literature. Consumer preferences might lie in perceived effort or perceived value of the gift as Kim et al. (2011) and Ellen et al. (2000) proposed. Alternatively, the clarity or transparency of the campaign or a less suspicious attitude might explain the reason, as this study proposes. More investigation is necessary on underling reasons why consumers prefer product donation.

The second issue concerns the product type firms promote and donate. Affect-based complementarity is a widely accepted phenomenon in the existing CRM literature. However, most extant studies regarding the phenomenon only deal with campaigns in which firms donate money. The present study tries to extend the literature by considering the CRM campaigns in which firms donate their own products. When firms donate their own products, there is a strong possibility that consumers believe that CRM campaigns donating frivolous products do not benefit recipients much and result in a negative evaluation of the campaigns. Consumer perceptions of the campaigns will be influenced by their own self-construals. People with independent self-construals focus on themselves and therefore, they will consider how they feel rather than how recipients in a CRM campaign feel. They will use affect-based complementarity and evaluate campaigns of frivolous products more positively. On the contrary, interdependent consumers consider other people more than themselves and will focus on the recipients, evaluating campaigns donating practical products more positively.

The results of the analysis are consistent with this prediction. The result, however, does not imply that firms producing frivolous products should not run CRM campaigns for interdependent consumers and firms producing practical products should not run campaigns for independent consumers. If affect-based complementarity is a major factor for consumers possessing independent self-construals, firms promoting practical products can focus on "guilt" through advertising appeals. The guilt in affect-based complementarity stems from consumers' feelings about purchasing frivolous products. In addition, guilt can also be felt from not helping the poor or less privileged (Basil et al., 2008). Therefore, CRM advertisements can emphasize the guilt independent consumers will feel when they do not contribute.

On the other hand, firms producing frivolous products can improve consumer response by donating practical products rather than their own frivolous products. In this case, the fit between the promoted products and donated products will be an important issue. Fit has been an important issue in the area of Corporate Social Responsibility (CSR). Specifically, fit between a cause and a brand is critical because fit brings positive consumer reactions such as corporate identity (David et al., 2005), purchase intentions (David et al., 2005), attitude toward the sponsorship (Simmons & Becker-Olsen, 2006), brand equity (Becker,-Olsen & Hill, 2006), and attitude toward the brand or company (Nan & Heo, 2007).

The effect of fit is explained with consistency theory and the meaning transfer theory (Kim et al., 2012). According to consistency theory, consumers prefer consistency in their thoughts and react negatively to a violation or other inconsistency (Meyers-Levy & Tybout, 1989). The meaning transfer theory states that the meaning of one object can transfer to another and a positive shared association can be created from a well-developed relationship between these two objects (Kim et al., 2012). High fit objects can lead to a stronger relationship than low fit objects, and therefore high fit will lead to a better evaluation.

A similar effect is expected to occur between promoted and donated products. Consumers will feel more comfortable with a high fit between the two than low fit. Therefore,

> *H3   Consumers have a more positive attitude toward CRM campaigns in which producers of frivolous products donate practical products that have a high degree of fit between the two products.*

STUDY2

An experiment using print advertising was conducted to test the hypothesis, designed to compare responses to a high-fit vs. low-fit product donation. Selection of a high-fit and low-fit practical product donation in a CRM campaign promoting a frivolous product was done through a pretest.

Pretest

A pretest has been done to select high-fit and low-fit frivolous-practical product pairings for the advertising stimuli. Movie tickets from Study 1 were used as a promoted frivolous product. Four practical products, children's books, laundry detergent, gift cards (a specific type of an open loop card, usually used for books, movies, and other cultural events), and flour were used as a practical product pool. First, the perceived fit with a movie ticket (the main frivolous product) was

measured using three questions (Similar/dissimilar, consistent/inconsistent, and complementary/not complementary) from Becker-Olsen et al. (2006). Then, the measurement items for frivolous-practical products adopted from Voss et al. (2003) were solicited for four practical products, on a seven point scale. As a result of the pretest, the gift card was selected as a high-fit practical product and flour as a low-fit practical product for a movie ticket. Respondents perceived a high fit between the movie ticket- gift card paring (m=5.71) and low fit for the movie ticket-flour pairing (m=1.39). Also, both products were perceived as more practical than frivolous (for a gift card, mpractical=5.48, mfrivolous=5.20, t=2.74, p=.008; for flour, mpractical=5.71, mfrivolous=4.03, t=9.31, p=.00).

Analysis

A similar procedure to Study 1 was adopted. Questionnaires were distributed in undergraduate business classes at a university in Korea. A print ad was shown in the questionnaire in black and white (see appendix for the material). Students were encouraged to participate in the survey voluntarily during the class break. A total of 285 responses were gathered across two cells: 148 for high-fit product donations and 137 for low-fit product donations. The student population was split between 48.8% male and 51.2% female with an average age of 22, ranging from 18 to 57.

To test the third hypothesis that postulates that a high-fit donation is evaluated more positively than a low-fit donation when firms donate products different from promoted products, an ANOVA was run and confirmed that the hypothesis was supported (refer to Table 4). Consumer attitudes toward the campaign was more positive for a high-fit donation (Mfit=5.63, Mnon-fit=5.30, F=3.865, p=.05).

Table 4 ANOVA RESULTS FOR H4					
Dependent var.	Donation type	Mean	S.S.	D.f.	F
Campaign attitude	Fitted donation	5.63	7.852	1	3.865*
	Non-fitted donation	5.30			

*p<.05 **p<.10

CONCLUSIONS

Summary of the results

The present study explored CRM campaigns in which firms donate products rather than money. First, a product donation was perceived more positively by consumers than a cash donation, consistent with the results of earlier CSR research. More importantly, the present study found that the product characteristics, especially if practical or frivolous, are important for consumers when they evaluate CRM campaigns in which firms donate the promoted product itself. Interdependent consumers, who focus on others, evaluate CRM campaigns of practical product more positively because they think more about the receivers. On the contrary, independent consumers, who focus more on their own feelings and emotions, respond more positively to CRM campaigns of frivolous

products, commensurate with affect-based complementarity. Based on the result and the existing literature, it was suggested that firms with practical products should emphasize "guilt" to promote campaign participation for independent consumers. If the firm promotes frivolous products and its target market consists of interdependent consumers, it might be a better option to donate practical products that are different from their own products. The present study aimed to suggest the best product type in this situation. Using the concept of fit as a criterion, the study found that fit between the promoted product (frivolous) and the donated product (practical) is important for consumers. The more fit the pairing has, the more positively consumers evaluate the campaign.

Implications

The present study is one of the first attempts to investigate CRM campaigns in which firms donate products rather than money. The study gives both academic and practical implications.

First, the issue of product vs. monetary donations was extended to CRM contexts. Some CSR studies compare product and monetary donations (e.g., Ellen et al., 2000; Kim et al., 2011) and show converging findings that product donations are better perceived than monetary donations by consumers. The present study adds to the robustness of the findings by comparing two types of product donations in the CRM context.

Second, affect-based complementarity is commonly accepted phenomenon in CRM research though the present study finds that it is not a global phenomenon when it comes to product donations. Affect-based complementarity prevails when firms donate cash through CRM campaigns. However, when firms donate the promoted product itself, a different process might occur in in the mind of a consumer because donations of frivolous products raise suspicions of the firm's motives for CRM. The present study proposes self-construal will influence how consumers evaluate frivolous (practical) product donation of frivolous (practical) product promotions.

Finally, the study identifies the influence of product fit in the CRM context. Outside of CRM, the principle has been adopted in various research areas from brand extensions (Keller, 1993), event sponsorship (Simmons & Becker-Olsen, 2006), to product promotion (Chandon et al., 2000). The results of our study show one more area where this principle applies; specifically, fit between donated products and promoted products play an important role. Firms should consider the fit when they design CRM campaigns that donate products different from the promoted product.

The results of the study give practical implications for firms designing CRM campaigns. Most of all, the present study argues that firms can design their campaigns with more creativity. The previous research assumes that firms donate money through CRM campaigns, and marketers have only to choose the cause to support. However, the present study expands the scope of campaigns. Firms can be more creative and they can donate their own products or related products through CRM campaigns. In doing so, firms should consider their product characteristics carefully.

Secondly, the study emphasizes that marketers should be well aware of their customers to conduct successful CRM campaigns. According to the present study, consumer self-construals play an important role in campaign outcomes. Since interdependent consumers have a different mindset than independent consumers, their reactions to CRM campaigns will vary. Marketers need to approach CRM campaigns strategically and take consumer characteristics into consideration in the campaign design.

Limitations and Future Research Suggestions

Self-construal is a cultural characteristic as well as an individual characteristic. Many researchers point out that the cultural dimension of collectivism and individualism is closely related to interdependent and independent self-construal (Kim & Johnson, 2013; Singelis, 1994; Triandis, 1989). Since independent consumers focuses on themselves, independent consumers prevail in individualistic cultures. Meanwhile, people in collectivistic cultures tend to be interdependent and weigh social relationships (Hui et al., 2011; Singelis, 1994). It might be useful if the cross-cultural approach is adopted. Do CRM campaigns of practical products have better outcomes than campaigns of frivolous products in collectivistic countries and vice versa? Cross-cultural approaches will potentially extend the result of the present study.

Further, the present study addresses situations where firms donate the promoted product itself. However, it might be too expensive and unreasonable for many products such as cars, televisions, etc. In this case, manufacturers do not have a choice but to donate products different from the promoted product. Explorations of different product characteristics and consumer characteristics will be necessary.

Finally, most CRM research, including this study, deals only with manufacturers' campaigns. However, retailers also conduct CRM campaigns. For instance, Target donated one percent of consumer purchases to schools (Kotler & Lee, 2005). Additional research tailored to retail firms is necessary.

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APPENDIX
Print advertisement

Study 1

Study 2

CUSTOMER VERSUS EMPLOYEE PERCEPTIONS: A REVIEW OF SELF-SERVICE TECHNOLOGY OPTIONS AS ILLUSTRATED IN SELF-CHECKOUTS IN U.S. RETAIL INDUSTRY

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ABSTRACT

Self-service technologies are the newest additions to many public service venues, most commonly with banks, retailers, and grocery stores, within the past two decades. These recent discoveries are becoming more customary as consumers and employees find themselves dependent on machines like ATMs and self-checkouts. To better understand the two different perspectives of how self-checkouts are viewed from the public and service sectors, certain factors concerning these machines must be assessed. This paper is a review of how customers and employees view the implementation of self-checkouts in grocery stores as an illustration of self-service technology options in the retail industry. The factors that influence a consumer to choose to either use or avoid self-checkouts are evaluated while the reasons that employees like or dislike those very same machines are assessed in detail. A discussion of whether customers and employees are satisfied despite being treated like employees and machines, respectively, will follow.

INTRODUCTION

Self-service technology (SST) options are an unavoidable aspect of everyday life. Everything from ATM machines at banks, automated gas pumps, self-checkout lines at grocery stores, to checking bags at an airport with help from a kiosk can fall into this category (Anitsal, 2005; Anitsal and Anitsal, 2006; Anitsal and Anitsal, 2007). The actual definition of self-service technology, or SST, calls these options "technological interfaces that enable customers to produce a service independent of direct service employee involvement" (Meuter et al., 2000, p. 50). With the rise of technology over the past couple decades, the popularity of such an idea is only going to grow.

NCR placed the "first self-checkout at Ball's Food Stores in Kansas City in 1998" (Anand, 2011, p. 1). Their intention was for the machines to have "shoppers scan and bag their own goods, pay with cash or plastic, and get out of the store without so much as an insincere 'Have a nice day'," while also allowing companies to spend less money on cashiers in the long run (Lake, 2002, p. 1). The cost was about $17,000-$20,000 per self-checkout, or $125,000 for a pod of them, and could be completely paid off in nine months, compared to the much higher annual rate required to pay actual cashiers (Anand, 2011; Lake, 2002).

To further provide benefits to retailers and customers, new venders and improved technology have contributed to a new definition of self-service that appeals most to "the connected customer"—meaning someone of a younger generation who is more connected to the booming technology—and has the ability to cater both to "catching and retaining customers" (Bowers, 2013,

p. 1). This latest description focuses mainly on customer convenience and three company-centered themes: big data, cloud computing, and smarter machines. Big data pertains to the fact that companies now have the capability to access a higher level of information and observances that would be too much for one person to process or retain. Their reliance is on computers and data, which is now easier to retrieve thanks to cloud computing, or a "catch-all term for the ability to rent as much computer power as you need without having to buy it, without having to know a lot about it" (Associated Press, 2013, p. 1). Smaller businesses often utilize this because the cloud is cheaper and easier to use, especially when customers are demanding less human interaction, thinking check-in kiosks at airports and ATM machines are faster than the alternative. A large number of consumers who usually use the SST options also find themselves dissatisfied with the lack of privacy that comes hand-in-hand with these types of technological advances (Associated Press, 2013).

Even with these advances, consumers are discovering that they cannot have everything they want, specifically concerning how face-to-face interactions and job opportunities are steadily disappearing. Society was fearful in the past of the idea that machines and automation was "a direct threat to employment," replacing all the existing employees with machines (Andrews, 2014, p. 3). What they do not realize in more current times is that several of the initial steps to an entirely automated world are in the process of being created. Machines have already begun driving cars with Google, fighting wars with drones, keeping track of schedules with Siri, and even libraries can function with robots, not librarians, that retrieve books requested by students. Robot Taxi Inc., for example, has been working on developing a driverless taxi cab service that will, for now, be able to travel three kilometers and navigate through the major parts of the city of Kanagwa, Japan, and will hopefully be commercialized by 2020 (Hongo, 2015). These are all samples of smart machines that will continue getting smarter and growing in popularity. While self-service technology is predominately thought about in the retail sense, machines like the common self-checkouts are actually everywhere in banks, hospitals, airports, movie theaters, and travel agencies. The producers of these machines hope to be able to "enable shoppers to explore and access the breadth of what the store [or service] has to offer [and] [to offer] experiences that [will] draw customers" to use them (Bowers, 2013, p. 1). But no matter their intentions, the Associated Press (2013) states that "millions of workers are caught in a competition they can't win against machines that keep getting more powerful, cheaper and easier to use."

About 3.3 million people were employed as cashiers in 2011, while there are currently only 2.7 million cashiers working in retail industry, a number that is rapidly declining as the existence of self-checkouts is increasing and causing customers to become involved in the purchasing process (The Retail Trade Workforce, n.d.; Thibodeau, 2013). The definition of a customer has begun to evolve to include the phrase "partial employee." Studies show that psychologically, these consumers feel that if they are doing something, the process is going faster even if that is not true (Lake, 2002). Shoppers get annoyed and bored waiting in line and will often choose to work for their groceries despite not being paid for their services. This process usually causes more trouble than it solves. People often times end up with a large amount of wasted time trying to deal with bag struggles, "scanner blindness," that annoying voice claiming there is an "unexpected item in the bagging area," a large amount of fruit with no barcodes, having to wait for an ID check on alcoholic items, scanning an item more than once, or even just a common system failure (Winterman, 2009, p. 1). Some shoppers may also have to worry about the ergonomics of how the height of the machine may affect them with the way they have to stand depending on their own height, which could mean future back problems for some especially tall consumers.

Consumers find that their main issues, other than wasted time and confusion, concern the disappearance of jobs due to economic stress caused by recessions and implementation of new technologies and the elimination of face-to-face interaction. Jobs are being cut too quickly for society adjust. One utility company cut 20,000 jobs between 2001 and 2010 in favor of automatic meter readers (Condon, 2013). Yet despite examples like this and their worries, consumers keep asking for more technology, like these meter readers, and then complain when companies comply. The fact is around 7.5 million jobs were lost in America during the Great Recession from December 2007 to June 2009 with about 1.1 million of them in retail. Now, the economy is better, and while about forty-seven percent, or 3.5 million, of the jobs were brought back, specifically 128,000 in retail, companies have also seen this turn around in the economy as a chance to try their hands at self-service technology (Newman, 2010; Condon, 2013). All customers know is that there are now multiple options of how to checkout at the grocery store and are unknowingly supporting that decision by choosing convenience over people (Associated Press, 2013; Thibodeau, 2013). Some companies, like Walmart, believe that these types of machines free up employees to help consumers; however, Frank Levy of MIT says, "Producing the automated systems will create jobs [but] the net overall effect may be job loss" (Thibodeau, 2013, p. 1).

Many stores—Albertson's, Big Y, and IKEA to name a few—use this idea of how the lack of customer relations, or "customer rejection," will affect the future of customers' store loyalty as a reason to abandon self-service, though one of the more likely causes can be contributed to theft (Anand, 2011; Thibodeau, 2013). The risk of theft is about five times more likely at a self-checkout than compared to a real cashier (Anand, 2011; O'Donnell and Meehan, 2012). Consumer theft is causing stores to lose more money than these machines are worth. In Britain, the amount of theft reached an all-time high, "with the average value increasing to 177 pounds [US $273] per incident" and "adding a direct cost to retailers of 511 million pounds [US $789 million]." These figures are "166 percent higher than five years ago" according to the BRC (British Retail Consortium) (Carter, 2014, p. 1). Similar numbers are occurring in the United States causing retailers to become fearful, since the costs of theft are having to be paid by the store and tax payers (Carter, 2014). Employees are now having to be trained extensively to recognize the signs of a shoplifter, such as "scanning only some items and putting others directly into the bag, ringing up pricey items at the price of bananas or scanning cheap items and putting more expensive ones on the weight counter" (Nickisch, 2012, p. 1). Even with this knowledge, the number of self-checkouts will continue to rise about ten percent within the next few years, which may backfire on these suppliers when they are cheated out of more money than they are earning (O'Donnell and Meehan, 2012).

Customer opinions are greatly varied on the topic of self-service. Anand (2011) took a survey of 160,000 shoppers: "35 percent said they loved self-checkout lanes while 37 percent said they hated them. About 28 percent said they used them when they had to." Many who said they hated them stated that the machines were dehumanizing and that labor saving was leading to lost jobs. However, another study showed that "52 percent of consumers lean toward choosing an automated service with no wait" and "61 percent…would be willing to shop at a fully automated 'self-service' store" (Reda, 2013a, p. 1). This shows that people would rather use the available technology, but as soon as something goes wrong, like a malfunctioning machine or a mistake on online shopping, 94 percent want a personal response, whether that be an email or face-to-face meeting (Reda, 2013a). These statistics are not limited to just the United States. In fact, 48 percent of all people living in Britain hate self-checkouts compared with the 44 percent in the United States (Winterman, 2009; Meuter et al, 2000).

With all this information at one's fingertips, some conclusions could be drawn that there must be something missing in the current self-service technology. There would not be so many unsatisfied shoppers if there was no gap. It seems that shoppers are being treated more like partial employees instead of the consumers they really are. They are expected to use machines that are confusing, easily tricked, and contributing to the rising unemployment in the world. There is also a certain degree of service failure that desperately needs recovering. Employees are finding themselves being treated more like machines, while actual machines appear to be taking away their jobs.

Self-checkouts are one of the recent technological advances that is not going anywhere; however, some changes need to be addressed in order for those who feel wronged by SST can coexist with it. The purpose of this paper is to address which factors are influencing consumers to choose self-service technology options—specifically self-checkouts in grocery stores, investigate how employees view technology-based self-service and the multitude of existing issues, discover ways to improve upon the current lack of satisfaction when dealing with machines of this nature, and finally provide future research avenues.

CONSUMER PERCEPTIONS VS. EMPLOYEE PERCEPTIONS

Without ever providing consent, the consumer's role has been adjusted from well-paying customer to partial employee, who scans and orders their own items for no pay, since the introduction of self-service technology. SST options are "technological interfaces that enable customers to produce a service independent of direct service employee involvement and without assistance from service employees" (Pedroso, 2014, p. 1). However, a more common definition in retailing that is the basis of this particular paper is when "customer[s] take responsibility for scanning items they wish to purchase at a specially designed checkout and then pay for them using an ATM-style interface" (Beck, 2011, p. 1). Consumers encounter these machines on a daily basis, whether they realize it or not. Generally, this includes customer service, direct transactions, and self-help through telephone-based, internet-based, kiosk-based, and video/CD-based services (Meuter et al, 2000; Wang, 2012). With annual electronic kiosk sales of around $1 trillion in 2014, customers have no choice but to change their perception because SST is here to stay (Zhu, 2012; Elliot, 2013).

The perception of the consumer has to do with the psychological way they view self-service. A study done by Schliewe and Pezoldt (2010) in Russia and Germany defines how "social pressure, self-efficacy, and technological anxiety" cause the use or avoidance of self-checkouts. In Germany, a very individualistic country, citizens are encouraged to accept new things, be more self-confident, and be less influenced by social pressures. They are around technology all the time unlike the people in Russia, who are of a more group-oriented mindset, where anyone who does anything new will be ostracized. German's were seventy-seven percent more confident in their abilities to use SST compared to Russia's fifty-three percent (Schliewe and Pezoldt, 2010).

Though in different places in the world, Americans too can relate to terms like social pressure and technological anxiety when confronted with self-service technology. "Social pressure…[or an] individual's perception that people who are important to her/him, like family, friends, or supervisors, think she/he should or should not behave in a particular way, like using self-service technologies," and "self-efficacy [is an] individual's assessment of his or her abilities to deal with a specific situation and has a positive effect on the intention to use self-service technologies," are two terms that both refer to how one's shopping companion influences them (Schliewe and Pezoldt, 2010, p. 2-3). Dabholkar and Bagozzi (2002) found that a consumer with

less self-efficacy can be directly correlated with a less total confidence. This statement holds true among the elderly (i.e. sixty-five years of age and older) when having someone at a self-checkout with them can create a negative perspective because they do not know how to work the SST which can be embarrassing for them. Many indicated, however, that if they are with their children, they would usually decide to try their luck with the technology, stating, "I will try it and [my daughter] is here because I might make mistakes" (Wang, 2012, p. 7). They have high levels of "technology anxiety, [meaning an] anxiety experienced by an individual confronted with the decision to use a new technology" that seems to escape the younger generations, who find that the added company at an SST is a chance to impress others and be accepted (Schliewe and Pezoldt, 2010, p. 3; Wang, 2012).

Consumers do not like being forced to serve themselves, and it has been proven that having a choice is incredibly important and has the ability to result in a changed view of SST. Customers do not want to have to scan their own items when they are not getting extra benefits for doing the work that someone else is currently being paid to do. When no choice is given, consumers feel "reduced perceptions of freedom of choice and increased levels of feeling manipulated" by corporations (Reinders, 2015, p. 191). There is a certain element of co-production and customer participation involved, which could be perceived as fun by the right customers who are willing in the right setting of choice (Jacob and Rettinger, 2011). When a consumer has the opportunity to participate in the checkout process, they find that the increased productivity often increases their level of emotional value, meaning they have a more positive experience because they had a hand in the course of the action. The conditions must be right in order for this to work because if a consumer is asked to participate too much, they will associate self-checkouts with a decreased degree of satisfaction (Anitsal and Fairhurst, 2002).

As for the employee aspect, they were previously the only way for a consumer to purchase the items they intended to buy. This perception has shifted, and now, those very same employees are there to "guide" consumers as they go through the motions of completing their shopping experience alone. In 2005, "23 percent of grocery stores [had] already adopted self-checkout systems, while an additional 14 percent [were] likely to adopt within two years," while another source predicted that "almost 90 percent" of all grocery stores would be utilizing self-checkouts (Anitsal and Flint, 2005, p. 59). With statistics like that, most grocery stores have in fact dedicated some of their floor space and much of their capital in the faith that these machines will be to their benefit.

Now, companies are so set in these new ways that they offer customers incentives to use the self-checkouts instead of hiring new employees to work the open registers because of the expectation of future cost savings the self-service machines will provide for large corporations (Di Pietro et al., 2014). Retailers are pulling their workers in all different directions, telling them they need to "satisfy customers, who require attention and service of high quality [while they] demand efficiency and productivity" (Di Pietro et al., 2014, p. 845). After being given the list of factors of their job performance in Table 1 below by their employers, grocery clerks find they cannot effectively perform in their position to the best of their abilities when faced with the implementation of SST, especially in their task specific behavior and communication task fields

This "wide range of SST" will lead to "the viewing of self-scanners as an alternative to hiring and training, as a potential saving" (Pedroso, 2014, p. 2). Those corporate ladders will be required to eliminate human interaction in the retail sense. Executives choose to ignore the fact that the technological failures of the machines can usually only be solved by a present employee (Di Pietro et al., 2014). These machines are, instead, being used more often for even more

Table 1
EMPLOYEE JOB PERFORMANCE FACTORS

Performance Factors	
Task specific behavior	Personal discipline
Communication tasks	Supervisory/leadership component
Effort	Helping others
Managerial performance	Administrative performance
	Adapted from Di Pietro (2014).

ridiculous actions, like how a divorce can now be completed using an automated kiosk, instead of the traditional court systems, giving employees a less optimistic view off their futures (Meuter et al., 2000).

WHY CONSUMERS LIKE SST OPTIONS

Consumers would not just choose to use self-checkouts if there was not something that would benefit them in doing so. This technology "allows them to save time, to stay in control [and] to derive feelings of independence, empowerment, accomplishment, or mere pleasure" (Reinders, 2015, p. 190). There are certain factors that influence one to decide to use SST: demographic factors, speed and efficiency, control, reliability, number and type of items, service recovery time, ease of use, and perceived fun.

Demographic Factors

Demographic factors are an influential element of why a customer would choose to use SST. This includes gender, age, amount of education, and annual income. In two surveys conducted concerning self-checkouts and demographic factors, the facts contradict each other in the category of gender but hold true in the others. Fifty-three percent of the people who responded to the first survey were women, implying that self-checkouts are more popular with women; however, another study proves that men are "more likely to be innovative in the domain of technology" (Meuter et al., 2000; Lee et al., 2010, p. 49). Both Meuter et al (2000) and Lee et al (2010) agree that most users are of a younger age because they find technology easier and faster to use than older people, who did not grow up around this sort of equipment. About thirty-two percent of users were between the ages of twenty-five and thirty-two (Meuter et al., 2000). Education and income also hold an important place in the influence of who uses SST options. When a customer has a higher levels of education and income, he or she has less technology anxiety and more technology innovativeness (Lee et al., 2010). That means that a highly educated, young man with a good income is the most likely to use a self-checkout at a grocery store. Lee et al (2010) makes it clear that while all the demographic factors are important, age is the most influential for customers.

Reliability

When customers choose to use self-checkouts, they want to have a feeling of consistency and dependability that the machines will work for them now and in the future (Pedroso, 2014). If

a consumer knows that a machine is going to be reliable, their attitude towards self-checkout will be affected in a positive way (Elliot, 2013). One of the possible issues would be that there is a large number of risks involved in the assessment of whether to use SST or not, including "financial, performance, physical, psychological, social, or convenience loss" (Jacob and Rettinger, 2011, p. 4). In order to get past the fears that surround the uncertainty, one must be reassured of the reliability of these machines, and that he or she will not have his or her private information stolen, will be capable of operating the machine, will not be embarrassed if a failure occurs, and will save precious time that would have been lost otherwise. Trust is an important asset when thinking about reliability and can lead to a greater amount of customer loyalty (Kelly, 2010).

Control

Everyone loves to be in control, so when given the chance, customers appreciate the opportunity to choose how to scan their own items and place them in bags with items they think makes sense (Pedroso, 2014). Having control over how a customer "unload[s], scan[s], weigh[s], purchase[s], and bag[s] the items selected," can bring a customer a certain joy while grocery shopping and can lead to more favorable views towards self-checkouts (Anitsal and Schumann, 2007, p. 349). Many consumers have positively noted an increased amount of service quality on the basis that they are able to decrease their dependence on employees and be more in control of the course of the checkout process (Anitsal and Paige, 2006). Although there is a downside to being able to have control. By going to the self-checkout, customers run the risk of a system failure, which puts them in the position of having to depend on an employee to fix whatever the problem is. This perceived danger causes customers to go to the normal cashiers, so they are then at the cashier's discretion of how fast the experience will go and have officially lost control over the situation (Jacob and Rettinger, 2011).

Speed/Efficiency

One thing consumers always hope for when grocery shopping is for it to go by quickly. No one wants to stand around waiting for a cashier to open their line after having roamed around the store for an hour trying to decide what to eat that week, so many will choose to go to the self-checkout, thinking the experience will go faster. When having an active role and participating in the process of checking out, customers feel like they are getting more out of their time. They have an expectation of how long it should take to scan the amount of items they have, and more often than not, employees have a hard time comparing to that high standard (Pedroso, 2014). When a consumer knows exactly how long the process should take, many of them are inspired to increase their productivity, which overall provides benefits of personal and skills development and value to the customer (Anitsal and Schumann, 2007).

Ease of Use

The definition of the "perceived ease of use" stated by Kim et al (2014, p. 258) is "a degree to which an individual expects the target system to be free of effort." As a common rule, people want to pick the easiest option, so if the SST is perceived as hard to use, customers will avoid using them. So in order for consumers to be more willing to sacrifice the energy to scan their many items, they must believe that the self-checkouts are on the same level of ease as standing in line

for a normal cashier, or at least, an option that is more worth their time (Jacob and Rettinger, 2011). However, this factor all depends on the number and type of items they have, which will be discussed in more detail later.

Enjoyment

Retailers' main goal should be to make the SST appeal to consumers with the enjoyment angle. That aspect would motivate the customers to choose this option more often (Pedroso, 2014). Psychologically, consumers would rather be doing the scanning than standing and watching an employee do the same thing because they get bored quickly, have more fun when participating, and expect certain benefits when using these machines—"saving time and effort" (Kim et al., 2014, p. 258). These benefits could also include emotional rewards and the opportunity to "play" cashier for the day, which give customers the opportunity to see what it would be like. These past five paragraphs can be seen more visually in Table 2.

Table 2 REASONS CONSUMERS FIND SST TO BE INVITING	
Factors of Influence TO Use SST	
Reliability	Consumers have to be able to trust that the machines will continue to work for them
Control	Consumers like to scan their items in the order and the way they want
Speed	Consumers do not like wasting time and choose SST to be faster
Ease of Use	Consumers do not want to make things harder than they need to be
Enjoyment	Consumers think scanning their own items is more fun than standing in line watching someone else do the scanning
Adapted from Anitsal and Paige (2006), Dabholkar and Bagozzi (2002), Elliot (2013), Kim et al (2014), and Pedroso (2014).	

Number/Type of Items

Going to the self-checkout depends on the circumstances of each individual shopper. This refers to the statistics detailed in Table 3. A customer has to take the number of items in their cart and the specific type of items in to consideration in order to decide whether to use a self-checkout or a regular checkout (Anitsal and Schumann, 2007). Sixty percent of shoppers who use SST either do not use shopping carts or baskets and purchased an average of four items while forty percent of the people who frequent regular checkouts purchased about eleven items. Out of those four items if one or more was produce, they would be more likely to switch to a regular checkout, since produce has no barcode to scan and can, therefore, take more knowledge of self-checkouts to complete the task. Statistically, Wang (2012) shows that regular checkouts are not chosen more

than self-checkouts by customers and vice versa. The decision is more of a spur of the moment choice depending on the length of the lines and the possibility of wasted time.

Table 3 REGULAR CHECKOUTS VS. SELF-CHECKOUT STATISTICS		
Factors	**Regular Checkout**	**Self-Checkout**
Length of Waiting Line	All lines are long or short	Regular checkout lines are long
Number of Items	11 or more	Less than 11 (usually around 4)
Cart or Basket?	Cart, basket	Basket, none
Type of Items	More produce and unpackaged items	Mostly smaller items with easy-to-scan barcodes
Shopping Companion	Children, elderly	Friends, no one
Technology Ready	No	Yes
Typical Demographics	Older, less educated, lower income, more in need for personal contact	Younger, more educated, higher income, less in need for human interaction
		Adapted from Wang (2012).

Recovery

One critical aspect of deciding to use SST is knowing that if a problem does occur, the solution will be fast and effective. When something goes wrong, customers are often times at fault, but twenty-two percent refuse to cite themselves as the issue (Zhu, 2012). Therefore, consumers who are less familiar with this technology will be less likely to want to use it because they do not know how to solve issues when they occur and probably do not have the patience to wait for someone to come and help them fix it (Reinders, 2015). If not handled correctly or fast enough, customers will become exasperated to the point of having negative emotions when thinking about self-service technologies, meaning service recovery is an important requirement in customer satisfaction (Hilton, 2013).

WHY CONSUMERS DO NOT LIKE SST OPTIONS

While there are many reasons why a customer would be willing to use a self-checkout, there are also a few explanations of why some customers do not like SST. For starters, when the technology happens to fail, precious time that the customers' expected to save would be wasted. It could also be said that "time saved for [retailers] is not time saved for [customers]" (Anitsal and Schumann, 2007, p. 350). Many customers, when asked, would side with a statement made by a customer interviewed by Wang, Harris, and Patterson (2012, p. 9), "Each time [using the self-checkout], some problems come up. We'd have to get help. That kinda affected my choice to use it again. Just felt easier to watch someone else to do it I suppose." Secondly, certain customers lack the technological skills to use the machines, which causes them to have high levels of anxiety surrounding the experience. According to Lee et al (2010), this factor applies specifically to women and the elderly even more so than others. Neither of them have high confidence concerning self-service technology options, or even technology in general. Thirdly, the limited amount of human contact bothers particular individuals, especially the older crowd who are more likely to

already be lacking in interpersonal interactions (Hilton, 2013). One older interviewee for a survey by Jacob and Rettinger (2011, p. 10) claims that "personal conversation, being face-to-face, talking with each other [is the] most important," so she and many others would be unlikely to sacrifice that feature of their checkout. Lastly, consumers associate self-service technologies with a certain "coproduction intensity," a phrase coined by Haumann et al (2015), which often negatively affects customers' views of self-checkouts in terms of requiring too much effort and not worth enough economic value. These ideas are shown in Table 4.

Table 4 REASONS CUSTOMERS FIND SST TO BE UNINVITING	
Factors of Influence to NOT Use SST	
Technology Failures	Consumers expect the machine to continue working, and if not, time is wasted
Anxiety/Discomfort	Consumers have an amount of social pressure, especially if they do not use this technology often
Human Contact	Consumers do not always want to avoid the small talk with employees
Coproduction Intensity	Consumers are asked to provide too much effort for little gain
Adapted from Elliot (2013), Haumann et al (2015), Hilton (2013), Kelly (2010), Meuter et al (2000), and Zhu (2012).	

WHY EMPLOYEES LIKE SST OPTIONS

Employees' jobs were interrupted about twenty years ago when technology-based self-service hit the stores. While consumers seem to have been more accepting of this new way to checkout, employees have had a slightly harder time. In a study done by Di Pietro, Pantano, and Di Virgilio (2014), certain demographic factors were tested depending on the age, knowledge, and experience of the employees. The most common responses came from workers between the ages of thirty-one to forty, a knowledge of the machines that could be categorized as good but not very good, and more than ten years of experience. Many of them believed that self-checkouts have made their job faster so they can help more customers because they completed their own tasks more efficiently. They found that there was more time for them to work on building relationships with customers to ensure more consumer loyalty, solve complex problems, and be more actively creative (Alcock and Millard, 2006). However, it should be noted that this idea of a faster job with more time to make connections is more likely to be seen on a smaller scale than the bigger grocery stores where self-checkouts have been most popular (Di Pietro et al., 2014).

Managers, and other employees of higher level positions than cashiers and low wage workers, could clearly see that these machines increased the productivity of their existing workers and provided a significant amount of cost savings for the retailers (Anitsal and Paige, 2006, p. 58). Using that cost savings from not paying as many employees' wages, retailers often employ the use of these machines to keep their competitive advantage in attracting more customers and revenue than the multitude of almost identical stores (Anitsal and Flint, 2005). Retaining these customers and earnings play into the goal of customer value, which is defined as "a customer's perceived

preference for and evaluation of those product [service] attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situations" (Woodruff, 1997, p. 142). Employees and employers try to create this value through the use of self-service technology, and in turn, find themselves with more loyal customers and a steady income.

REASONS WHY EMPLOYEES DO NOT LIKE SST OPTIONS

In that aspect, self-service technology has a positive influence on the emotions of employees and other retailers, but employees also have their reasons to hate this updated system. Instead of just having to deal with the usual aspects of their regular jobs, they now have the added responsibility of trying to prevent the increased amount of theft and job losses surrounding their world. These extra duties make their jobs harder than originally requested of them, making many employees angry with how retailers have treated them and their positons.

Theft

Theft is one of the biggest issues employees have when it comes to self-checkouts. Unfortunately, the actual act of taking items has become even easier with the lessened amount of security over the open spaces surrounding the self-checkout kiosk areas. Researchers question whether the introduction of SST has increased the amount of theft or if now the amount is neutralized with how many mistakes the employees would have made themselves (Beck, 2011). However, they imply that the volume of customers' intentional theft has multiplied because they have begun to recognize that the employees in charge of watching the self-scan area are not usually paying as close attention as they should (Anitsal and Flint, 2005).

Employees, who are in charge of watching the self-checkout machines, are now needing to be trained to recognize the signs of shoplifting customers to counteract the large losses the retail industry is feeling. Overall, the amount of loss has come to equal about $278 billion worldwide, or the GDP of the country of South Africa, and is responsible "for 42.4 per cent of all loss" (Beck, 2011, p. 2). Cater (2014, p. 1) added on to that by revealing that shoppers in Britain steal around "1.6 billion pounds [US $2.5 billion] worth of items from supermarkets every year." Those numbers will only increase as long as customers continue finding more and more clever ways to steal the items in their carts. Employees have noticed these techniques include not scanning certain items, selecting the wrong product on purpose, tricking the weight plate by only scanning a large product and just slipping a small item in the bag without it being scanned, and scanning all the products but walking out without actually paying (Beck, 2011). Specifically, a consumer may try weighing five pounds of shrimp as bananas, so he or she would only end up paying $0.79 per pound instead of the correct price of $10.99 per pound (Andrews, 2014, p. 9). Those consumers who steal items believe there is little chance of being caught and can often make up plausible excuses as to why they were stealing (Clarke and Petrossian, 2012). More than half of the customers who share this opinion of theft began stealing because they could not get an item to scan, then continued to steal because they knew they could (Carter, 2014). Because of this, employers are having to spend their time training their employees to detect these actions and are in all actuality losing even more money that way.

The other issue employers are having when considering the issue of theft is the decision of how many employees they need to hire to cover the number of self-checkouts the store has. More theft leads to stores losing sales and ultimately losing money, making it harder to pay the

employees that are necessary to watch the self-checkout stations (Andrews, 2014). About thirty-six percent of employees have caught consumers stealing at a self-checkout, and forty-two percent stated that stealing is way too easy because they do not have the ability to look at everything that is going on at the time (Beck, 2011). Table 5 reveals how only fifty-four percent of employees working over four self-checkout machines feel as though they can effectively watch all the customers to make sure all the merchandise was scanned. As the number of self-checkouts to watch increases, the confidence the employees watching them decreases. Thirty-seven and eighteen percent of employees covering six and eight SST felt they could prevent theft, respectively (Beck, 2011).

Table 5 CORRELATION BETWEEN THEFT AND MACHINES/EMPLOYEE			
Typical Grocery Stores	**Number of Self-Checkouts Per Employee**	**Percent of Employee Confidence of Ability to Cover Self-Checkouts Effectively**	**Can Theft be Prevented?**
Walmart, Cookeville, TN	4	54%	Likely
Kroger, Cookeville, TN	6	37%	Not Likely
Walmart, Kingsport, TN	8	18%	Very Unlikely
			Adapted from Beck (2011).

Another reason the self-checkout area is even harder to watch is the way it is set up compared to the regular checkouts. The normal checkout has a more direct path that corrals customers through a narrow passage that blocks them from getting past the cashier without having their items scanned. Then they are taken care of by one employee, who watches them empty their cart and either scan a card or hand over their money. With the self-checkout, there is a large open space containing a number of self-scanners, which makes the act of theft much easier because customers can simply walk out the door without paying especially since the self-checkouts were built right next to the exit (Beck, 2011). Close to half the employees interviewed by Beck (2011) revealed they believe customers are stealing items on a daily basis or even more frequently, but especially "between Wednesday and Saturday" and around holidays (Clarke and Petrossian, 2012). One way to fix this would be to make "zones of control" that would make a self-checkout more similar to a regular checkout, meaning a more direct, singular path to corral customers through the checkout towards the exit, or adding more employees around the extra busy times of the year. However, to change things that drastically, employers would need to spend even more money to move the machines closer to the middle and add more employees to watch customers, basically obliterating the idea of self-checkouts (Beck, 2011).

Job Loss

Added on to the stress of trying to prevent theft in such a large, open area, employees have to worry about the safety of their jobs. The fact is that with the help of this new technology that is capable of doing the same jobs that humans have been doing for decades more efficiently, consumers have been put in the position of becoming partial employees. This means that many jobs no longer exist because customers act as the employee themselves, and the retailer does not

have to pay them for their service (Hilton, 2013). With the help of these technologies, customers can actually perform the same job as an employee with no training and are being seen as replacing employees (Kim et al., 2014, p. 256). All remaining employees have been displaced from their hired positions to restocking shelves and answering customer questions on the store floor (Hilton, 2013). Because of the uncertainty around the new definition of being a cashier, many retailers find that retaining their workers is a difficult task, especially with the younger employees between the ages of sixteen and twenty-four who require more flexible hours than the job can supply any more (Andrews, 2014).

Cashiers, who have been working at the same store for ten or more years, have noticed a continual loss in most mid-pay jobs since the Great Recession where only two percent of the original 3.5 million jobs have been gained back since June 2009 (Condon, 2013). This reduction in staff has also been contributed to the introduction of self-service technology (Kim et al., 2014). Instead of having four employees, employers only need one to work over four machines. Smaller scale retailers have been affected even more than the larger scale industries, like Walmart (Di Pietro et al., 2014). Condon (2013, p. 1) stated that technology "raises the specter of high unemployment even after economic growth accelerated." Certain grocery stores, Albertson and Big Y included, have decided to stop using their self-checkouts, following the same mentality as Condon in that these checkout machines are ruining their shopping atmosphere by taking away the employee-customer interaction and customer service reputation (Elliot, 2013). Other stores like Ikea feel that customers find their shopping experience to be more enjoyable if the employees handle all the scanning and the work. Stores like these have found that laying off their employees in lieu of these new machines is contributing to the nation's unemployment rate, making it more difficult for people to find jobs.

SATISFACTION OR DISSATISFACTION WITH SST OPTIONS

As research would appear to imply, consumers are overall more satisfied with SSTs than employees; however, there are certain events that can completely ruin their shopping and checking out process. One interview measured the amount of satisfaction compared to dissatisfaction of the normal self-checkout user. About fifty-six percent out of 823 incidents were documented as satisfied, while forty-four were not (Meuter et al., 2000). Eleven percent claimed they were impressed by how the technology solved their "intensified needs," while twenty-one percent decided they were satisfied because the self-checkout "did its job" and sixteen percent said SST was "better than the alternative" (Meuter et al., 2000, p. 55). The reason consumers often find themselves happy with their choice to use a self-checkout rather than a regular checkout is because they can customize their experience to go the way they want—complete control (Prahalad and Ramaswamy, 2004). Therefore, satisfaction manifests through a psychological process and a "fascination with the capabilities of various SST" (Jacob and Rettinger, 2011, p. 5).
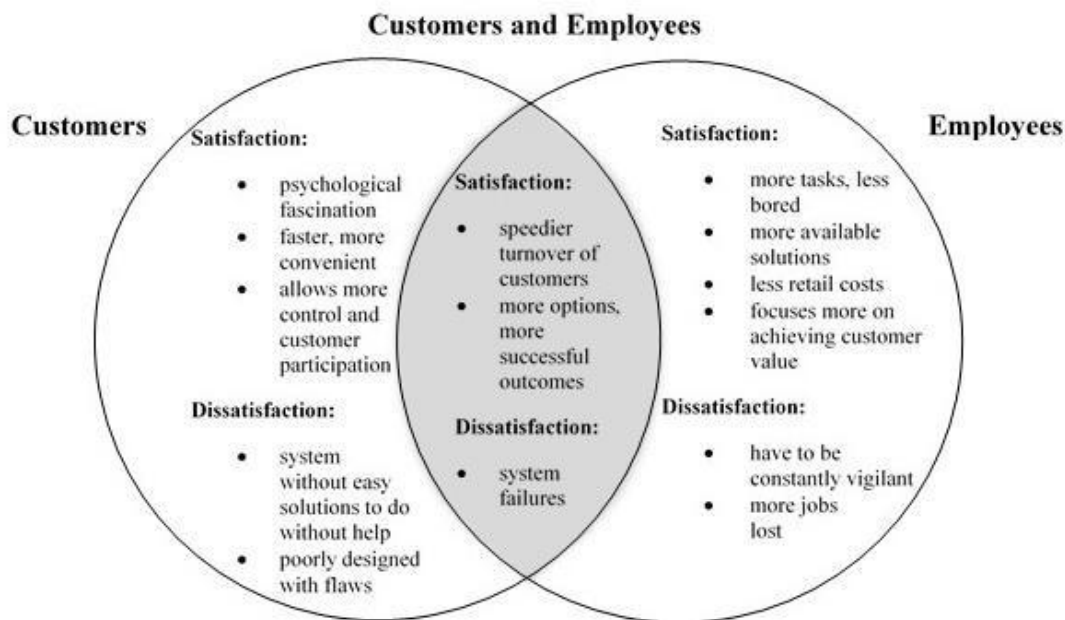
Consumers are not nearly as happy when they run into issues of technology, process, and consumer-driven failures. They believe the design of how this technology runs has not been devised appropriately for easy customer use (Meuter et al., 2000). If a solution to a failure is not immediately addressed, their overall experience is ruined and often cannot be repaired unless managed carefully. To fix this, self-checkouts need to have a more personalized response to certain problems that occur often and a speedier recovery (Hilton, 2013; Wang, 2012).

Employees have less of a choice to express their satisfaction or dissatisfaction towards self-service technologies. They have been asked to do different jobs than they had been hired for, which gives them more of a variety of tasks to do, meaning they will not get bored as easily. At the same

time, they are expected to oversee an array of customers throughout the day trying to act like employees because they are not patient enough to stand in a line.

New solutions to theft and self-checkout kiosks can contribute to the satisfaction of employees. Adrian Beck (2011) suggested ways to avoid these issues surrounding theft. Zones of control should be implemented, as discussed above. In order to be effective, this system would need more vigilant employees and cameras. Retailers would need to redesign the machines to be more reliable, since process failures are responsible for sixty-five percent of the theft that transpires (Beck, 2011). Another idea that has been proposed is to redesign the machines to be more like the security machines at the airport which are referred to as "tunnel scanning" by grocery stores, like Kroger. This method would have customers place their items on a conveyor belt to be moved under a tunnel that will automatically scan all the barcodes without anyone having to actually aim each barcode at a singular scanner. The amount of theft would decrease and employees would have to

Figure 1
LEVELS OF SATISFACTION OR DISSATISFACTION FOR CUSTOMERS AND EMPLOYEES

Customers and Employees

Customers   Satisfaction:

- psychological fascination
- faster, more convenient
- allows more control and customer participation

Satisfaction:

- speedier turnover of customers
- more options, more successful outcomes

Satisfaction: **Employees**

- more tasks, less bored
- more available solutions
- less retail costs
- focuses more on achieving customer value

Dissatisfaction:

- system without easy solutions to do without help
- poorly designed with flaws

Dissatisfaction:

- system failures

Dissatisfaction:

- have to be constantly vigilant
- more jobs lost

Adapted from Anitsal and Fairhurst (2002), Anitsal and Flint (2005), Meuter et al (2000), Jacob and Rettinger (2011), Beck (2011), and Elliot (2013).

be less worried about catching all the consumers' mistakes (Elliot, 2013). These ideas are compared visually in Figure 1.

DISCUSSION AND FUTURE RESEARCH AVENUES

The definition of retailing has become an ever changing characterization since the creation of stores. People, in the beginning, would trade items for items, which evolved into trading money

for items. Once reaching that point, retailing, in the sense of having stores where all necessary and luxury items were located all together, began. SSTs have now entered the equation and made the formula for the future more complex in a technical sense while being simpler for users. In order to establish a more realistic definition for the future, the gap between consumer and employee perceptions must be considered.

Before being able to fully understand how to cater to the consumer's needs when using SST options, the first thing that should be considered is what the consumer's ideal shopping experience consists of in all sorts of situations. Most customers want to go to the grocery store to get the essentials and get out as fast as possible. Other consumers find themselves going to the store to buy a large amounts of items and still trying to get in and out quickly. There are also those consumers who make a day of their shopping and are in no hurry to reach the end of their experience. Finally, the unique situations that include those running around to multiple stores searching for that one specific item but most likely still want it to go rapidly. It is pretty clear that most consumers' ideal shopping experience includes a speedy checkout.

The two main factors that cause consumer satisfaction are related to speed and control and how these two elements are utilized. Self-checkouts are currently not as fast as they could be potentially. The price lookup code (PLU) on produce and items with an age requirement, like alcohol, slow the system. One way to fix this could be to have the scanners identifying the PLU codes without the customer having to type anything or be capable of recognizing a customer's age on his or her license without requiring an employee to authorize the purchase. These are some options that one may want to look into further.

The other factors of consumer satisfaction weigh in as well. Self-service technologies as they are aimed at younger men with more education and a higher income. This leaves a gap for all other users of different ages and backgrounds who experience high levels of anxiety and need for human contact. The types of technological anxiety that are most prevalent have to do with a lack of reliability, machines seeming to be hard to use, and less enjoyment. Machines that loudly declare when something has gone wrong can scare away those who are less confident with technology, so companies should look into redesigning their machines to be more subtle when alerting the staff to an issue. With a more consumer-reliable redesign in mind, retailers should also consider making the scanners and scales in the bagging area more sensitive to barcodes and lighter weighted objects. These solutions could fix consumer perceptions of SST being unreliable and hard to use and hopefully cause consumer productivity to increase. Firms need to be careful that as consumer productivity increases, not to increase the intensity of coproduction unless they are ready to provide solutions like offering support to consumers through multiple channels and more customizable options (Haumann et al 2015). As for the enjoyment of using SST options, retailers need to consider their audience and provide choice for as soon as it becomes and obligation, fun levels will most likely plummet. Further research may need to be conducted on the suggested solutions.

Other solutions that can increase customer satisfaction concerning self-checkouts could be done by increasing technology that is more familiar on a daily basis to consumers, like smartphones and tablets, as indicated by Klaus and Nguyen (2013), who also recognize that this change will increase customer productivity. Reda (2013b) from the National Retail Federation suggests a new mobile phone app called Q Thru, which consumers can enter their credit card information and scan items as they shop. Some companies may take that idea further and place a tablet on the cart that works similarly to the app, so customers without smartphones can also scan their items quickly and without ever having to interact with a single person if that is their preference. Even with this

app, consumers will still want choices. Self-checkouts and regular checkouts need to be options as well, so being faced with having to supply those options and trying to meet customer needs, retailers should consider the ergonomics of self-checkouts to achieve an elevated level of satisfaction. Consumers come in different heights, and retailers need to consider how the current height of the actual machine may affect taller consumers along with disabled consumers. This solution could end up being regular self-checkout machines with multiple scanners at different height levels. With additional research, retailers are likely to find better conditions for their self-checkout shoppers.

Retailers find themselves focusing on fixing issues surrounding customer satisfaction since stores would not exist without customers, but they also need to consider ways to go about increasing employee satisfaction. When they first consider reasons why employees do not like SST options as discussed above, they see gaps that should be fixed concerning job loss and theft. The moment online shopping became popular there were countless predictions that brick and mortar stores would become extinct; however, they were wrong. Now, the next big thing is self-service technologies. More predictions stating that all stores are going to be completely automated have been made, and while the amount SST options is escalating rapidly, it seems unlikely that all the jobs in retail will be lost to robots.

One of many employees' complaints has to do with how these robots are being made in recent times. Checkout machines in the past had been geared towards employee use and are now morphing into machines dedicated purely for customer use, which encourages retailers to decrease their workforce. This is referred to as robotics service, an idea coined by Anitsal et al (2002), where customers interact with robots—in this case self-checkouts—and eventually leave employees out of the loop entirely. Robotics service can also mean that just the low wage jobs will be cut, giving current employees the opportunity to be retrained for other jobs requiring more skills. Even if that is the case, there is still a lack of satisfied employees, and that leads to a question that needs to be answered: is there a connection as to why low wage consumers dislike SST options, other than not being exposed to as much technology on a regular basis, having to do with solidarity? The jobs that are being cut more often are low wage jobs, much like theirs, which could imply that some of their discomfort with these machines is brought on by retail employee job loss where self-service is concerned. Having more job security would most likely increase satisfaction in response to this particular issue. Retailers may find it beneficial as a whole to expand the current research on this concept.

Theft is the other big subject that employees look upon negatively in that they have to work extra hard to prevent common shoplifting tricks. It is impossible to completely eliminate theft. Things like "tunnel scanning" as mentioned above and "zones of control," where retailers would rearrange the grocery store to put the self-checkouts in an area that would make the act of theft harder to complete, should be looked into extensively. As is the method that Sam's Club uses. They make all their customers become members, do not use bags, and recheck consumer receipts before one can leave the store. This technique would be very time consuming but effective where theft is involved. A retailer's best bet would be to try different systems of theft prevention until finding one that works and increases employee satisfaction in grocery store settings.

One view that is not presented in the scope of this paper is to consider high end retail stores and wholesalers, such as Sam's Club, compared to low end retail stores and big bucks retailers, like Walmart. They are different in the ways they treat their customers, meaning that higher end stores offer memberships and have more customer expectations on better service, however, despite that, they both have SST options. Many of these SST options were not offered in higher end stores

until recently, and it would appear as though they are not being received overly well. Consumers at the Sam's Club in Cookeville, TN, around Thanksgiving time 2015 were greatly disgruntled when lines extended through the store and only three cashiers were up and running. Managers reminded the growing crowded of the eight self-checkouts that were open to no avail. One person with no cart and few items moved. It was not until managers offered to scan consumer items themselves at the self-checkout did customers choose to move lines, and even then, they were outraged at the poor service they were receiving. Why did they react this way? They seemed more than capable of going around the store and placing items in their carts, but they could not be bothered to take the items out and scan them without assistance. Other stores like Nordstrom and J. Crew serve to a more upper class audience. Their customers rely on the value of their membership and business as a privilege and the promise of good service makes them reject most of the normal consumer satisfaction factors. The other question is which factors apply to high end retailing. An older demographic seems most likely but also consumers who began using technology as soon as it was presented. Instead of using self-checkouts, maybe retailers should depend on SST options aimed at employees, so employees can aid customers without customers having to work for themselves. This paper focuses almost solely on low end retailing, so self-service high end retailing should be looked into further.

Different cultures and subcultures should be another outlook that retailers contemplate when thinking about self-service technologies. They should look into the subcultures in the United States, i.e. African American, Asian American, and Hispanics, and how that would affect one's use of SST options. In the one example about Sam's Club above, the only person who moved to use a self-checkout was a Saudi Arabian man. Was his motive a cultural phenomenon? Different cultures play a role as well in where and how SSTs are used. The United States has an almost ubiquitous number of machines in their chain stores, while places like India, who have just as many retailers, do not have self-checkouts because their retailers are all individuals without the money or space for SSTs. Once retailers figure out how culture and SSTs relate, they will be able to further understand how to satisfy different regions of people.

It is hard to know what retailing will look like in the future when technological advances are so unpredictable right now. Anything could happen at this point, and because of this, the most important thing to focus on is fixing the current gap. This can be seen when contemplating the adjusted expectations retailers have for employees and consumers and vice versa. Employees have a changing job that is more geared towards customer satisfaction on the store floor. That means current employees are having to be trained and retrained to better perform with their new statuses, and new employees are finding themselves being trained differently from the beginning. Employees expect to be able to obtain other job opportunities after being taken off the registers and anticipate more job security. Consumers, on the other hand, are being expected to know what they want and how to find it on their own or with little help. They are slowly becoming employees for themselves, and many are not ready for that change. Heidenreich et al (2015) suggests that consumers go through a seminar on how to efficiently use the emerging SST options; however, if they are using self-checkouts, chances are they consider themselves too busy to attend a seminar. While this is happening on the retailers' side, consumers are expecting better customer satisfaction since employees are no longer doing those low wage jobs and the never-changing presence of having options and a choice between self-checkouts and regular checkouts.

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DETERMINANTS OF MANUFACTURER COMMITMENT TO THE INDEPENDENT SALES REPRESENTATIVE

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ABSTRACT

Independent sales representatives handle all or part of the selling function for manufacturers on a contract basis. There is some risk for the representative; the manufacturer might switch to a different representative or decide to handle sales by vertically integrating. This could occur if the representative has not cultivated the manufacturer's commitment to the working relationship. Moreover, the representative may not know how to go about increasing the manufacturer's commitment to having a long-term working relationship. This study sought to provide helpful information by examining determinants of manufacturer commitment.

Transaction costs economics (TCE) is used as a theoretical foundation for hypothesized relationships to develop a model relating manufacturer perceptions to commitment. Specifically, manufacturer trust in the representative and perceptions of the representative's performance are examined. These perceptions are also examined in relation to the quality of information provided by the representative and contact with the manufacturer. An analysis of indirect effects was completed to account for the influence of antecedents on manufacturer commitment.

Using survey data collected from 115 manufacturers, a path analysis was completed to test hypothesized relationships. The findings support hypotheses and motivated completion of a supplemental analysis to explore the relationship between the manufacturer's perception of information quality and the manufacturer's trust. The influence of information quality on manufacturer trust perceptions is compared to the influence of a representative's contact with the manufacturer. Findings from tested hypotheses and the supplemental analysis indicate areas that may be improved by the representative to achieve greater commitment from a manufacturer.

INTRODUCTION

Many firms choose to outsource non-core business functions to lower costs and to be able to focus more on core competencies in order to achieve competitive advantages. Manufacturers take this approach by outsourcing all or part of the selling function. They may fulfill the function with their own salespeople, independent sales organizations, or a combination of these two methods. Working with several manufacturers, the independent sales organizations sell a portfolio of noncompeting product lines on a commission basis. Referred to as independent sales representatives, brokers, or agents, they fulfill the selling function on a contract basis and usually do not take possession, or ownership, of products. The most recent economic census reported there are 44,247 of these firms in the United States (U.S. Census Bureau, Economic Census, 2012). In this article, a firm handling the selling function is called a *manufacturers' representative* and *referred to as an MR*.

When working with a manufacturer, there is some risk for the manufacturers' representative (MR) because of the possibility that the manufacturer will end the business arrangement. The manufacturer might perceive that a different MR is better able to perform the selling function, or that it would be better to have its own sales force handle sales. This could happen if an MR has not cultivated a manufacturer's commitment to an ongoing relationship. Commitment is defined for this study as the manufacturer liking the working relationship and definitely wanting to continue working with the MR. This definition is similar to one developed by Moorman, Zaltman & Deshpande (1992, p. 316): "Commitment to the relationship is defined as an enduring desire to maintain a valued relationship." It is also similar to definitions of long-term relationships and relationship continuity (Ganesan, 1994; Anderson & Weitz, 1989).

An MR may not know how to go about increasing manufacturer commitment. This study sought to provide helpful information by answering the research question, "*What influences the formation of manufacturer commitment to the MR?*" To this end, transaction costs economics (TCE) is used as a theoretical foundation for hypothesizing relationships between manufacturer perceptions. Specifically, manufacturer trust in the MR and perceptions of MR performance are examined in relation to manufacturer commitment. To provide specific guidance, these general perceptions were studied in relation to the quality of information an MR provides a manufacturer and the contact that an MR has with the manufacturer. The indirect influence of these attributes on manufacturer commitment was also examined. Finally, a supplemental analysis was completed to explore the influence of a manufacturer's perception of information quality.

Previous studies related to this topic covered reasons for vertical integration to handle the selling function (Anderson, 2008), the influence of idiosyncratic investments (Anderson & Weitz, 1992), and the role of switching costs (Weiss & Anderson, 1992). Anderson & Weitz (1989) developed a model of factors related to long-term relationships. The current study is different because it examines the quality of information provided by an MR and contact with the manufacturer; these factors were not included in the previous research.

This study makes three contributions to the literature. It contributes by examining manufacturer commitment to an MR to reveal areas requiring attention from an MR in order to increase the manufacturer's commitment. A second contribution is that this research complements the previous studies by examining factors that are more specific and have not been studied, thus providing more guidance to the MR. A third contribution is the finding that a manufacturer's perception of information quality is important to the MR's efforts to obtain the manufacturer's trust and commitment.

BACKGROUND

Transaction cost economics (TCE) provides the theoretical reasoning for examining the factors included in this study because it helps to explain why firms choose to outsource a functional area, such as the selling function (Coase, 1937; Williamson, 1985). The fundamental idea of TCE is that a firm is more likely to outsource a business function to a supplier if transaction costs are lower than if the function were fulfilled within the firm or by a different supplier. In the context of a manufacturer working with the MR, the manufacturer may have a high level of commitment to the relationship because transaction costs are lower as compared to alternative arrangements. In contrast, the manufacturer may be dissatisfied with transaction costs and have less commitment to the MR. A choice may be made to switch to a different MR, use its own sales force, or implement a combination of these methods to handle the selling function. Transaction costs include direct and opportunity costs (Rindfleisch & Heide, 1997;

Masten, Meehan & Snyder, 1991). Manufacturers' direct costs include ones related to planning, commissions, product training, sales support material, and monitoring the MR's performance. Opportunity costs exist when there is a belief that opportunities have been missed (e.g., opportunities to increase sales) that could have been achieved through another party. Estimates of transaction costs are influenced by asset specificity, bounded rationality, and opportunism.

Asset specificity is the extent to which assets are invested specifically for a particular relationship. Different types of asset specificity, including human asset specificity, brand capital specificity and procedural asset specificity, have been identified (De Vita, Tekaya & Wang, 2011). The manufacturer relies on the MR to provide these assets as part of the outsourcing arrangement. If the MR does not perform adequately, these assets sought by the manufacturer are not provided as expected. Inadequate investments by the MR in these assets leads to higher transactions costs and increases the likelihood that a manufacturer will make different arrangements to fulfill the selling function. Human asset specificity is the knowledge, experience, and skills used by an MR when handling the selling function. Brand capital specificity exists when the selling process strongly affects the manufacturer's performance and may damage its reputation if not performed well. Procedural asset specificity refers to the procedures and processes used by the MR when interacting with the manufacturer.

Bounded rationality indicates "the problem of economic organization as a problem of contracting" (Williamson, 1985, p. 20). Assets deployed by an MR are described to some extent in contracts but *bounded rationality* (i.e. limited ability to reason effectively) prevents the firms from being able to address all matters. It is due to the lack of information about all possible aspects of an outsourcing arrangement and the inability to foresee future developments; contracts do not cover all possible circumstances. According to TCE, *opportunism* rises when an incomplete contract, due to bounded rationality, is formed and this occurs because it is human nature to seek one's self-interests. As a result, uncertainties about the behaviors of the other party in a contract exist. Therefore, a manufacturer may be uncertain about whether an MR is pursing self-interests, instead of interests important to the manufacturer.

In summary, the manufacturer's perceived transactions costs (i.e. direct and opportunity costs) drawn from evaluations of the MR's assets and the consideration of uncertainties, stemming from bounded rationality, influence decisions to continue working with an MR or make different arrangements. Therefore, transactions costs influence the manufacturer's commitment to an MR. The manufacturer perceptions included in this study are examined because they are likely to influence transaction costs, thus influencing commitment to the MR.

HYPOTHESES

Figure 1 presents the study variables and hypothesized relationships. The figure also includes dotted lines to represent indirect effects of the antecedents on *Commitment to the MR*. The manufacturer's *Evaluation of MR Performance* and *Trust in the MR* are proxies for TCE transaction costs. They suggest how well MR assets are deployed and degree of manufacturer uncertainty. *Quality of Information* and *Contact with the Manufacturer* are examined as antecedents to these proxies for transaction costs.

Trust is the willingness to be vulnerable to the behavior of another because there is the belief that the behavior will be performed as expected (Mayer, Davis & Schoorman, 1995). It is described as one's perceptions of another along two dimensions: credibility and benevolence (Doney & Cannon, 1997). Referring to retailers and suppliers, Ganesan (1994, p.3) defined these components of trust. *Credibility* is "the extent to which the retailer believes that the vendor has

the required expertise to perform the job effectively and reliably." *Benevolence* is "the extent to which the retailer believes that the vendor has intentions and motives beneficial to the retailer when new conditions arise, conditions for which a commitment was not made." In this study, *Trust in the MR* is present to the extent that the manufacturer believes the MR is benevolent and will perform as expected, thus exhibiting credibility.

Figure 1
DETERMINANTS OF MANUFACTURER COMMITMENT
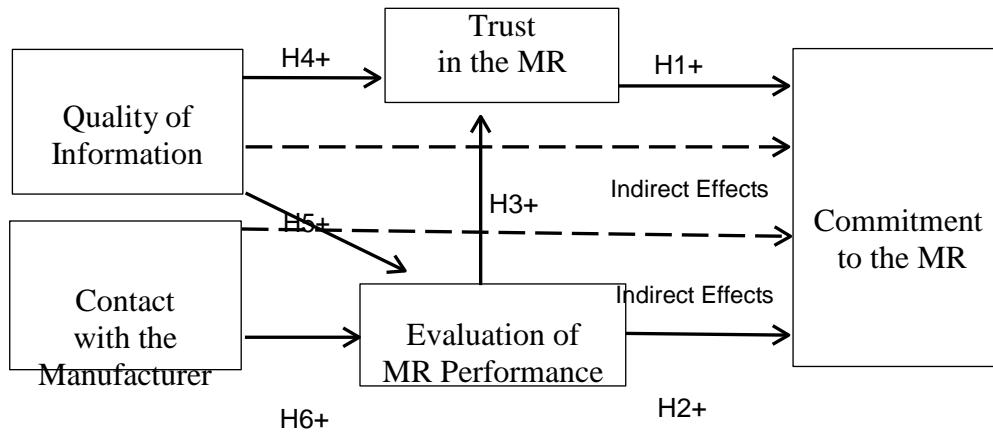
Higher manufacturer trust suggests less uncertainty about the occurrence of opportunistic behaviors by the MR so the manufacturer will have lower transaction costs. Less time and effort is spent monitoring the MR. Since transaction costs are lower, the manufacturer's commitment to the MR will be higher. Therefore, a positive relationship is hypothesized to exist between *Trust in the MR* and *Commitment to the MR*. Previous studies examining trust and commitment support this hypothesized relationship (e.g., Anderson & Weitz, 1992; Morgan & Hunt, 1994).

Evaluation of MR Performance is defined as the manufacturer's opinion of how well the MR generates sales for current and new products, acquires new customers, and meets the manufacturer's expectation for sales. The MR's performance is an indicator of how well the assets (i.e. human, brand capital, and procedural) sought by the manufacturer are being provided. The manufacturer's transaction costs related to these assets include the loss of potential sales (i.e. opportunity costs) and the time and effort made by a manufacturer to help improve MR performance (i.e. direct costs). Higher levels of MR performance suggest lower transaction costs that result in greater commitment to the MR. This reasoning supports hypothesizing a positive relationship between *Evaluation of MR Performance* and *Commitment to the MR*.

As shown in Figure 1, the manufacturer's *Evaluation of MR Performance* is expected to have a positive relationship with *Trust in the MR*. One dimension of trust, the MR's credibility, is likely to increase with better performance. Ganesan (1994) explains that a vendor's satisfaction with an outcome of a supplier, such as performance, influences the vendor's opinion of the supplier's credibility. Therefore, as the manufacturer becomes more satisfied with MR Performance, perceptions of credibility improve, thus leading to increases in the manufacturer's trust. These relationships are hypothesized as:

H1 *The manufacturer's Trust in the MR is positively related to the manufacturer's Commitment to the MR.*

H2 *The manufacturer's Evaluation of MR Performance is positively related to the manufacturer's Commitment to the MR.*

H3 *The manufacturer's Evaluation of MR Performance is positively related to the level of manufacturer's Trust in the MR.*

Quality of Information is defined for this study as the principal's perceptions of the information content provided by the MR and the process of sharing the information. A positive relationship between *Quality of Information* and *Trust in the MR* is hypothesized. Support is provided by research showing that the quality of information provided by trusted advisors influences customer trust perceptions (Neu, Gonzalez & Pass, 2012). The researchers found several characteristics of information that are considered when evaluating its quality. They may be categorized as related to content (relevance, unbiased, and completeness) and the process of sharing information (proactiveness, timeliness, frequency, and responsiveness). The quality of information content and the process of sharing information influence two aspects of trust: credibility and benevolence. As content improves, it influences the opinion that a "vendor has the required expertise to perform the job effectively and reliably" (Ganesan1994, p.3). When the sharing of information is done well, benevolence perceptions form because the sharing indicates that a "vendor has intentions and motives beneficial to the retailer" (Ganesan1994, p.3). This reasoning and the previous research (Neu, Gonzalez & Pass, 2012) indicate that the *Quality of Information* is positively related to *Trust in the MR*.

A positive relationship between *Quality of Information* and *Evaluation of MR Performance* is also hypothesized. Better quality information supports the MR's efforts when selling, thus improving performance. In addition, the process of sharing information with the manufacturer helps to develop accurate expectations for performance and attributions for lower than desired performance. Therefore, the *Evaluation of MR Performance* is likely to increase as the quality of information provided by the MR improves. These relationships pertaining to the *Quality of Information* are hypothesized as:

H4 *The manufacturer's perception of the Quality of Information provided by the MR is positively related to level of manufacturer Trust in the MR.*

H5 *The manufacturer's perception of the Quality of Information provided by the MR is positively related to the manufacturer's Evaluation of MR Performance.*

An MR spends time learning about the manufacturer's needs and getting to know its employees. This is done by physically meeting with the manufacturer and interacting by way of e-mail, or other means. For this study, the interaction is termed *Contact with the Manufacturer*. It is defined as how often the MR visits or contacts the manufacturer and spends time learning about needs and getting to know employees. As these interactions increase, the manufacturer becomes more involved with the sales function and attributions are developed for MR performance. *Evaluations of MR Performance* are based on a more accurate understanding of the sales environment and the attributions are likely to dampen dissatisfactions with MR performance. Therefore, a positive relationship between C*ontact with the Manufacturer* and *Evaluation of MR Performance* is hypothesized.

H6   The MR's Contact with the Manufacturer is positively related to the manufacturer's
        Evaluation of MR Performance.

Significant findings for the hypothesized relationships would suggest a model with *Trust in the MR* and *Evaluation of MR Performance* as mediators of relationships between *Commitment to the MR* and the two antecedents (i.e. *Quality of Information* and *Contact with the Manufacturer*). As noted, Figure 1 includes dotted arrows to represent the anticipated indirect effects. *Trust in the MR* is likely to be a mediator because of the influence that both antecedents have on the manufacturer's perceptions of two dimensions of trust: credibility and benevolence. *Quality of Information* indicates the MR's expertise that is likely to be associated with the manufacturer's credibility perceptions. The MR's *Contact with the Manufacturer* is assumed to be associated with the manufacturer's perception of whether the MR is benevolent, or focused primarily on self-interests. *Evaluation of MR Performance* is likely to be a mediator of the two antecedents because they represent sources for potential transaction costs. When the MR's performance on the antecedents is evaluated by the manufacturer, transaction costs are considered, such as the time and effort required for resolution of issues associated with each antecedent. The level of these transaction costs affect whether or not the manufacturer remains committed to the MR.

METHODOLOGY

An online survey was completed with manufacturers known to be working with manufacturers' representatives (MRs). E-mail addresses for the executives were provided by the Manufacturers' Representatives Educational Research Foundation (MRERF), nine of its member associations and representatives completing the MRERF Certified Professional Manufacturers' Representative program. Contact information for potential respondents was also obtained from directories of manufacturers. The potential respondents were contacted by e-mail and asked to participate in the survey by following a link to surveymonkey.com. The request for participation identified the Manufacturers' Representatives Educational Research Foundation, member associations of MRERF, and Sam Houston State University as sponsors of the research. The nine associations are: (1) Business Solutions Association, (2) Communication Marketing Association,(3) Electronics Representatives Association, (4) Foodservice Sales & Marketing Association, (5) Health Industry Representatives Association, (6) International Association of Plastics Distribution, (7) Manufacturers' Agents Association for the Food Service Industry, (8) Manufacturers Agents National Association, and (9) Specialty Tools & Fasteners Distributors Association. Besides identifying sponsors, the request for participation also encouraged executives to respond by explaining the value of the research and offering a chance to win one of ten $50 Starbucks gift cards.

A reminder message requesting participation was sent two weeks after the initial request. Of 485 manufacturers contacted, the questionnaire was completed by 115 respondents to yield a 23.7% response rate. The response falls within the range of response rates reported in meta-analyses examining rate levels. It is also similar to the 24% rate obtained in a previous study asking for manufacturers' opinions of working with MRs (Weiss & Anderson, 1992). A meta-analysis based on studies completed by organizational researchers found that 50% of the studies based on opinions of top managers had response rates of 31% or less (Anseel, Lievens, Schollaert & Choragwicka, 2010). Another meta-analysis of surveys used in organizational

research reported an average response rate of 35.7 with a standard deviation of 18.8 (Baruch & Holtom, 2008).

The possibility of non-response bias was evaluated by comparing responses early in the survey process to later responses (Armstrong & Overton, 1977). Non-response bias exists if the opinions of early responders are significantly different from those held by late responders. The assumption is that late responders will be more similar to non-responders. Responses received early during the survey period (59% of the total surveys) were compared to the remaining 41% that represent late responders. The two groups were compared with respect to the five study variables listed in Table 1, annual sales volumes and years working with MRs. The ANOVA analysis revealed no significant differences, so nonresponse bias is not considered a problem.

DATA ANALYSIS AND FINDINGS

Measures for variables were modified from previously published scales to be appropriate for the context of this study. Survey responses were examined using exploratory factor analysis to determine final scale items to represent each variable. Appendix A presents scale items, reliability scores, and sources. Cronbach's alpha scores exceed the recommended .70 level (Nunnally, 1978). ANOVA analyses indicated no significant differences in opinions across industry types, sales volumes, and length of MR-Manufacturer relationships. Annual sales volumes were reported at less than $20 million (45%), $20 million to $100 million (38%) and above $100 million (17%). Respondents have worked with the MRs less than 4 years (36%), 4-9 years (36%), or greater than 9 years (28%).

Table 1 presents variable means, standard deviations, and correlations. A path analysis was completed with LISREL 8.51 (Jöreskog & Sörbom, 2001) using a covariance matrix and maximum likelihood estimation with listwise deletion. Use of LISREL is appropriate for the small sample size (n=115) because the model includes five variables yielding the ratio 23:1 of variables to observations (i.e. respondents) that is generally accepted in the literature (Hair, Anderson, Tatham & Black, 1998). Table 2 reports the modeling results that are shown in Figure 2. Based on Marsh, Hau & Wen's (2004) caution against rejecting content-valid models, Browne & Cudek's (1993) index criterion of at least .90 is used to indicate a good fit. The fit indices exceed the greater than .90 rule of thumb and meets fit levels recommended for small sample sizes: a cutoff value close to .95 for CFI and NNFI (TLI) and .08 for SRMR (Hu & Bentler, 1999).

Hypothesized relationships are significant with t-values greater than 2.00, thus supporting hypotheses H1-H6. The R-square values indicate that a substantial amount of variation in the three dependent variables is explained by the antecedents. Table 3 reports the significant indirect effects associated with *Quality of Information* and *Contact with the Manufacturer*.

Table 1 MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS							
			Pearson Correlations				
Variable	Mean	SD	1	2	3	4	5
1. Trust in the MR	4.09	.890	1.00				
2. Quality of Information	3.73	.960	0.79	1.00			
3. Contact with the Manufacturer	3.16	.920	0.71	0.68	1.00		
4. Evaluation of MR Performance	3.55	.873	0.75	0.74	0.80	1.00	
5. Commitment to the MR	3.94	1.01	0.82	0.70	0.72	0.80	1.00
All correlations are significant at the p<.05. n=115							

Table 2
MODELING RESULTS: HYPOTHESES H1– H6 (n=115)

o From	Commitment To The MR	Trust in the MR	Evaluation of MR Performance
Trust in the MR	H1 .50(7.02)	-	-
Evaluation of MR Performance	H2 .43(6.07)	H3 .28(2.77)	-
Quality of Information	-	H4 .56(5.60)	H5 .54(6.28)
Contact with the Manufacturer	-	-	H6 .35(4.12)
R^2	75%	65%	73%

χ^2=8.95; p=.03, 3 df
NFI=.98, NNFI=.96, IFI=.99, CFI=.99, GFI=.97, RMR=.019, SRMR=.020
Note: Loadings are standardized.   t-values are in parentheses

Figure 2
FINDINGS: DETERMINANTS OF MANUFACTURER COMMITMENT
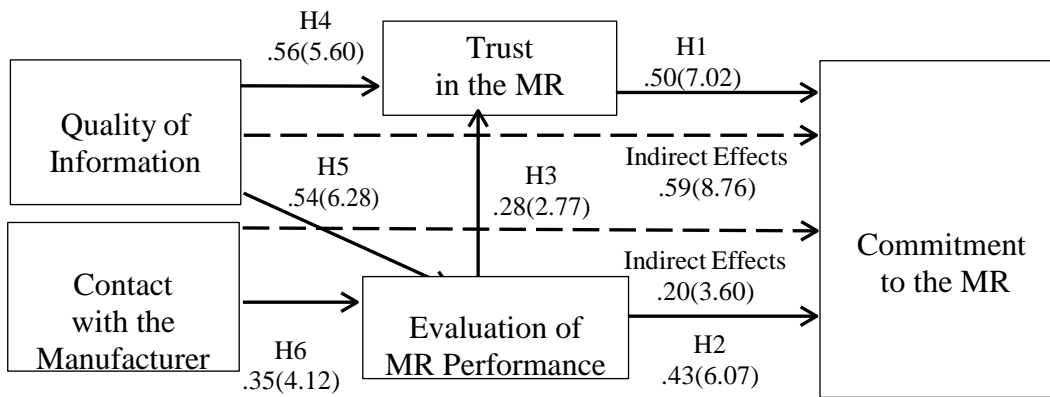
Loadings are standardized. t-values are in parentheses .
Dotted arrows represent indirect effects.

Table 3
MODELING RESULTS: INDIRECT EFFECTS

Effects on Commitment to the MR *From:*	Indirect Effects	Mediating Variables
Quality of Information	.59 (8.76)	-Trust in the MR -Evaluation of MR Performance
Contact with the Manufacturer	.20 (3.60)	-Evaluation of MR Performance -Trust in the MR
Loadings are standardized. t-values are in parentheses (n=115)		

CONCLUSION

This research provides helpful information for the MR that may not know how to go about increasing the manufacturer's commitment to having a long-term working relationship. The study was completed to answer the question, "*What influences the formation of manufacturer commitment to the MR?*" Transaction cost economics (TCE) provides the theoretical foundation for answering the question. It suggests that transaction costs are considered by a manufacturer and it is not possible to form a complete contract, because of bounded rationality, so the manufacturer is going to be uncertain about the MR activities and behaviors. Hypothesized relationships are based on the idea that transaction costs, including uncertainty perceptions, influence the likelihood that a manufacturer will be more, or less, committed to the MR.

Lower transaction costs are associated with higher levels of manufacturer commitment. Transactions costs will be less to the extent that the MR deploys assets effectively and reduces the manufacturer's uncertainties. Accordingly, *Evaluation of MR Performance* indicates how effectively assets are deployed for the manufacturer and *Trust in the MR* suggests the degree of manufacturer's uncertainties. The findings (i.e. H1, H2) show that these general perceptions, or holistic judgments, are positively related to the manufacturer's *Commitment to the MR*. In conclusion, the MR must perform the selling function well and earn the manufacturer's trust to cultivate manufacturer commitment. The MR's performance is critical to earning the manufacturer's commitment because the findings show it to be positively related to *Trust in the MR* (i.e. H3). If the assets sought by a manufacturer are not adequate, as indicated by poor MR performance, it is unlikely that a manufacturer will trust the MR and be committed to a long-term relationship.

The findings indicate that maintaining *Contact with the Manufacturer* and providing *Quality Information* influences the manufacturer's *Trust in the MR* and *Evaluation of MR Performance* (i.e. H4, H5, and H6). These relationships suggest that the MR needs to spend time with the manufacturer to develop relationships with employees and learn about needs. In addition, the MR needs to share information effectively that has content perceived as valuable to the manufacturer. The reason is that *Quality of Information* has greater influence on *Evaluation of MR Performance* as compared to *Contact with the Manufacturer.* The beta weights are .54 and .35, respectively. Regarding information content, an MR may evaluate how well it meets the characteristics considered when manufacturers evaluate content (relevance, unbiased, and completeness). Similarly, how well the information is shared may be considered by evaluating characteristics of the process (proactiveness, timeliness, frequency, and responsiveness).

Indirect effects reported in Table 3 represent relationships with *Commitment to the MR* when the *Quality of Information* and *Contact with the Manufacturer* are mediated by other variables. In both cases, the indirect effects are significant. *Commitment to the MR* is related to the antecedents but a difference in beta weights suggests a stronger influence from an MR providing information to the manufacturer. Indirect effects from the *Quality of the Information* provided by the MR and *Contact with the Manufacturer* have standardized beta weights of .59 and .20, respectively.

This finding prompted completion of a supplemental analysis of *Quality of Information*. It was examined to determine if the relationship with *Trust in the MR* is stronger than one between *Contact with the Manufacturer* and *Trust in the MR*. Appendix B reports the total, direct, and indirect effects for these relationships. All three effects are reported because *Quality of Information* has both direct and indirect effects on *Trust in the MR*. The analysis reveals that

both variables influence the manufacturer's trust but the beta weights are relatively different. *Quality of Information* and *Contact with the Manufacturer* perceptions have standardized beta weights of .71 and .10 for total effects, respectively.

In conclusion, the model (Figure 2) represents areas for an MR to consider when earning the manufacturer's commitment. Building trust and managing the manufacturer's perceptions of performance are accomplished by meeting the manufacturer's performance expectations and maintaining continuous contact with the manufacturer. It is important for the MR to recognize the difference between *Contact with the Manufacturer* and *Quality of Information* (i.e. the content and sharing of information). *Contact with the Manufacturer*, as measured in this study, entails "getting" information from the manufacturer while also getting to know its employees. This activity is fundamental to building a relationship but, to earn greater commitment, the MR should do more. The MR needs to go beyond "getting" via *Contact with the Manufacturer* to focusing on the *Quality of Information*, thus "giving" the manufacturer valuable information. In terms of TCE, valuable information is a needed asset that also reduces uncertainty, thus lowering transaction costs. This reasoning is supported by the main study findings (Table 2) and the supplemental analysis (Table 3) showing that *Quality of Information* has a strong influence on the manufacturer's trust and commitment. By giving attention to the Quality of Information, the MR may be considered a trusted advisor and obtain greater manufacturer commitment.

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APPENDIX A
VARIABLES, SCALE ITEMS, SOURCES, AND RELIABILITIES

Responses were to "This Salesperson…. (statement)" Strongly Disagree (1) to Strongly Agree (5)

Trust in the MR (Cronbach's alpha =.97) **
 1. genuinely wants our business to succeed.
 2. is honest when dealing with us.
 3. will tell us the truth about any situation.
 4. is someone that we can depend on.
 5. is trusted by people at my firm.
 6. has high integrity.
 7. is someone that we have confidence in.
 8. is competent.

Contact with the Manufacturer (Cronbach's alpha =.89) **
 1. visits us frequently.
 2. takes a lot of time learning our needs.
 3. spends a lot of time getting to know our people.
 4. frequently contacts us by phone or e-mail.

Evaluation of MR Performance (Cronbach's alpha =.93)*****
 1. generates a high level of sales for our products.
 2. regularly exceeds our expectation for sales of our products.
 3. is capable of quickly generating sales for a new product.
 4. is good at identifying customers for our products.
 5. regularly meets our expectations for product sales.
 6. does not meet our expectations for product sales.

Quality of Information (Cronbach's alpha =.96)***
 1. gives us good advice.
 2. updates us regularly on customers' needs & preferences
 3. shares information in order to help us.
 4. gives us accurate information.
 5. proactively tells us about things that may impact us.
 6. frequently gives us information we may need.
 7. responds quickly when we request information.

Commitment to the MR (Cronbach's alpha =.97) ****
 1. We expect our relationship with this salesperson to continue for a long time.
 2. Renewal of the relationship with this salesperson is virtually automatic.
 3. We will choose to work with this salesperson during the next two years.
 4. We will choose to work with this salesperson during the next four years.
 5. We like this relationship so we would not stop working with this salesperson.

** Based on Doney & Cannon (1997)   *** Based on Bailey & Pearson (1983); Wang & Strong (1996)
****Based on Kumar, Scheer, & Steenkamp (1995)   *****Based on Sujan, Weitz & Kumar (1994)

APPENDIX B
Decomposition of Total, Direct, and Indirect Effects

Effects on Trust in the MR *From:*	Total Effects	Direct Effects	Mediating Variables	Indirect Effects
Quality of Information	.71 (10.60)	.56 (5.60)	Evaluation of MR Performance	.15 (2.53)
Contact with Manufacturer	.10 (2.30)	--------	Evaluation of MR Performance	.10 (2.30)
Loadings are standardized. t-values are in parentheses (n=115)				