

MARKETING MANAGEMENT JOURNAL

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Editorial: Thoughts and Directions for Marketing Management Journal

Value Contribution of Personal Selling and Direct-to-Consumer Advertising in the Pharmaceutical Industry
Rebecca Dingus, Raj Agnihotri and Michael Y. Hu

The Role of Prior Sales Experience of Buyers and Duration in Buyer-Seller Relationships
Scott C. Ambrose, Nwamaka A. Anaza and Brian N. Rutherford

Salesperson Networking Behaviors and Creativity: Exploring an Unconventional Relationship
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An Empirical Study of Consumer Motivations to Use In-store Mapping Application

Selcuk Ertekin, Susie Pryor and Lou E. Pelton

Editorial: Thoughts and Directions for Marketing Management Journal

Special Thanks:

First, I would like to extend special thanks to Gail Zank for her service as Editor of *Marketing Management Journal* for the past three years. With her leadership and direction, I feel the Journal has made great strides and is well positioned for the future. Her dedication to the Journal shows in the overall quality of the Journal. Thank you, Gail!

The Current Issue:

In the present issue, Gail Zank served as Editor for the five accepted articles. These articles highlight the wide scope of topics that fall within the realm of Marketing Management. I want to briefly highlight several key take-aways I gleaned from each of these articles.

The lead article, “Value Contribution of Personal Selling and Direct-to-Consumer Advertising in the Pharmaceutical Industry” by Dingus, Agnihotri, and Hu, examines the use of detailing and direct-to-consumer advertising within the pharmaceutical industry. Detailing is explained as pharmaceutical reps making multiple rounds of presentations to inform and educate physicians in the hope they will consider the given drug when writing prescriptions. With FDA approval, direct-to-consumer advertising has allowed changes in regulations, which permit pharmaceutical firms to use promotional advertisements through broadcast media. Using COMPUSTAT, data for Tobin’s q , stock return, and return on investment were generated. Findings suggest that both detailing and advertising contribute to the overall value of a firm. Interestingly, findings suggest that detailing makes a far greater contribution per unit than advertising. I find this study interesting, given the use of secondary data within a sales context. Further, the pharmaceutical industry context provides an interesting avenue for this type of research to be conducted within.

The second article, “The Role of Prior Sales Experience of Buyers and Duration in Buyer-Seller Relationships” by Ambrose, Anaza, and Rutherford, examines the impact of both social and economic satisfaction in relation to buyer’s commitment to salespeople. The study suggests that while both social and economic satisfaction impact buyer commitment, economic satisfaction has a stronger impact on buyer’s commitment. The main focus of the article is the examination of two moderators, relationship duration and buyer’s prior sales experience. Their results suggest that as duration of the relationship increases, the relationship between economic satisfaction and commitment becomes more important. However, this moderating relationship is not found when examining the social satisfaction to commitment relationship. When looking at prior sales experience, surprisingly, their results suggest that it is possible that buyers without prior sales experience place a higher level of importance on both social and economic satisfaction when determining their level of commitment to the relationship. This finding highlights the worthiness of additional research to further develop our understanding of the impact of buyers’ having prior sales experience within the buyer-seller relationship.

The next article, “Salesperson Networking Behaviors and Creativity: Exploring an Unconventional Relationship” by Krush, Agnihotri, Macintosh, and Kalra examines customer and professional networking in relation to salesperson creativity and adaptive selling. Interestingly, the data source is from the real estate industry, a well-fitting context for this study. Unique to this study, the authors examine direct, interactive, and curvilinear effects on salesperson creativity. Their findings suggest that both professional and customer networking are positively related to salesperson creativity. They also report a positive impact of salesperson’s creativity on adaptive selling. From this study, I see the need for additional research on networking beyond the real estate context. Also, I see the potential for additional studies conducted within the real estate context to further develop our understanding of this unique group of salespeople.

The article titled, “The Impact of Cognitive Age on Materialism, Status Consumption and Loyalty Proneness on the Indian Elderly” by Iyer, Eastman, Sharma, and Eastman, examines the impact of cognitive age on the level of materialism, status consumption, and loyalty proneness for Indian seniors. The study examines if relationships are moderated by self-confidence and social involvement. Interestingly, the study finds direct relationships between cognitive age and both materialism and status consumption, but not loyalty to product/brand. Five of the six moderated paths were supported. I was intrigued that both self-confidence and social involvement were moderators between cognitive age and loyalty to product/brand. The results for H_3 , H_{3a} , and H_{3b} , taken together, provide an insightful finding showing the importance of examining moderators, even when direct effects are not significant.

The last article in the issue, “An Empirical Study of Consumer Motivations to Use In-store Mapping Applications” by Ertekin, Pryor, and Pelton, examines characteristics that influence the use of in-store mapping applications by young consumers. According to the authors, in-store mapping applications are mobile applications that provide real time location information to consumers, as well as the means by which marketers can deliver coupons and other sales promotions at the target location. These applications can enhance consumers’ in-store experiences by providing the means to more efficiently research and purchase products. To predict intentions to use in-store mapping applications, both motivational and personality characteristics were examined. Results suggest a variety of characteristics influence consumers’ intention to use in-store mapping applications. As with any technology-based studies, this study reinforces the importance of understanding how and to what extent consumers are willing to adopt and use new technology to enhance the customer experience. This study is an excellent example of a topic that is at the forefront of current marketing application.

Special Sections:

As in the past, the Journal publishes a Special Section in the 2nd issue of each volume. In this volume of the Journal, the Special Section is titled, “The Use of Social Media and Strategic Marketing Initiatives: Insights into State-of-the-Art Marketing Communication Practices.” We received a high number of quality submissions for the Special Section and the submissions are currently in the review process.

The topic for the Special Section that will appear in Volume 28, Issue 2, is titled, “The Evolution of Marketing – Changes in the Purchase and Consumption of Products and Services through Technology.” The Special Section is based on the dramatic change in the purchase and consumption of goods and services that we have experienced in the recent decade. In part, this is due to the advent and rapidly expanding uses for mobile technology, as well as the transformation of numerous cultural norms. While technology has an obvious impact upon nearly every aspect of the purchase and consumption of goods and services, other factors such as social norms, significant shifts in demographic profiles, consumer psychographics, and socio-economic changes are also factors impacting our society’s consumption. In this Special Section, both business-to-business and business-to-consumer manuscripts will be given equal consideration. Also, primary consideration will be given to empirical work, both qualitative and quantitative in scope. The submission deadline for the Special Section is March 1st, 2018. We look forward to receiving submissions for this section.

Perspectives from the New Editor:

As with any other new Editor of a journal, authors frequently wonder what type of topics the “new Editor” will be looking for. Consistent with the scope of *Marketing Management Journal*, I will look for articles that are well-written, methodologically sound, and make a contribution to the field of Marketing Management. I feel the scope of Marketing Management spans most areas/sub-areas in Marketing, as long as managerial implications can be gleaned. The importance of providing well thought-out managerial implications, which can be implemented by firms, cannot be underscored enough. Further, I feel that the Management discipline can contribute to the Journal by providing Marketing implications to topics within the Management field.

From a manuscript positioning standpoint, I encourage authors to focus on fewer well-developed hypotheses than a large number of under-developed hypotheses. In my opinion, two to five well-developed hypotheses can advance the literature further than a manuscript with ten to fifteen hypotheses where only one or two of those hypotheses are well developed and make a contribution.

I also feel the need for the field to increase the amount of manuscripts replicating previously studied hypotheses. This does not mean just replicating a model and submitting a manuscript. It implies understanding the inherent limitations of the work you are replicating, or partially replicating, and explaining how you extend the current body of knowledge of the topic beyond the initial study. In the case of replications, counter-findings provide a strong avenue for contribution and should be highlighted.

From a methodological standpoint, a wide range of techniques fit within the scope of the Journal. I have always tried to use the best method to aid me in understanding versus the method that I know the best when conducting my own research. While papers using structural modeling, ANOVA, and regression-based approaches are always welcome, I encourage authors to consider if other tools can address their research questions better. For example, given, the managerial focus of the Journal, case-based studies using a qualitative methodology approach would allow us to advance many of the topics at the heart of Marketing Management.

This approach would be highly appropriate for emerging topics and recent events impacting the macro-environment, especially given the relatively quick publication time of the journal.

Manuscripts conducting scale development and/or critiques and solutions to existing scales provide an opportunity to expose readers who might not otherwise be familiar with our work to the Journal. As with any scale development project, the development process (correctly following established scale development guidelines) and the end result (quality of the scale) will be a determining factor of its potential for publication. However, the importance and need for the development of quality scales cannot be stated enough. Further, scales which can be easily used by managers to assess employees, customer, or market potential are strongly encouraged.

Taxonomies are another avenue for contribution. Given that taxonomies provide a foundation to build further research upon, the need for several quality taxonomies to appear within the Journal over the next several years is apparent. In addition, meta-analytic assessments of constructs at the heart of Marketing Management are strongly encouraged.

Given the relatively quick publication process of the Journal, I recommend that authors submit manuscripts on current topics within the field. I feel research on current topics can make a strong impact on the field and help in shaping further discussion on the given topic. However, I do want to be clear that current topics are not a replacement for traditional manuscripts that build and extend topics that were once the hot topic. In essence, we welcome a wide range of manuscripts from ones that focus on current topics all the way to those manuscripts that are well-positioned and extend a fairly established research stream.

Changes to the Journal:

Shifting focus, I wanted to highlight several of the new directions that we as a Journal are moving toward. First, we want to recognize the best-of-the-best in the Journal. For Volume 26 (2016), we are asking the Editorial Review Board to select the “Best Paper of the Year.” With ten high quality articles, the board will have a challenging time selecting only one article. Further, we want to show our appreciation to the hard work that our Editorial Review Board members provide to the journal and acknowledge their dedication to the Journal. Starting this year, we will announce a “Reviewer of the Year Award.” The Reviewer of the Year will be selected by the Editor with the help of the Associate Editors.

From a publication standpoint, we are looking to add two unique types of articles to each issue of the Journal. The first pertains to methodological issues and advancements. For example, recent developments in PLS, HLM, or others types of analytic tools. This type of article will not be the primary type of article appearing in the Journal, but we feel will be useful to better expose our readership to current research methodologies. The second pertains to the current state and future of areas under the umbrella of Marketing Management. Examples could include, “The Current State and Future of Selling and Sales Management” or “The Current State and Future of Retailing.” These articles will highlight thoughts from some of our field leaders to help our readership better develop ideas for future research that would be relevant to the journal.

Overall, I feel that *Marketing Management Journal* and the Marketing Management Association are in a strong position to really impact the future of Marketing Management scholarship! As always, I welcome comments and thoughts from past, current, and future authors of the Journal.

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MANUSCRIPT AND SUBMISSION GUIDELINES

MARKETING MANAGEMENT JOURNAL

January 2017

Scope and Mission

The mission of the *Marketing Management Journal* (MMJ) is to provide a forum for the sharing of the academic, theoretical, and practical research that may impact the development of the marketing management discipline. Manuscripts that focus upon empirical research, theory, methodology, and review of a broad range of marketing topics are strongly encouraged. Submissions are encouraged from both academic and practitioner communities.

Submission Guidelines

Manuscripts that do not conform to submission guidelines will not be distributed for review. Authors should submit manuscripts via email to mmjjournal@gmail.com. Each submission should consist of two files:

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2. A file containing the manuscript title, an abstract of no more than 150 words, keywords, and manuscript. Author identification or affiliation should not appear anywhere in this file.

Manuscripts should be submitted using 12-point Times Roman font and should not exceed 30 typewritten pages inclusive of body, tables and figures, and references. Margins must be one inch. Preparation of the manuscript should follow style guidelines in the most recent *Publication Manual of the American Psychological Association*, 6th edition. Tables and figures used in the manuscript should be included on a separate page and placed at the end of the manuscript. Authors should insert a location note within the body of the manuscript to identify appropriate placement. Tables and figures should be constructed in table mode of Microsoft Word.

The MMJ editorial board interprets the submission of a manuscript as a commitment to publish in MMJ. Editorial policy prohibits publication of a manuscript that has already been published in whole or in substantial part by another journal. Each manuscript is first assessed by the editor to determine its potential for successful completion of the review process. A manuscript that goes beyond the initial review goes through a double-blind review conducted by members of MMJ's review board. Feedback from reviewers and the editor team's evaluation are used to make a decision on whether a manuscript will be accepted for publication in MMJ.

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VALUE CONTRIBUTION OF PERSONAL SELLING AND DIRECT-TO-CONSUMER ADVERTISING IN THE PHARMACEUTICAL INDUSTRY

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This research explores the value contribution of detailing and direct-to-consumer advertising among the six major pharmaceutical firms in the U.S. market using data from 1995 to 2012. Value of a firm is measured with Tobin's q and stock returns. A valuation model with ROI as the primary explanatory variable is employed to parameterize the effects of these two key promotional approaches on the value of a firm. Both detailing and advertising are found to contribute to the overall value of a firm, while detailing makes far greater contribution per unit than advertising. This study also proposes a possible explanation for the lack of interaction between these two factors.

INTRODUCTION

Academic researchers and pharmaceutical firms alike have been interested in knowing the value contribution of consumer advertising, detailing, and the complementary nature of these two marketing tools. This study intends to examine these research questions at the individual firm level. To the best of our knowledge, there is only one major piece of academic research (i.e., Osinga, Leeflang, Srinivasan, and Wieringa (2011) published in this area where, relying on monthly data from 1993 to 2000, a positive impact is found for both DTCA and detailing on stock returns. However, potential interactive effects are not examined in that study. Given changing regulations in the pharmaceutical industry during the last two decades (e.g., the FDA officially relaxing regulations for DTCA in 1997 and the Physician Payments Sunshine Act in 2010), we use a recent data set to assess the impact that detailing and DTCA activities have on a pharmaceutical firm's value in this new regulatory environment. Additionally, we introduce the notion of interaction effects between detailing and DTCA and test accordingly.

Since the pharmaceutical industry has seen major changes in the past 15 years (Schramm and Hu 2013), there is a definite need for an update of the ever-changing role of the

marketing activities such as detailing and DTCA within this industry. The present study extends Osinga et al.'s (2011) research by analyzing pharmaceutical firm value in a more recent time frame (1995 to 2012, compared to 1993-2000). A valuation model that allows for significance testing of the coefficients of detailing and DTCA is used in the present study. Potential interaction between these two promotional devices will also be identified and explained.

With detailing, pharmaceutical representatives make multiple rounds of presentations informing and educating physicians in hopes that these physicians will consider their drug when writing prescriptions. Detailing is highly relational, as pharmaceutical representatives work in a competitive setting where each is vying for a physician's commitment (Homburg, Bornemann, and Kretzer 2014). The other main marketing activity in the pharmaceutical industry, DTCA, was initiated with the approval of FDA, bringing about big changes in regulations and permitting pharmaceutical firms to have promotional advertisements on broadcast media, directly telling consumers about their prescription drugs (Mogull 2008; Liu and Gupta 2011) so as to make a connection between the brand and its users as a way of increasing commitment (Martin, Collier, and Engelland 2014).

The contribution of this study lies in proposing a valuation model to capture the effects of detailing and DTCA on overall firm value. The

financial metrics used to measure a firm's value are Tobin's q and stock returns, and annual year-end stock prices are the key inputs to the construction of these measures. Results with Tobin's q and stock return are largely the same, finding that DTCA and personal selling through detailing both serve as marketing expenditures that increase the value of a pharmaceutical firm. This study further contributes to the literature on valuation modeling and sheds light on the use of Tobin's q and stock return.

In the following sections, a background of the industry and its environmental and structural factors will first be presented, followed by a discussion of the product portfolio strategy. Next, a review of previous academic work on detailing and DTCA will be given. Study design, sample and the valuation model used will then be presented, followed by a discussion of analysis and results. Finally, managerial insights, theoretical conclusions, and limitations complete the paper.

U.S. PHARMACEUTICAL INDUSTRY

The Rise of the Generic Drug Sector

Product pricing impacts corporate financials, making the generic drug sector of interest in the pharmaceutical industry. The Waxman-Hatch Act passed in 1984 was designed to remove barriers to entry for generic drugs. Before 1984, filling of generic equivalent drugs took place long after the expiration of the incumbent drug patent. With the Waxman-Hatch Act, generic drugs can be marketed on the day of patent expiration of the incumbent drugs. As physicians were mostly loyal to branded drugs, shortly after 1984 the percent of total prescriptions being filled that were generic actually went down. However, prescriptions of generics took off in the early 1990s as the change in labor laws forced insurance companies to seek less expensive alternatives to branded drug prescriptions. Financial incentives were provided to purchase generic equivalent drugs whenever possible. As a result, generic drugs have literally shortened the product life cycle of branded drugs.

New Product Introduction

Top line growth in the branded sector is traditionally dependent of the introduction of new products. With patent protection, companies can enjoy years of reasonably high rates of return on investment, allowing the companies to recover the high product development costs. Yet, new product development is always a highly risky venture. Product development costs typically run in hundreds of millions of dollars with no guarantee that the product will even be introduced into the marketplace. In addition, it has become harder and harder to identify an opportunity for a blockbuster drug, as the product space for most chronic diseases has already been occupied or has become crowded (Kornfield, Donohue, Berndt, and Alexander 2013). For example, for the treatment of cardiovascular disease with a class of drugs called statins for lowering cholesterol level, Merck first introduced Mevacor in 1987, followed by its own updated version, Zocor in 1994. In the same year, 1994, Bristol-Myer Squibb introduced Pravachol while Novartis AG introduced Lescol. The introduction of Lipitor by Pfizer in 1997 and Astra Zeneca PLC's Crestor in 2003 further crowded the market. Even though Lipitor remains the number one blockbuster drug of all time, branded drug companies are concerned about the nature of competition even within their own sector.

Shifts in Product Portfolio Strategy

As a result of the erosion of market share toward the generic drug sector and high costs associated with new product introductions, firms in the branded sector are pressured to meet expectations for earnings and rates of return on investment. Resource investments in new product development are shifted to incremental products and extended branding. Extension drugs are less costly to develop, as the bulk of research and development expenditures have already been borne by the incumbent brand. The extension drug reaps the benefits from the incumbent brand equity. For example, when Merck extended its osteoporosis drug Fosamax by adding Vitamin D, the extended drug, Fosamax Plus D, benefited from

the established market position of the Fosamax brand. Furthermore, the Market Exclusive Period clause under the Waxman-Hatch Act allowed a three-year extension of the incumbent drug's patent after the extension drug was brought into the market.

Schramm and Hu (2013) utilized data from public sources and compiled the number of new and extended drugs introduced from 1980 to 2011. In the pre-1995 period, the number of new drug introductions by major U.S. pharmaceutical firms was slightly higher than the total for extended drugs. After 1995, the annual number of brand extensions far exceeded that of new products, except in 2011 when the number of new products introduced exhibited a strong uptick to be at the same level as the number of extensions.

It is reasonable to expect personal selling to physicians through detailing to be emphasized during the first several years of new product introduction because of the need to educate prescribers about newly available options. Then, as the drug gains acceptance in the marketplace by physicians and patients alike, firms will tend to shift their promotion strategy toward DTCA. Brand extensions are used to delay market erosion. These brand extensions typically are heavily supported by DTCA since these drugs are no longer under patent protection. DTCA serves as a reminder for the consumers who are already loyal to the brand.

PHARMACEUTICAL MARKETING ACTIVITIES

The prior section of this paper discusses the life cycle of pharmaceutical products and implications and regulations that are unique to this industry (e.g., generics, extensions). Additionally, intricacies arise due to the nature of physicians writing scripts for these prescription drugs, rather than end users having complete control of product selection. Because of how unique this industry is, it is important to determine the most effective way for firms to promote and market these products.

How does a company choose how to market its products? Stewart (2009) finds that marketing expenditures account for 20 to 25 percent of the overall corporate budget, yet accountabilities of

these expenses are mixed. Marketing expenditures are necessary for prescription drugs to be successfully innovated (Leefflang and Wieringa 2009). In general, pharmaceutical firms have used detailing, DTCA, meetings and events, internet marketing, and journal advertising for their marketing communication strategies (Jambulingam and Sharma 2010). However, these marketing activities are not delivered equally, and the majority of spending is on detailing and DTCA. In fact, in 2008, pharmaceutical companies averaged expenditures of 58.7 percent of their marketing budget on detailing and 22.8 percent on DTCA (SDI 2009). Accounting for over 80 percent of the marketing budget, this paper focuses on the activities of detailing and DTCA, as they should be critical variables to predict a firm value.

These promotions of pharmaceuticals are heavily regulated (Mogull 2008; Tipton, Bharadwaj, and Robertson 2009). In 2003, the Office of Inspector General under the Department of Health and Human Services issued its Compliance Program Guidance for Pharmaceutical Manufacturers (Federal Register 2003). It was designed to engage the healthcare community in preventing and reducing fraud and abuse in health care programs. A strong emphasis was placed on kickbacks and other illegal remunerations used to reward physicians for their prescriptions, but the enforcement of this Guidance was largely voluntary.

Subsequent compliance guidelines were also issued in 2006, when the Physician Payment Sunshine Act began to require drug and medical device manufacturers to publicly report gifts and payments with a value of \$10 or more. The Affordable Health Care for America Act signed into law on March 23, 2010 by President Barack Obama clearly spells out how compliance will be administered as well as the penalties associated with non-compliance. A centralized Sunshine Act Tracking system was created. It was reported in the New York Times (October 1, 2014: B1) that from August 1 to December 31, 2013, pharmaceutical firms in the U.S. made payments totaling \$3.48 billion to physicians in the form of research payments (\$1.49 billion), ownership interest (\$1.02 billion), speaking and consulting fees (\$380

million), royalties and licenses (\$302 million), travel, food, lodging (\$167 million), and other expenses (\$128 million). The data base with this information was made accessible to the general public in 2013, fueling public outcry against pharmaceuticals in their business operations.

While prescription drugs utilizing DTCA are the “largest and fastest selling medicines” (Herzenstein, Misra, and Posavac 2004: 202), they still require a prescription. Research involving the advertising and personal selling efforts for pharmaceuticals within a single framework has been sparse and, moreover, there is not yet consensus in terms of effectiveness of an integrative approach. For example, Azoulay (2001) reports a negative impact of advertising and sales force operations on marketing outcomes, whereas Gatignon and Hanssens (1987) report positive outcomes of advertising and sales force interactions.

Accountability of marketing managers is ever-increasing, and quantifiable outcomes of their work are in high demand (Balasubramanian, Mathur, and Thakur 2005; Sridhar, Narayanan, and Srinivasan 2014). Results of their responsibilities are often expressed in terms of sales or profits at the brand or product level, and marketing scholars have long placed emphasis on the sales of a brand or product (Chevalier and Mayzlin 2006; Chintagunta, Gopinath, and Venkataraman 2010; Edeling and Fischer 2016; Graham and Frankenberger 2000; Kumar, Choi, and Greene 2016). However, marketing responsibilities look different at the firm level than they do at the brand or product level. As Pasa and Shugan (1996) state, “marketing expertise helps a firm make better marketing decisions that can improve the performance and profitability of the firm” (p. 370). At the corporate level, CEOs are accountable to shareholders in upholding the value of stock prices, and changes in stock prices—combined with the total number of shares outstanding—reflect the firm’s market value. Marketing executives must translate marketing expenditures into sales, profits, or stockholder value for board members in order to decrease the likelihood of removal from the firm’s overall budget.

Stock price changes reflect how investors perceive the value of a firm and, recently, attention has shifted to that of stock price movement (Luo 2007; McAlister, Sonnier, and Shively 2012). Marketing activities such as advertising can increase shareholder value because they lead to increased revenues. For example, Barber and Odean (2008) find that advertising during the Super Bowl may increase a firm’s stock price. Accordingly, the marketing activities of companies can impact firm value, and the selection of pharmaceutical representatives to accomplish these roles appropriately is essential (Sager and Ferris 1986). Yet, a challenge exists in identifying what is “appropriate” for detailing and what reduces interference in DTCA (Groza 2015).

Academic research in this area basically takes on two related dimensions—firm value implications of marketing investments and synergies between personal selling and consumer advertising. In most cases where detailing and DTCA have been studied, research examines these communication strategies at disaggregate levels such as the physician, brand, or product-category level (Kremer, Bijmolt, Leeflang, Wieringa 2008). While limited research examines detailing and DTCA within the veterinary pharmaceutical industry, the majority of research considers pharmaceutical representatives approaching physicians. Mixed findings have been reported for the impact of detailing and DTCA. Examining sales force effort, Manchanda and Chintagunta (2004) find that detailing has a positive impact on prescriptions written but a diminishing return overall. Cavusgil, Deligonul and Calantone (2011) examine DTCA on sales of Nexium, a late entrant into the prescription gastrointestinal market. They find that DTCA does not have a significant impact on sales across brands in the product category, yet DTCA is positive and significant specifically for Nexium sales. Narayanan, Desiraju, and Chintagunta (2004) study the effects of both detailing and DTCA on different brands of antihistamines—Claritin, Zyrtec, and Allegra.

Narayanan et al. (2004) link promotional expenditures to return on investment (ROI) among antihistamines and antivirals. They find that the ROI for detailing is higher than that of DTCA. It is conceivable that the effects of

detailing and DTCA are complementary in nature, yielding significant interaction between these two promotional mechanisms. Iizuka and Jin (2007) use the same three brands in their study. Consumers are surveyed reporting which brand they would choose and how many units would be purchased. Their findings further confirmed the complementary nature of the two promotional mechanisms of detailing and DTCA within the product category.

Academic research examining marketing efforts at the firm level, as identified in the current study, is limited. Osinga and colleagues (2011) first examined the effects of detailing and DTCA on stock returns at the firm level using data from the years 1993-2000. The eight largest U.S.-based drug manufacturers—Abbott, Bristol-Myers-Squibb, Johnson and Johnson, Pfizer, Schering-Plough, Eli Lilly, Merck, and Wyeth—constituted the sample of their study. Monthly stock returns from Kenneth French's website were the primary measure of value, and the four factor Carhart model (1997) was used to extract systematic and idiosyncratic risk for each firm. The Karman filter was also used to further remove noise in the data. The study found positive and moderate effects of both DTCA and detailing on stock returns. Their study did not examine the interaction between DTCA and detailing. The current study extends and updates these findings, given changes in the pharmaceutical industry to DTCA requirements established by the FDA in the 1990s and changes to the overall healthcare industry since 2000. Using a comparable (but more recent) sample, this research examines the main and interactive effects of these two factors on the overall value of a pharmaceutical firm. A central research hypothesis we propose for this study is that the interaction between detailing and DTCA will affect the overall value of a pharmaceutical firm. Plausible explanations will be presented indicating why interactive effects should or should not exist in our sample of pharmaceutical firms.

VALUATION MODEL AND MEASURES

Valuation models derived in economics and finance propose that a firm's value depends largely on key fundamentals underlying operations (Luo and de Jong 2012). How much

the firm possesses of these fundamentals (levels), and the associated growth rate (changes), are used as model inputs to explain value (Mizik and Jacobson 2003). ROA (Return on Assets) or ROI (Returns on Investments) are typically the primary explanatory variables for firm value. After specifying the baseline model, the variables of interest (in this case, detailing and DTCA) and their interaction will be introduced to capture marginal contribution to overall firm value.

Valuation Measures

Two commonly used measures of a firm's value are stock return (STK) and Tobin's q. Stock price is the key input into the computation of both of these measures. Investors rely on stock prices as a reflection of relevant information about a firm's potential future earnings (Fama and French 1992), and Jambulingam and Sharma (2009) find that "stock prices are good indicators of the pharmaceutical firm value" (p. 333). Srinivasan and Hanssens (2008) recommend using Tobin's q for empirical modeling of firm valuation. Tobin's q is well grounded in economic theory (Tobin 1969). Offering a different perspective, Mizik and Jacobson (2009) express a preference for stock returns. In each case measurement issues, associated with calculating asset replacement value, introduce an added source of measurement bias. The appropriateness of each measure depends largely on modeling effort and whether it is level- or change-based. No convincing argument has been presented in the academic literature yet in favor of one over the other.

Tobin's q is the ratio of the firm's market value over the replacement cost of its tangible assets (Tobin 1969, 1978). It has been widely used in marketing (Anderson, Fornell, and Mazvancheryl 2004; Morgan and Rego 2006) and within the context of pharmaceutical marketing (Boasson, Boasson, MacPherson, and Shin 2005; Grewal, Chakravarty, Ding, and Liechty 2008; Wang, Zhang, and Ouyang 2009) as a forward-looking measure that provides a market-based view of the firm's future earnings. In this study, a slight variation of Tobin's measure will be proposed as firm value (McNichols and Stubben 2008), such that

$$\text{Tobin's } q = \frac{\text{Market Value of Equity} + \text{Total Assets} - \text{Book Value of Common Equity}}{\text{Total Assets}}$$

The market value of equity is equivalent to stock price times the numbers of shares outstanding. Using Total Assets in place of the traditional measure of Replacement Costs helps to circumvent the measurement errors associated with calculating replacement costs. Stock return assumes that investors view new information about a firm as a signal for change in the future discounted cash flow of the firm. As signaling changes, investors adjust expectations of future cash flow, and the changes in their expectations of future cash flow lead to changes in stock price. Stock return is calculated with the following formula

$$\text{Stock Return}_{it} = \frac{\text{Number of Shares Outstanding} \times \text{Price}_{it} + \text{Dividends}_{it} - \text{Number of Shares Outstanding}_{i,t-1} \times \text{Price}_{i,t-1}}{\text{Number of Shares Outstanding}_{i,t-1} \times \text{Stock Price}_{i,t-1}}$$

where, *i* refers to firm *i*, and *t* refers to time *t*. Stock return has been used to examine the market reaction to a dynamic process that occurs over time (Mizik and Jacobson 2003). Other examples of work using stock return in marketing include Aaker and Jacobson (2001), Morgan and Rego (2006), Luo and Homburg (2007, 2008), Srinivasan and Hanssens (2009), Luo and Bhattacharya (2009), Verniers, Stremersch, and Croux (2011), and Mani and Luo (2015).

Since both Tobin's *q* and stock return are used in this study, results will serve to cross-validate these measures and provide insights as to why one measure is more appropriate than the other in this study. The value of a firm at time *t* is largely a function of the basic fundamentals of how the firm operates. ROA and ROI typically correspond to these basic fundamentals. In this study, since detailing is a form of investment employed by the pharmaceutical firms to stimulate sales of their products, ROI is used as the key driver of the overall firm value. ROI is computed as:

$$\text{ROI} = \frac{\text{Net Income before Extraordinary Items}}{\text{Total Invested Capital}}$$

where

$$\text{Total Invested Capital} = \text{Total Long Term Debt} + \text{Preferred Stock} + \text{Minority Interest} + \text{Total Common Equity}$$

Level and change terms associated with ROI will be used in combinations to specify an

appropriate baseline model. After the baseline model is specified, detailing and DTCA will be added into the model to capture the marginal effects of these marketing mechanisms with ROI already in the model.

DATA AND SAMPLE

Data for this study come from two major sources. Data for Tobin's *q*, STK, and ROI are annual year-end data generated from COMPUSTAT. Data for detailing and DTCA of pharmaceutical firms come from SDI, a subscribed data service of Encuity Research, LLC. Encuity Research is considered to be one of the most reliable data sources for the pharmaceutical industry. From this source, we have annual data from 1990 to 2012 (expanding beyond Osinga et al's sample time frame of 1990-2000). The data contains information for each product on personal selling to hospital physicians, office physicians, nurse practitioners and physicians assistants; consumer advertising; samples; and eAnswers for online marketing. Detailing corresponds to the personal selling data, and DTCA is consumer advertising. The unit for each item is millions of dollars. Data was aggregated across all products for each company's detailing and DTCA.

Since the mid-1990s, pharmaceutical companies have been allowed more leniencies in advertising. Now, while still very regulated, pharmaceuticals may advertise to consumers via television broadcast without providing the previously-required "brief summary" of drug effectiveness, side effects, or contraindications for help-seeking or reminder ads since they do not discuss benefits (Bala and Bhardwaj 2010). For product claim ads, drug makers must include a "fair balance" of risks and benefits through either the traditional "brief summary" or through a "major statement" with adequate provision for access to the brief summary (Ventola 2011). As a result, advertising and promotion expenditures have greatly increased, utilizing this avenue for pharmaceutical companies to interact with a broader audience. Given that the present study considers the effects of detailing and DTCA over the same period, only data from 1995 to 2012 is retained for analysis.

The firms selected for the present study are similar to those selected by Osinga et al. (2011). In their paper, Osinga and colleagues analyzed the eight main pharmaceutical firms for the time period from 1993 to 2000. In 2009, larger pharmaceutical firms acquired two of the eight firms they studied. The remaining six pharmaceutical firms—Abbott, Bristol-Myers-Squibb, Eli Lilly, Johnson & Johnson, Merck, and Pfizer—are selected for the present study. These firms have consistently accounted for over 50 to 60 percent of the sales volume in the brand name sector. As an option for increasing the size of the sample, consideration was given to including medium and small size pharmaceutical firms in the sample. These firms were not included since non-sampling error would then be introduced, rendering our sample of pharmaceutical firms to be highly heterogeneous.

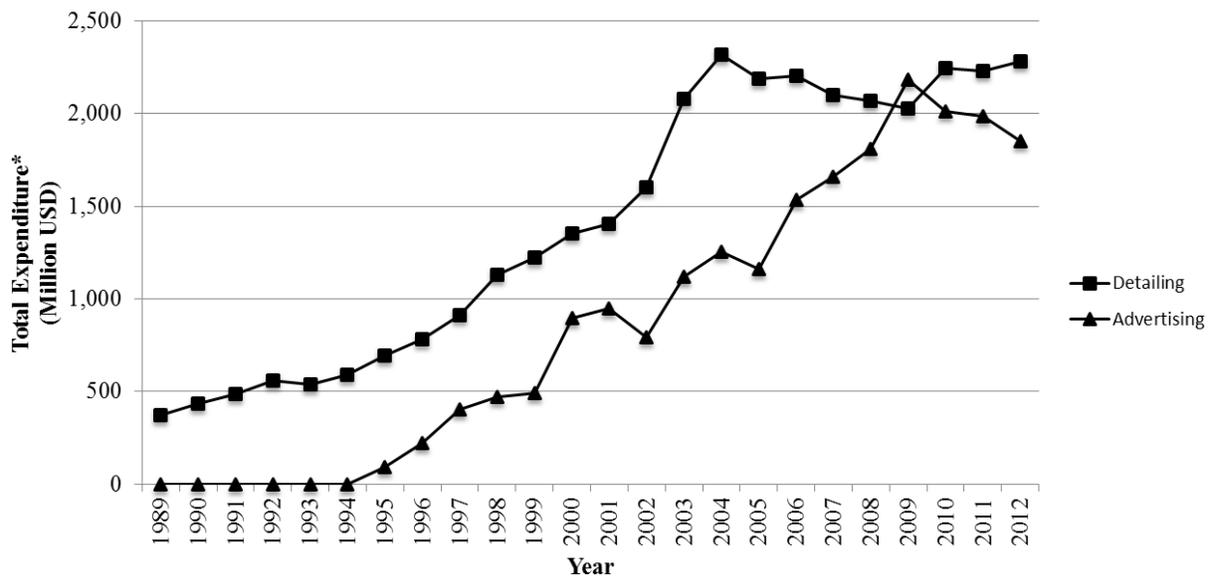
A cross-sectional time-series approach is deemed appropriate for this panel of six firms over an 18-year time period. Advertising data in the early 1990s tend to be outliers, due to the nature of regulation changes beginning in 1995,

so the balanced panel of six firms from 1995 through 2012 forms the current study’s dataset, with 108 total observations. It should be noted that firm-specific events like new product introductions will vary from firm to firm. The use of cross-section time series approach allows for each of the six time-series to vary. Variation among these series will be incorporated in the estimation of the model coefficients. Furthermore, time-related variation will be reduced by taking the first difference of the measures over time.

The time period of the current study (1995-2012) includes all of the major regulatory changes for advertising in the pharmacy industry as of late. Prior research and its mixed findings occurred during a different environment with much less regulation. Accordingly, this data set creates a prime opportunity for studying the integrative effects of detailing and DTCA in modern times.

Figure 1 presents the total expenditures (in million dollars) of detailing and DTCA for the six firms from 1995 through 2012. This time

FIGURE 1:
Total Expenditure on Detailing and Direct-to-Consumer Advertising, 1989-2012



*Note: Total expenditure is calculated across the six firms Abbott, Bristol-Myers-Squibb, Eli Lilly, Johnson & Johnson, Merck, and Pfizer. Data attained from promotional audits and personal selling audits of Encuity Research, LLC. Encuity’s data on promotional audit began in 1995. There may be a minimal amount of advertising occurring prior to 1995, which is not reflected in this Figure.

period is noteworthy, for reasons beyond providing a more recent view of Osinga and colleagues' (2011) study. In fact, based on conversations the FDA began in 1995, 1997 was the first year pharmaceutical firms were provided guidelines that allowed them to advertise directly to consumers without the advertisement providing a summary of drug effectiveness, side effects or contraindications. The total of DTCA for the six firms increased from \$91.6 million in 1995 to its peak (\$2,179.8 million) in 2009 and declined gradually in the subsequent three years. As detailing has been the dominant form of promotion in the pharmaceutical industry, the six firms invested \$693.5 million with detailing reaching its peak in 2004 at \$2,314.7 million. Expenditures in detailing have stabilized within a very limited range ever since.

It is quite understandable that the growth rate of DTCA far exceeded that of detailing in this study period. In fact, DTCA expenditures actually exceeded detailing expenditures (\$2,026.7 million) in 2009 by a small margin. Conceivably, the growth of DTCA expenditure is the result of a number of factors, such as the relaxation of federal regulation of pharmaceutical firms' ability to advertise

directly to consumers or the shifting of product emphasis from new to incremental products and pressure from the generic sector to meet ROI expectations. As for detailing, voluntary and involuntary compliance play a major role in the decline of investments made in detailing. Pressure from social groups has been mounting for decades challenging and accusing pharmaceutical firms of making exorbitant profits.

This study's approach recognizes that some variation exists among the six time series. Specifically within the pharmaceutical industry, one would expect the introduction of blockbuster drugs by each firm to be accompanied by a surge in marketing expenditures and to take place at different points in time. By allowing each time series to vary in the process, pooling across the data sample's six firms introduces an additional source of variability. By the same token, pooling leads to a six-fold increase in the number of observations. This pooled time-series approach entails a trade-off between an increase in the number of observations and an increase in the inherent variability within the proposed model.

TABLE 1:
Specification of Baseline Model (Dependent Variable = Tobin's Q)

	(A)	(B)	(C)	(D)	(E)	(F)
ROI	0.12** (<i>p</i> = .0000)			0.03* (<i>p</i> = .0482)		
ROI (-1)		0.10** (<i>p</i> = .0000)			(<i>n.s.</i>) (<i>p</i> = .3130)	
DROI (-1)			0.02 (<i>n.s.</i>) (<i>p</i> = .3051)			0.01 (<i>n.s.</i>) (<i>p</i> = .4660)
Q (-1)				0.77** (<i>p</i> = .0000)	0.81** (<i>p</i> = .0000)	0.85** (<i>p</i> = .0000)
R-Squared	0.35	0.27	0.01	0.71	0.70	0.70
Adj. R-Squared	0.34	0.27	0.00	0.70	0.69	0.69
F-Statistic	56.75** (<i>p</i> = .0000)	37.80** (<i>p</i> = .0000)	1.06 (<i>n.s.</i>) (<i>p</i> = .3051)	118.60** (<i>p</i> = .0000)	113.75** (<i>p</i> = .0000)	112.94** (<i>p</i> = .0000)
Durbin-Watson Statistic	1.01	0.83	0.37	1.91	1.81	1.87

Note: **p* < .05; ***p* < .01

SPECIFICATION OF THE BASELINE MODELS

The procedure and results for specifying the baseline model for Tobin's q are shown in Table 1. Tobin's q is measured as the market capitalization at time t , adjusted by the replacement cost of the firm at time t . The baseline model for firm value is first specified with the ROI measure, and results are shown in Column A of Table 1. The coefficient for ROI is highly significant (p -value = 0.00). This significance is likely caused by the presence of a time-related source of bias, as indicated by the Durbin-Watson statistic value of 1.01. Similarly, for ROI(-1) in Column B, ROI(-1) is highly significant, yet autocorrelation is a concern (Durbin-Watson statistic = 0.83). When the baseline model is specified with DROI(-1), the variable is not even statistically related to Tobin's q , and the Durbin-Watson statistic (0.37) indicates a more serious case of positive autocorrelation.

In order to correct for the time-related source of bias, a first difference approach is applied for these alternate baseline models. The first difference measures are represented with a "D" in front of the variable name, and lagged terms are represented by the addition of "(-1)" in the model's measures. With a slight modification, we use the lagged term $Q(-1)$ as the independent variable to explain Tobin's q at time t as the first difference model. Note that in analyzing valuation models with time-series data, change models rather than levels models are often being advocated (Mizik and Jacobson 2009). Autocorrelation is frequently associated with levels measures leading to artificially suppressing the overall model error terms, in turn yielding spurious statistical significance.

Results with $Q(-1)$ for ROI, ROI(-1) and DROI(-1) are shown in Columns D, E, and F of Table 1. It is quite evident that ROI with $Q(-1)$ in the baseline model yields the best results (shown in Column D). ROI takes on a value of 0.03 with a p -value = 0.05. The respective Durbin-Watson statistic with a value of 1.91 shows little sign of autocorrelation. The coefficients for ROI(-1) and DROI(-1) are not significant even though these models show no indication of autocorrelation. The baseline model for q is specified with $Q(-1)$ and ROI. Here, the

evidence we have gathered indicates the valuation model with ROI is an appropriate and valid approach for modeling the valuation of a firm.

Table 2 provides the study's results for STK. Column A presents results with DROI as the predictor of STK. DROI has a coefficient of -0.01 (p -value = 0.05). DROI(-1) results are shown in Column B. The coefficient of DROI(-1) is 0.01 and is significant at the 0.02 level. In addition, DROI(-1) explains more variability in STK, with R-square = 0.05, compared to R-square = 0.04 for DROI. The Durbin-Watson statistic of 2.14 shows little or no presence of autocorrelation. The model with DROI(-1) is identified as the appropriate baseline model for STK.

Mizik and Jacobson (2003) introduce time and industry dummies in their valuation model to further account for these two sources of variability. As mentioned previously, time-related variation is reduced by using the first difference approach. Since all six firms reside in the same industry, between-industry variation is non-existent in our sample.

TABLE 2:
Specification of Baseline Model
(Dependent Variable = Stock Return)

	(A)	(B)
DROI	-0.01 (<i>n.s.</i>) ($p = .00522$)	
DROI(-1)		0.01* ($p = .0209$)
R-Squared	0.04	0.05
Adjusted R-Squared	0.03	0.04
F-Statistic	3.86 (<i>n.s.</i>) ($p = .0522$)	0.51* ($p = .0209$)
Durbin-Watson Statistic	1.79	2.14

Note: * $p < .05$; ** $p < .01$

RESULTS

Table 3 presents the results of the valuation model with Tobin's Q as the dependent variable. The high R-square value (0.71) shown in Column A results largely from the inclusion of $Q(-1)$ in the model. The Durbin-Watson

TABLE 3:
Detailing and Direct-to-Consumer Advertising on Tobin's Q with ROI as Baseline

	(A)	(B)	(C)	(D)
Q (-1)	0.77** (<i>p</i> = .0000)	0.76** (<i>p</i> = .0000)	0.77** (<i>p</i> = .0000)	0.78** (<i>p</i> = .0000)
ROI	0.03 (<i>n.s.</i>) (<i>p</i> = .0482)	0.02 (<i>n.s.</i>) (<i>p</i> = .0890)	0.83* (<i>p</i> = .0474)	0.02 (<i>n.s.</i>) (<i>p</i> = .0918)
DDetail_LN		1.41* (<i>p</i> = .0236)		1.43* (<i>p</i> = .0286)
DAdvertising_LN			0.45** (<i>p</i> = .0010)	0.51** (<i>p</i> = .0019)
DD_LN*DA_LN				-0.91 (<i>n.s.</i>) (<i>p</i> = .3026)
R-Squared	0.71	0.72	0.74	0.75
Adjusted R-Squared	0.70	0.71	0.73	0.74
F-Statistic	118.60** (<i>p</i> = .0000)	84.25** (<i>p</i> = .0000)	91.72** (<i>p</i> = .0000)	57.73** (<i>p</i> = .0000)
Durbin-Watson Statistic	1.91	1.89	1.81	1.85

Note: **p* < .05; ***p* < .01

statistic again hovers consistently around 2.00, indicating that autocorrelation is not a problem. The coefficient for DDetail_LN in Column B has a value of 1.41 and is significant at the 0.02 level. By itself, DAdvertising_LN is significant at the 0.00 level with a coefficient of 0.45, shown in Column C. Inclusion of the interaction between advertising and detailing turns out to not be significant, as shown in Column D, while coefficients of the individual variables for detailing and advertising are positive and significant. Therefore, while individual results demonstrate the individual impacts of detailing and DTCA on firm value, our central research hypothesis of an interaction effect is not supported.

Similar results are captured in Table 4 with STK as the dependent variable. Column A shows the baseline model with DROI(-1). DROI(-1) is found to be significant at the 0.02 level with R-square = 0.05. The Durbin-Watson statistic is 2.14, indicating little or no sign of autocorrelation. DDetail_LN in Column B is marginally significant with a coefficient of 0.29

and *p*-value = 0.08, lending support for the positive impact of detailing on the value of a firm. DDetail_LN explains an additional 2.88% (R-square with DDetail_LN = 0.08 – 0.05) of the variation in STK.

In Column C of Table 4, the coefficient for DAdvertising_LN takes on a value of 0.10, significant at the 0.01 level. DAdvertising_LN explains an additional 7.18% of the variance in the dependent measure of STK. Addition of the interaction term, where variations of advertising and detailing measures are multiplied, captures some interesting results. While Column D indicates that the interaction between DAdvertising_LN and DDetail_LN is not statistically significant, it shows that the coefficient for DDetail_LN takes on a positive value of 0.34 (*p*-value = 0.05) and the coefficient for DAdvertising_LN is 0.13 at the significance level of 0.00. In this case, the R-square assumes a respectable value of 0.16, and the Durbin-Watson statistic hovers around 2.00 showing no sign of autocorrelation. Overall, the coefficients associated with advertising and

TABLE 4:
Detailing and Direct-to-Consumer Advertising on Stock Return with DROI (-1) as Baseline

	(A)	(B)	(C)	(D)
DROI (-1)	0.01* (<i>p</i> = .0209)	0.01* (<i>p</i> = .0143)	0.01* (<i>p</i> = .0232)	0.01* (<i>p</i> = .0147)
DDetail_LN		0.29 (<i>n.s.</i>) (<i>p</i> = .0811)		0.34 (<i>n.s.</i>) (<i>p</i> = .0533)
DAdvertising_LN			0.10** (<i>p</i> = .0055)	0.13** (<i>p</i> = .0026)
DD_LN*DA_LN				-0.39 (<i>n.s.</i>) (<i>p</i> = .1228)
R-Squared	0.05	0.08	0.12	0.16
Adjusted R-Squared	0.04	0.06	0.11	0.13
F-Statistic	5.51* (<i>p</i> = .0209)	4.36* (<i>p</i> = .0153)	6.86** (<i>p</i> = .0016)	4.65** (<i>p</i> = .0018)
Durbin-Watson Statistic	2.14	2.18	2.04	2.15

Note: **p* < .05; ***p* < .01

detailing are consistently positive, showing further support that these marketing expenditures increase the value of a firm.

Results reported in Table 4 largely support and validate findings from Table 3. Evidence shows that DTCA exercises a positive impact on the value of a firm. Likewise, detailing also has a positive, and stronger, influence on firm value. Based on the results shown in Tables 3 and 4, these two factors do not interact with each other, suggesting potential separation of the two markets (prescription drug and consumer health products) served by pharmaceutical firms. As has been pointed out previously, even within the branded drug market, emphasis has been shifted from new product innovation to that of incremental innovation. Promotions of new products are heavily reliant on detailing whereas, for extended products, promotion typically takes the form of DTCA. This further provides support for the separation of markets being served by a company, lessening the likelihood of interaction between detailing and DTCA.

SUMMARY AND CONCLUSIONS

This study employs a valuation model with ROI as the primary explanatory variable to parameterize and test the effects of DTCA and detailing on the overall value of a firm. In doing

so, this study sets itself apart from other research in this area. Data in our study was obtained from Encuity Research, LLC over a period of 1995 to 2012. The six largest U.S. pharmaceutical firms in the past 20 years constitute the sample of this study, and the model is shown to be appropriate for estimating the overall value of the sample firms. Tobin's *q* and stock returns are used to capture the effects of detailing and consumer advertising. Tobin's *q* measures the value of a firm at a fixed point in time, while stock return identifies changes in value between two consecutive points in time. In both measures, detailing and DTCA are found to have a positive and significant impact on a firm's value. Specifically, changes over time (first difference) in detailing and DTCA expenditures contribute to an increase in firm value as shown in Tobin's *q* and changes in value over time as reflected in stock return.

The magnitude of the coefficients associated with these explanatory factors indicates that the effects of detailing on firm value are substantially greater than those from DTCA. This comparison is possible since both detailing and DTCA are both measured in millions and the same transformations were applied to these two variables in the valuation model. The impact of detailing was more evident when data from 1990 to 1994 were included for detailing. We found a highly significant impact of

detailing on firm value. Here in the present study, in order to have comparable time periods for both detailing and DTCA, only data that extend from 1995 to 2012 were used.

Another observation should be noted. Tobin's q measures the value of a firm at time t , rescaled by its replacement cost. Replacement cost is a good indicator of firm size. Therefore, the size effect is removed through rescaling, yielding a more absolute measure of value. Stock return, even though it is differenced, maintains the original unit of measure (dollars).

It is obvious that overall sales of a firm is largely a function of volume of existing sales that can be maintained and new sales that can be attracted through new products. However, in light of government regulation and the major shift in emphasis from almost complete dependence on blockbuster drug introductions to that of market maintenance, the six major U.S. pharmaceutical firms in this study invested heavily in detailing. As evidenced in the results, value contribution of detailing per unit far exceeded that of DTCA, signifying that building a relationship with physicians still plays an absolutely critical role in the overall profitability picture of the firm. Yet, the new role of DTCA for market maintenance should not be understated.

Given our model, it is hard to conceptualize the structure of interaction when separate markets are combined at the firm level. Potential explanation for the lack of interaction between detailing and DTCA, as being put forth in this study, may be the separation of the prescription and over-the-counter product markets. Additionally, insurance companies have more influence on prescription drug choices now than ever before. It would be interesting for future research to study the marketing efforts of pharmaceutical firms that are directed toward insurance companies and how this activity might interact with other marketing activities such as detailing and DTCA.

LIMITATIONS

By nature of this research, several key limitations have to be recognized. Only the top six pharmaceutical firms are used in this study.

We could have enlarged the sample to include the top, say, 100 firms in this industry. However, small pharmaceuticals tend to specialize in specific markets, making the sample highly heterogeneous. Our decision to restrict the sample to the top six is primarily based on our desire to have as homogeneous a group of firms as possible, while allowing our results to be projectable to over 50% of the entire pharmaceutical market in terms of sales. The significant results as reported tend to support our presumption.

In terms of methodology, this paper incorporates a difference model. Using a first difference model helps remove time-related changes going on in the environment during this period, but the exact effectiveness of this is not confirmed. Future research in this realm would be to follow a model similar to Schramm and Hu (2013) to see if the impact of detailing and DTCA differ over time, before and after the regulatory changes.

The role of marketing is diverse and, while this paper focuses on marketing communications activities, it is important to note that marketing operates at a broader level and is especially helpful when learnings from marketing are integrated with the research and development (R&D) process (Becker and Lillemark 2005; Feng, Morgan, and Rego 2017; Peterson and Jeong 2010). The rise of generic drug companies and increase in cost of R&D have greatly changed the landscape of how the pharmaceutical firms go about conducting their business. Comments and feedback from physicians during detailing could conceivably play a role in future R&D. To what extent these restrictions have influenced the results of this study cannot be ascertained and is beyond the scope of this research. This study provides evidence on the value contribution of detailing and DTCA at the firm level.

Answering the call for improving marketing metrics (Hanssens and Pauwels 2016), we aimed to examine the impact of the pharmaceutical industry's two primary marketing methods (detailing and DTCA) on firm value. While our findings may not be counterintuitive, such confirmation is an important contribution to our knowledge base of marketing tactics in light of new legislation and leniencies regarding the

marketing of pharmaceutical products. While the pharmaceutical industry is unique in many ways, this serves to further validate the importance of personal selling and customer relationship building across all business-to-business transactions (Ahearne, Jelinek, and Jones 2007), reminding us that, at the core, stronger relationships lead to better trust, which generates credibility that is essential when prescribing physicians are seeking guidance from pharmaceutical representatives, making decisions, and choosing between products that can quite literally have life-altering consequences.

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THE ROLE OF PRIOR SALES EXPERIENCE OF BUYERS AND DURATION IN BUYER-SELLER RELATIONSHIPS

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This paper examines the impact that a buyer's prior sales experience and the duration of the buyer-salesperson relationship has on the satisfaction and commitment linkages established within the literature. First, two key facets of satisfaction (social and economic) are linked to buyer's commitment to the salesperson. Next, buyer-salesperson relationship duration is examined as an influencer between the satisfaction and commitment linkages. Following this, the study shifts its focus to examine if and how buyers with prior sales experience view the buyer-salesperson relationship different than buyers without prior sales experience. Findings of the study highlight the importance of developing our understanding of buyer-salesperson relationships with regards to multi-faceted satisfaction, buyer background, and relationship length.

INTRODUCTION

Firms that are successful in today's competitive environments understand methods of increasing buyer's commitment through comprehending nuances within each buyer relationship (Palmatier, Dant, Grewal & Evans, 2006; Rutherford, Boles, Barksdale & Johnson, 2006; 2008). The presence of commitment in buyer-seller relationships is essential across various contexts and settings including supply chain management exchanges (Kibbeling et al., 2009), services (Caceres & Pappas, 2007), pharmaceuticals (Lagace, Dahlstrom, & Gassenheimer, 1991), and manufacturing (Cannon & Perrault, 1999) for driving general relationship quality (Dagger & O'Brien, 2010; Ferris et al., 2009). In an effort to better understand the development of buyer's commitment to firms, scholars have focused increased attention on the development and maintenance of the buyer-salesperson relationship. Specifically, the linkage between buyer's satisfaction with the salesperson and its influence on buyer's commitment has been focal to this discussion (e.g. Johnson, Barksdale Jr., & Boles, 2001; Rutherford et al., 2006).

While a linkage between satisfaction and commitment has been established, a limited, but growing body of research has suggested that satisfaction must be studied from both a social

and economic viewpoint (Geyskens & Steenkamp, 2000; Rodriguez, Agudo & Gutiérrez, 2006; Rutherford, 2012). These studies emphasize that a failure to distinguish between both types of satisfaction will undoubtedly lead to conflicting findings, which hinders the advancement of the current knowledge base. For instance, Geyskens and Steenkamp (2000) found that economic and social satisfaction had differing effects vis-à-vis antecedents and outcomes. The authors offer that satisfaction in general has shown mixed findings in the marketing channel literature likely because it has been treated as a unidimensional construct with economic and social dimensions often canceling each other out. From a practitioner viewpoint, sales representatives may be doing particularly well with buyers in one area of satisfaction, while masking potential problems in another, leaving the partnership vulnerable. For instance, sales representatives may pride themselves on providing superior service and on having strong interpersonal relations with their buyers only to be blind-sided when a buyer switches to a competing seller because the competing seller, with no such established social ties, promised the buyer additional cost savings (e.g. economic satisfaction).

Given the importance of distinguishing between these types of satisfaction, this study will first highlight the impact of social and economic satisfaction on commitment using social exchange theory, and demonstrate the relative importance of economic satisfaction. Building

on the direct impact of satisfaction on commitment, the study will then focus on the impact of two potential moderators (relationship duration and prior sales experience of the buyer). Differences in relationship development (Dwyer, Schurr & Oh, 1987) and buyer's background may impact the satisfaction to commitment linkages. Specifically, does the relationship length impact the strength of the relationship between satisfaction and commitment? Social exchange theory would indicate that it does as it takes time to have multiple interactions that lead to relationship norms and eventually commitment. Yet, what does this say about buyers and sellers that can establish relatively high levels of social and economic satisfaction early on? Length of the relationship has not been studied as a moderator of satisfaction and commitment and a better understanding of how relationships evolve over time has important managerial implications. Does additional time in the relationship reinforce levels of commitment or potentially lead salespeople into a false sense of relationship security?

As to the second moderator, the previous experience of a buyer as a salesperson, and how this experience impacts the buyer in their present role interacting with salespeople, has not been researched. More specifically, does a buyer's previous sales experience alter the development of the relationship that creates a differing effect on the linkages between satisfaction and commitment? And, does this previous sales experience of the buyer impact the social and economic development of the relationship differently? These are important questions to answer as they can provide insights into how salespeople need to adapt in order to strengthen buyers' levels of commitment. While learning that a buyer was a sales representative in a former life may seem innocuous on first blush, this experience provides the buyer with a basis for comparison in how the present sales representative is assessed. Considering the prevalence of people working in sales, having buyers with previous sales experience is not likely to be an isolated phenomenon. In fact, over one-third of the buyers in this study had previous experience as sales representatives. If researchers can provide firms with a better understanding of how previous social experiences affect buyer-seller

relationships, firms, through sales managers, will be better able to train new sales personnel as well as develop and maintain stronger long-lasting relationships. A more nuanced understanding of the associations can also potentially help salespeople to avoid complacency in their partnerships with buyers.

THEORETICAL FRAMEWORK

Social exchange theory is well established within the literature as a basis for building relationships in a business-to-business context (i.e. Briggs & Grisaffe, 2009; Rutherford et al., 2006; Schetzle & Drollinger, 2014). The theory is based on relational interdependence, which develops over time within the buyer-seller relationship (Dwyer et al., 1987; Kingshott, 2006; Lambe, Wittmann, & Spekman, 2001). The premises of the theory include: 1) exchange interactions resulting in economic and/or social outcomes such as satisfaction, and 2) positive outcomes over time increases a firms' commitment to the exchange relationship. First, time in the relationship is an important factor per social exchange theory. It takes time for interactions to occur that can foster the necessary levels of trust and commitment. Second, as opposed to economic theory alone, social exchange theory considers both social and economic conditions as key influencers within relationships. Parties engage in exchange interactions depending upon the value of the exchange (Blau, 1968; Lambe et al., 2001). As such, the success of exchange relationships depends on both parties acknowledging the presence of economic and social interdependence (Luo & Donthu, 2007). More specifically, when social and economic rewards are satisfactory, the retention rate of existing relationships and transactions remain and increase.

Social exchange is an appropriate theoretical lens as this study examines levels of commitment parceled out by both social and economic satisfaction. As theorists note, some parties may place more emphasis on economic rewards while others put more emphasis on social outcomes and maintaining trust with trading partners (Lambe et al., 2001). Hence, by determining the importance level of each type of satisfaction on commitment we will have a

better understanding of how social exchange theory operates in a buyer-salesperson context.

DEFINING THE CONSTRUCTS AND HYPOTHESIS DEVELOPMENT

Central to this study is the commitment construct. It is an important identifier in the social exchange process (Schetzslle & Drollinger, 2014). According to Anderson and Weitz (1992), commitment is the desire to develop a stable relationship by fulfilling the necessary sacrifices to maintain it. Commitment has long served as a key variable in explaining buyer-seller relationships and the willingness of parties to make short-term exchange sacrifices in efforts to maintain these relationships indefinitely (*see* Morgan & Hunt, 1994). The first facet of satisfaction, buyer's social satisfaction, is defined as a "member's evaluation of the psychosocial aspects of its relationship, in that interactions with the exchange partner are fulfilling, gratifying, and facile" (Geyskens & Steenkamp, 2000, p. 13). Research has been able to specifically establish a link between social satisfaction and commitment (e.g. Brown & Peterson, 1993; Caceres & Paparoidamis, 2007; Geyskens & Steenkamp, 2000; Rutherford, 2012; Walsh, Evanschitzky & Wunderlich, 2008). The second facet of satisfaction, economic satisfaction, is defined as a, "members' positive affective response to the economic rewards that flow from the relationship with its partner" (Geyskens, Steenkamp & Kumar, 1999, p. 224). While not studied nearly as much as social satisfaction within a buyer-salesperson context, a positive linkage between economic satisfaction and commitment has recently been established (Rutherford, 2012).

Relationship Duration as a Moderator

Palmatier et al. (2006) defined relationship duration as the, "length of time that the relationship between exchange partners has existed" (p. 140). They posited that relationship duration supplies partners with behavioral information, which can allow for increased confidence in the partnership. Further, Kumar, Scheer, and Steenkamp (1995) posited that the age of a relationship had a positive impact on the quality of a relationship because similar goals and interests within the buyer-seller

relationship affect cooperation. This in turn impacts the successfulness of the partnership. Additionally, social exchange theory suggests that more established, long-term buyer-seller relationships tend to have more positive social and economic rewards and increased levels of confidence and commitment (Briggs & Grisaffe, 2009; Stanko, Bonner & Calantone, 2007). Time is a necessary ingredient from which interactions occur and norms that foster commitment are established (Lambe et al., 2001).

Further, an important stability factor for long-term exchange relationships is a commitment-oriented exchange partner who engages in the partnership from both the economic and social aspects (Sharma, 2001). However, relationship duration has rarely been tested in a moderator role. Dagger and O'Brien (2010) found that the effect of social benefits on commitment to a service provider was much stronger for experienced consumers than novice consumers. Experience was needed for the social benefits of friendship to lead to greater commitment.

Conversely, other researchers found that the importance of social bonds linked to utilitarian benefits such as profits and improved store image decreased as relationship duration increased between franchisors and franchisees (Lee, Kim, Ki, Lee, and Lim 2015). As the authors anticipated, social benefits would be more important during early stages of the relationship in which there was still a high degree of uncertainty. Similarly, Sweeney and Webb (2007) hypothesized that within buyer-supplier relationships involving Australian manufacturers, relationship maturation would lessen the importance of social benefits on commitment. According to their reasoning, "time" fosters continuity such that relationship commitment becomes less dependent on social benefits. However, they found evidence to the contrary, suggesting that social benefits are linked to commitment over the duration of the relationship. The authors call for additional investigation of this phenomenon. Meanwhile, a similar proxy to economic satisfaction, termed functional benefits, was found to have a constant positive association with commitment in the same study (Sweeney & Webb, 2007).

Given mixed past findings, and limited scope of inquiry, it is important to examine length of the relationship as a moderator within a broader buyer-salesperson context. Social exchange theory acknowledges that new relationships are likely more fragile because time allows for more interactions and reinforcement of norms. Yet, it has not been established whether time has any additional influence on relationships in which social or economic satisfaction has initially been achieved. The following moderator relationships are formed:

- H₁:** The positive association between social satisfaction with the salesperson and buyer’s level of commitment to the salesperson is stronger as relationship duration increases.
- H₂:** The positive association between economic satisfaction with the salesperson and buyer’s level of commitment to the salesperson is stronger as relationship duration increases.

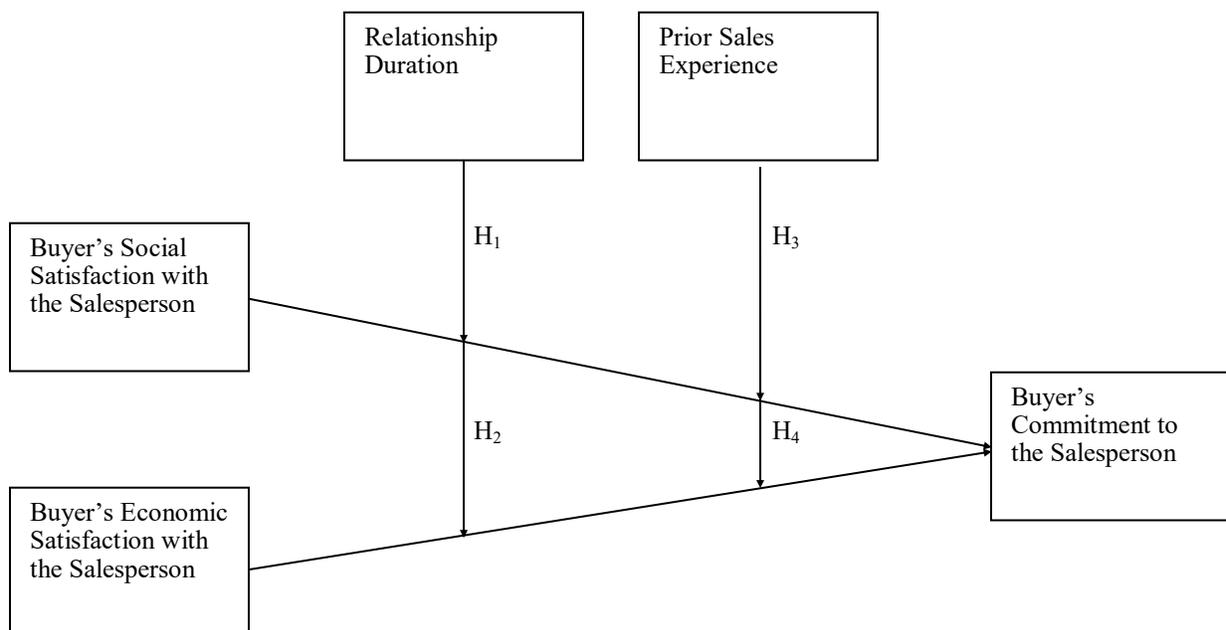
Prior Experience in Sales as a Moderator

In this section, the role of a buyer’s prior sales experience is examined in relation to satisfaction and commitment. Existing literature on buyer’s prior sales experience is sparse. Therefore, this study draws on the impact of

prior sales experience in general to build the case of a moderating effect. Sales personnel with less experience might react differently in business-to-business situations than those with experience (Churchill, Ford & Walker, 1976), like the challenges presented to inexperienced sales personnel when dealing with sales call failures and successes (Dixon, Forbes & Schertzer, 2005; Dixon, Spiro & Forbes, 2003). The ability to deal with a variety of situations and maintain a sense of stability with customers makes for a successful salesperson. In their study on relationship quality, Crosby, Evans, and Cowles (1990) suggested that seller expertise influences the buyer-seller relationship. Expertise comes with experience, which leads to improved relationship quality (Lagace et al., 1991). Expertise refers to the degree to which a salesperson is knowledgeable, experienced, and proficient in the art of cultivating relationships that results in beneficial exchanges (Lagace et al., 1991). Expertise in sales requires an accumulation of competency based on prior experience and application (Newell, Belonax, McCardle, & Plank, 2011).

If a buyer has previous sales experience, the buyer will understand the sales process from both the salesperson and buyer perspectives. With this extra viewpoint of the buyer-seller

**FIGURE 1:
The Research Model**



relationship, buyers that have worked in sales will likely be better at assessing relational aspects over their counterparts without prior sales experience. As social exchange theory suggests, buyers who have had experience on both sides of the buyer-seller exchange have engaged in social interactions on both levels, providing them with the knowledge for expertise, ability to function in either role, and a greater understanding of the interdependence that exists. Buyers with this extra viewpoint will be more confident and better able to assess both behavioral and economic aspects of the relationship with their salesperson. A buyer's sales experience can impact relationship-building strategies used to foster a successful buyer-seller exchange (Dagger & O'Brien, 2010). Moreover, logic suggests that buyers who have been on the sales side will have a greater appreciation for how challenging it is to achieve both economic and social satisfaction from the perception of the salesperson. Hence, it can be expected that growing satisfaction, coupled with a greater level of understanding through previous sales experience for how difficult it is to achieve satisfaction, will result in amplified levels of commitment. Based on the above arguments, the following moderator relationships are formed:

H₃: The positive association between social satisfaction with the salesperson and buyer's level of commitment to the salesperson is stronger for buyers with prior sales experience.

H₄: The positive association between economic satisfaction with the salesperson and buyer's level of commitment to the salesperson is stronger for buyers with prior sales experience.

METHODOLOGY

Sample

Participants were part of an online panel in which they were compensated for completing surveys. Employees of firms that worked in purchasing were asked to participate in the study. To qualify for participation in the study, subjects had to have purchasing power in a business-to-business setting and have face-to-face contact with salespeople. A total of 2,068 potential respondents were contacted, of which

635 visited the online site where the questionnaire was posted, and 509 agreed to start the questionnaire. Of the 509 potential respondents, 175 did not meet the set criteria of having direct face-to-face contact with a salesperson and were not allowed to participate. A total of 334 respondents started the questionnaire, of which, 229 completed the questionnaire. A total of 196 respondents remained after complete case deletion (listwise) in which data was missing. Overall, a response rate of just over 30% was obtained with a usable response rate of 9.5%. Complete case deletion is appropriate given the sample size is sufficiently large with the sample after deletion approaching 200, the amount of missing data is relatively small (<15%), and the relationships in the data are strong (Hair, Black, Babin & Anderson, 2009).

The sample was composed of 59.5% females. A total of 86.3% were age 35 or older. The majority of the sample was married (59%) and Caucasian (81%). The average length of buying experience for the sample was just under six years. On average, the buyers have maintained a relationship with their respective salespersons for 57 months. Buyers with prior sales experience had on average 25 months of selling experience. Appendix 1 provides additional details of the industries, products purchased, and frequencies within the sample.

Measures

Two questions were used to focus respondent's attention to a specific salesperson which they had face-to-face contact with and procured products from (see appendix 2). The independent and dependent constructs were adapted from previously accepted scales when available. Buyer's social satisfaction with the salesperson was measured using five 7-point Likert-type items developed by Dwyer and Oh (1987) and adapted by Rutherford et al., (2006). Buyer's economic satisfaction with the salesperson was measured using items developed on a 7-point Likert-type scale. To develop the scale, items were partially based on the work of Geyskens and Steenkamp (2000) and Rutherford, Anaza & Phillips. (2012). However, neither of these studies (retailing based and selling firm based) fit the salesperson context and adaptations were made primarily

based on the Rutherford et al. (2012) study to fit the salesperson context. Buyer’s commitment to the salesperson was measured using nine 7-point Likert-type items. The items were adapted from the scale developed by Anderson and Weitz (1992). Adaptations were made by changing words from “we” to “my firm” and “supplier” to “salesperson.” For example, “We have a strong sense of loyalty to this *supplier*” was adapted to “My firm has a strong sense of loyalty to this *salesperson*.” The two moderators were examined at the end of the survey. In measuring relationship duration, respondents were asked, “About how long has this salesperson called on you?” Respondents replied in months. The following question measured prior sales experience, “Have you ever worked in sales?” The respondents answered either “yes” or “no.” A follow-up question to those who answered “yes” allowed the subjects to enter the number of months of prior sales experience.

Analysis

To test the robustness of the model, a confirmatory factor analysis was conducted using LISREL 8.52. A total of six items were removed from the multi-item constructs. Three of the removed items from the commitment scale were reversed. Reversed items have been shown to exhibit problems (Swain, Weathers & Niedrich, 2008). The remaining three removed items (one from the social satisfaction scale and two from the commitment scale) were removed based on path estimates, standardized residuals, and modification indices (Hair et al., 2009). All multi-item constructs retained at least four items. The model yielded a chi-square of 110.52 with 51 degrees of freedom (p < 0.00). According to Hair et al. (2009), goodness-of-fit indices suggest adequate fit (RMSEA=0.078;

CFI=0.99; standardized RMR=0.044). All items had significant loadings on their latent construct, which suggests convergent validity (Anderson & Gerbing, 1988). All construct reliabilities exceeded 0.90, which exceeds the threshold set by Nunnally (1967). All average variance-extracted values (lowest value = .71) were greater than the squared correlation estimates providing evidence of discriminant validity (Fornell & Larcker, 1981; Hair et al., 2009). Table 1 provides a correlation matrix, reliabilities, means, and standard deviations for each construct.

Regression and hierarchical moderated regression analysis were used to test the hypothesized relationships in a series of five steps. In step one, direct paths between both buyer social satisfaction with the salesperson and buyer economic satisfaction with the salesperson were examined in relation to buyer commitment to the salesperson. Next, to test the impact of the two moderators, hierarchical moderated regression analysis was initially used (Baron & Kenny, 1986). Each moderator was tested independently, to keep the integrity of the sample and provide a basis for controlling the effects of each moderator separately (Walsh, Evanschitzky & Wunderlich, 2008). Relationship duration was reported in months and a single regression equation was used to test the moderating effects of this variable. Buyer’s prior sales experience was captured as both a categorical variable and a linear variable (in months). In the first of three steps, the regression equation for this moderator was run using the linear coded variable. For further analysis, in step four, a regression analysis of the dummy coded version of prior sales experience, split into those with and those without prior sales experience, was examined. Further, step five conducted a Chow

**TABLE 1:
Correlation Matrix, Means, and Standard Deviations**

	Y ₁	X ₁	X ₂	X ₃	Means	S.D.
Y ₁ Buyer’s commitment to salesperson	0.91				5.21	1.30
X ₁ Buyer’s social satisfaction with salesperson	0.67**	0.98			6.00	1.18
X ₂ Buyer’s economic satisfaction with salesperson	0.79**	0.72**	0.94		5.57	1.20
X ₃ Relationship duration	0.22**	0.16*	0.19**		56.94	63.35
X ₄ Prior sales experience	0.19**	0.15*	0.18*	0.09	25.52	68.10

Notes: Reliabilities on the diagonal; Correlations under the diagonal; *statistically significant at the .05 level: one-tailed test; ** statistically significant at the .01 level: one-tailed test.

(1960) test to examine the impact of prior sales experience.

RESULTS

Results reinforce support for both a relationship between buyer’s social ($b = .223, p < .05$) and economic ($b = .701, p < .05$) satisfaction with the salesperson and the buyer’s commitment to the salesperson. The overall equation yielded an adjusted R^2 of .645.

To test the effect of relationship duration, H_1 and H_2 , hierarchical moderated regression was used in step two. The results for H_1 failed to find support that relationship duration moderated the relationship between buyer’s social satisfaction and buyer’s commitment to the salesperson ($p > .05$). Results for H_2 found a significant interaction with regards to relationship duration on the relationship between buyer’s economic satisfaction with the salesperson and the buyer’s commitment to the salesperson ($b = .003, p < .05$). This suggests that as time in the relationship increases, the

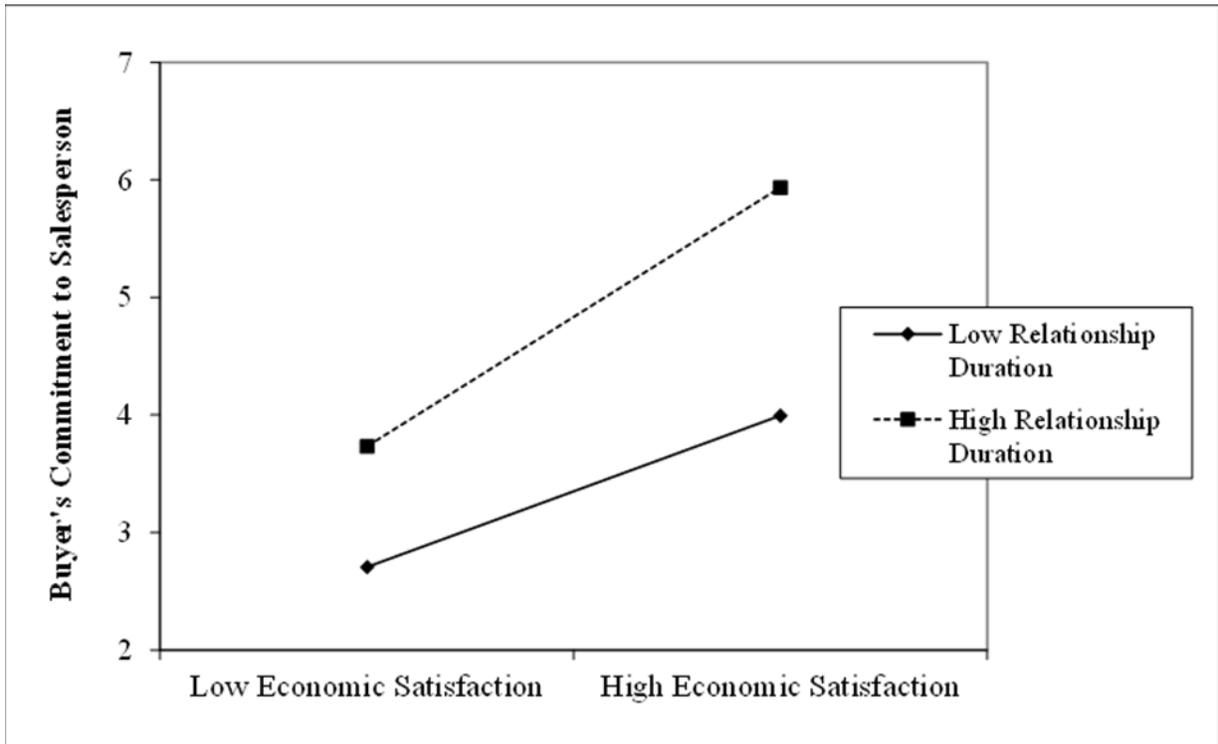
relationship between economic satisfaction and commitment becomes more important. Thus, H_2 is supported. To further assess moderation, Aiken and West (1991) suggest plotting the interaction effects for the analysis. The steeper slope in figure two under conditions of longer-standing relationships indeed signals that gains in economic satisfaction drive higher levels of buyer’s commitment to the salesperson.

In order to test the effect of prior sales experience (H_3 and H_4), two separate steps were completed using hierarchical moderated regression. In step three, prior sales experience was first examined as a linear variable. Hence, buyers without prior sales experience were coded as “0” and buyers with prior sales experience had that experience measured in months. The impact that prior sales experience had on the relationship between buyer’s social satisfaction with a salesperson and buyer’s commitment to the salesperson yielded non-significant results ($p > .05$), failing to support H_3 . For H_4 , prior sales experience impacted the relationship with buyer’s economic satisfaction

TABLE 2:
Regression Models Testing Main and Interaction Effects

	Step I: Main Effects		Step II: Interaction Effects of Relationship Duration		Step III: Interaction Effects of Prior Sales Expe- rience (linear) ^a		Step IV: Interaction Effects of Prior Sales Expe- rience (yes/no) ^a	
	b	t - value	B	t - value	b	t-value	b	t-value
Main Effects								
Social Satisfaction	.223	3.268**	.281	3.153**	.177	2.481*	.217	2.623**
Economic Satisfaction	.701	10.522**	.556	6.115**	.793	11.065**	.805	8.941**
Relationship Duration	-	-	-.005	-1.417	-	-	-	-
Prior Sales Experience	-	-	-	-	.018	2.571*	1.720	2.698**
Interaction Effects								
Social Satisfaction x Relationship Duration	-	-	-.002	-1.192	-	-	-	-
Economic Satisfaction x Relationship Duration	-	-	.003	1.987*	-	-	-	-
Social Satisfaction x Prior Sales Experience	-	-	-	-	.002	1.228	-.087	-.600
Economic Satisfaction x Prior Sales Experience	-	-	-	-	-.005	-2.880**	-.181	-1.362
R^2	.648		.665		.675		.665	
Adjusted R^2	.645		.656		.666		.656	
Notes: ^a The significance of the interactions were also tested using a change in F test. The results were consistent with the results of the t-tests provided (see Table 3). *Significant at $p < 0.05$ **Significant at $p < 0.01$.								

FIGURE 2:
Interaction Effect of Relationship Duration and Economic Satisfaction on Commitment



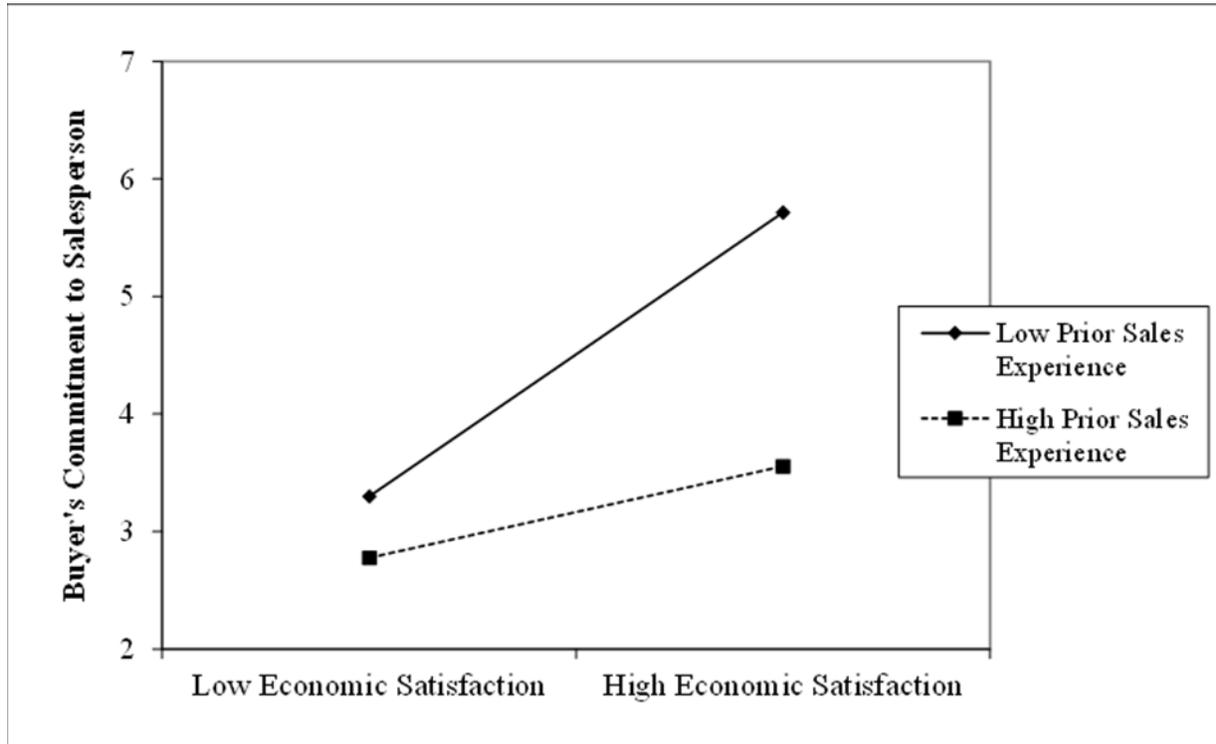
and buyer's commitment to the salesperson ($b = -.005$, $p < .05$). This suggests that as the buyer's prior experience in sales increases, the relationship between economic satisfaction and commitment becomes less important. Figure three confirms this interaction effect. As economic satisfaction shifts from low to high, commitment to the salesperson rises only slightly among buyers with higher levels of prior sales experience. Said another way, when buyer's prior sales experience is low, increases in economic satisfaction have significant increases in commitment to the salesperson as noted by the degree of slope change in figure 3.

Given that the hypothesis was significant in the opposite direction, additional steps provide beneficial information. Therefore, in step four, the sample was split into two groups and recoded. Those that had prior sales experience ($N=72$) were coded as "1" and those that did not have prior sales experience ($N=124$) were recoded as "0". By recoding the variable into two groups, differences could be examined based on prior experience or no prior experience in sales. Moderated regression was run using the dummy coded prior sales

experience and the multiplicative interaction term between social satisfaction ($p > .05$), and economic satisfaction ($p > .05$) on commitment. Results yielded non-significant findings.

To further explore the relationship, a Chow test was conducted between the two groups. The Chow test results produced a significant F-value of 3.10 ($p < .05$). Given the critical F-value of 2.65, the null hypothesis is rejected demonstrating that there is indeed a difference between the group of buyers with prior sales experience and those without. Referring to Table 3, economic satisfaction ($b = .624$, $p < .05$) has a higher impact on commitment than social satisfaction ($p > .05$) in the prior sales experience condition. In the no prior sales experience condition, economic satisfaction ($b = .805$, $p < .05$) also has a higher impact on commitment than social satisfaction ($b = .217$, $p < .05$). When examining the parameter estimates, those without prior sales experience show higher coefficients than those with prior sales experience. This suggests that prior sales experience reduces the importance of buyer's social and economic satisfaction with the salesperson in relation to buyer's commitment

FIGURE 3:
Interaction Effect of Prior Sales Experience and Economic Satisfaction on Commitment



to the salesperson. Further, the amount of variance explained in the dependent variable ($Adj. R^2 = .729$) is significantly higher within the respondents without prior sales experience. Overall, H3 and H4 are not supported.

GENERAL DISCUSSION

Findings from this study highlight the importance of developing our understanding concerning differences in social and economic satisfaction as they relate to commitment in buyer-salesperson relationships. This study suggests that while both social and economic satisfaction impact buyer commitment, economic satisfaction has a stronger impact on buyer's commitment to the relationship. For researchers that focus exclusively on social aspects of satisfaction, this study provides evidence suggesting that they should extend their satisfaction measures to also include economic aspects of satisfaction. Specifically, this study indicates that for buyers in long-term relationships, economic rewards are a strong driver for commitment to their salespeople that

only amplifies over time. Meanwhile, these findings reinforce those of Lee et al. (2015) in a franchisor-franchisee context indicating that social bonds may be more important during early stages when buyer-seller relations tend to be more uncertain. Unlike Lee and colleagues, this study did not find a significant diminishing of social importance over time, yet the nature of the association was similarly in the negative direction. Instead, as the buyer-seller relationship matures economic satisfaction takes on a more prominent role than social satisfaction in fostering higher levels of commitment.

Next, buyer's prior sales experience did have a statistically significant impact on the linkage between economic satisfaction and commitment. However, the direction of the coefficients suggests that with more prior sales experience, the importance of economic satisfaction diminishes. Furthermore, the significance of the Chow test and increased beta values for the group of buyers without sales experience suggest that it is possible that buyers without prior sales experience place a

TABLE 3:
Chow Test Results (Step Four)

	Social Satisfaction		Economic Satisfaction		Adjusted R ²
	b	t-value	b	t-value	
Prior Sales Experience (n = 72)	.130	.921	.624	5.441*	.516
No Prior Sales Experience (n = 124)	.217	.2.965*	.805	10.106*	.729
Note: * denotes significance at $p < .05$; critical F (3,190) = 2.65					

higher level of importance on both social and economic satisfaction when determining their level of commitment to the relationship.

Given the exploratory nature of this hypothesis, it is possible that we miss-specified the direction of this moderation. It is highly plausible that with previous sales experience, buyer expectations may be more rigorous at the outset, and buyers may be more critical of sales practices that deviate from their own experiences in the sales role. Perhaps there is more of an expectation that satisfaction should be achieved and less of an increase in commitment levels even as satisfaction levels increase. While merely conjecture for now, this makes for an intriguing phenomenon for future study. Along the lines of “familiarity breeds contempt,” psychologists have found that a certain level of ambiguity is needed to foster liking (Norton, Frost, & Ariely, 2007). Given that buyers with previous sales experience had lower levels of satisfaction and commitment overall, perhaps this familiarity with the sales process creates higher hurdles for their present sales counterparts. The findings suggest that buyers with prior sales experience are more critical and demanding of the buyer-salesperson relationship because they are accustomed and familiar with what it means to be a salesperson and how to sell.

For salespeople, they should ensure that a buyer’s needs are met on both sides (social and economic) when developing the relationship. Salespeople may need to alter their sales strategy to better adapt to the buyer based on the buyer’s level of prior sales experience. For academic researchers, the results open a new avenue for further inquiry. First, these findings regarding differences among buyers with previous sales experience need replication.

More importantly, if confirmed, researchers need to determine more precisely why the differences exist. Perhaps, qualitative research focusing on buyers with previous sales experience can uncover common themes in how they evaluate satisfaction and commitment with their sales representatives that are unique. These insights can then be translated into adaptive selling measures.

MANAGERIAL IMPLICATIONS

For salespeople, the findings demonstrate the importance of understanding how buyers view costs versus benefits provided in the relationship. The results show that buyers who experience lower levels of economic satisfaction will be less likely to remain committed to the relationship. From a relationship building perspective, the results illustrate the importance for salespeople to engage in more ways to deliver continued economic satisfaction to the buyer. Said another way, salespeople should not be lulled into a false sense of relationship security with buyers merely based on positive social cues. Such a situation leaves salespeople vulnerable to competitors who can exhibit to buyers that their offerings are more economically attractive. In fact, economic justification provides buyers with a ready-made excuse to exit the relationship with a salesperson when they otherwise may be hesitant because of the social goodwill achieved. Also, this study shows that length of the buyer-salesperson relationship provides no added benefit to the sales representative who has achieved this social goodwill. Hence, salespeople should be counseled to periodically probe buyers to understand if their products or services are helping to reduce buyer’s operating costs. This also raises the importance of salespeople in the

role of intelligence gatherers, constantly monitoring the marketplace to ensure that their products and services are competitively priced.

On the positive side, there is hope for sales managers dealing with salesforce turnover who fear having to assign new sales representatives to buyers with long-standing prior salesperson relationships. If the new sales representative can assure that economic satisfaction is achieved, there may be time to build social satisfaction in the relationship. At the same time, the importance of social satisfaction should not be discounted and salespeople can help create a satisfying environment by customizing buyer-seller relationships and building interpersonal connections. Creating this type of environment is one way to increase the value received from the relationship, leading to improved relationship management and strategic success (Sullivan, Peterson & Krishnan, 2012).

The surprising finding regarding buyers' previous sales experience has managerial implications as well. While it remains to be determined exactly why the differences exist, it is important for salespeople to carefully consider how buyers' previous sales experience may alter their expectations of the buyer-seller relationship. Perhaps salespeople can engage buyers in a conversation early in the relationship about their previous sales experiences to determine what criteria were most important to them from the selling perspective. If the criteria are equally important in the present relationship sales representatives should adapt accordingly. If the previous circumstances are not applicable, it is important that sales representatives explain this and potentially forestall any latent feelings of incongruence that the buyers may have regarding expectations of their sales representatives. For example, buyers in their previous sales role may have operated in a time in which transaction selling, as opposed to partnership selling, was more commonplace. Similarly, buyers may have operated in an industry in which supplier churn was frequent irrespective of current satisfaction levels. As such, sales representatives may need to spend more time articulating to buyers the long-term benefits of commitment itself.

LIMITATIONS AND FUTURE RESEARCH

The findings presented here have some limitations and provide avenues for future research. First, having buyers self-report on their prior sales experiences suffers from recall bias. It is plausible to expect that participants may have forgotten their experiences as salespeople due to the lack of recency, which can bias any results. Researchers must address this limitation in future studies by controlling for the time lapse required for the actual recall. Second, the examination of prior sales experience using years in sales presents some limitations. Although this measurement technique is a sound empirical approach commonly used in the sales literature (e.g., Fu, 2009), it ignores the quality aspects of selling that assesses the features, complexity, and degree to which the buyer was a novice or expert salesperson. Without this information, sales expertise cannot be fully deduced. Thus, further research investigation on this is needed. Third, like most studies utilizing self-reported data, variance explained can be associated with method bias, which is less likely a major concern in this study given that the association between related variables were higher than unrelated variables as seen between the satisfaction measures and prior sales experience. However, we suggest that future studies control for method variance by using dyadic data by assessing predictor variables from buyers and outcome variables (e.g. commitment) from salespeople. This way different individuals measure the predictor and criterion variables, thus limiting the production of artifactual covariance likely to emanate from the same respondent.

Fourth, although the relationships established in this study are grounded in theory, additional independent variables and moderators can shed better insights to understanding buyer commitment to the salesperson. For example, personal variables, prior and current skills, motivation, and training should be considered as likely predictors of commitment in future studies. In addition, it is likely that prior sales experience will impact persuasion knowledge. However, this relationship is not tested in the current study. Thus, future research must investigate persuasion knowledge as an

outcome of prior sales experience. Investigating this relationship will add to the richness of what is currently known from our results. Furthermore, long-term orientation of the buyer as a plausible moderator should be incorporated in future studies. This may further reveal differences in buyer commitment to the salesperson. Moreover, examining a firm's supply strategy as it relates to relationship duration and prior sales experience could shed new insight on the importance of commitment in buyer-seller relationships. Lastly, salesperson prior buying experience could be examined and applied to existing sales research.

CONCLUSION

The present study reiterates the importance of salespeople focusing on maintaining high levels of both social and economic satisfaction within their relationships with buyers. While both social and economic satisfaction have a positive impact on buyer's level of commitment to the salesperson, economic satisfaction has a stronger impact on buyer's commitment. For researchers, this stresses the importance of further developing an understanding of economic satisfaction. The results also support that as a buyer's relationship with the salesperson increases, the strength of the relationship between economic satisfaction and commitment is increased. Furthermore, the buyer's prior sales experience negatively impacted the strength between the satisfaction and commitment linkages. Overall, this study provides additional support for examining satisfaction beyond just a social based dimension and a foundation for examining the impact of both buyers' prior sales experience and relationship duration as potential moderators.

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**APPENDIX 1:
Industry Classification**

Industry	Frequency	Percent of Respondent
Manufacturing/Production Equipment	31	15.8
Office supplies/Office Service/Printing	26	13.3
Electronic/IT Services	25	12.8
Retail Products	14	7.1
Construction/Drilling/ Home Components	13	6.6
Food/Restaurant/Hospitality	12	6.1
Medical/healthcare	12	6.1
Shipping/ Shipping Supplies	11	5.6
Auto/Aviation/Marine	10	5.1
Lab/Science	8	4.1
Other (less than 3% of the sample) Financial Services Furniture Gears/lubrications Janitorial Suppliers MRO	34	17.4

**APPENDIX 2:
Scale Items**

<p><i>Focus Questions</i></p> <p>Please select and list the name of one firm which meets the following two requirements: 1) Your firm procures products or services from this firm, and 2) A salesperson from this firm makes sales calls to you.</p> <p>What type/types of products or services does this selling firm primary provide to your firm?</p>
<p><i>Buyer's social satisfaction with the salesperson</i></p> <p>In general, I am very satisfied with my firm's relationship with my salesperson.</p> <p>Overall, my salesperson is a good person to do business with.</p> <p>My salesperson provides my firm with a satisfactory level of service.</p> <p>Overall, my salesperson is an asset to my company.¹</p> <p>All in all, my salesperson deals fairly with my company.</p>
<p><i>Buyer's economic satisfaction with the salesperson</i></p> <p>My firm's relationship with my salesperson has provided good value.</p> <p>My firm's relationship with my salesperson is very attractive with respect to cost savings.</p> <p>My firm's relationship with my salesperson is very attractive with respect to productivity increases.</p> <p>My firm is economically satisfied with my salesperson.</p>
<p><i>Buyer's commitment to the salesperson</i></p> <p>My firm defends this salesperson when others criticize him/her.¹</p> <p>My firm has a strong sense of loyalty to this salesperson.</p> <p>My firm is continually on the lookout to add to or replace this salesperson.¹</p> <p>My firm expects to be using this salesperson's products for some time.¹</p> <p>If another company offered my firm a better product line, my firm would most certainly take them on, even if it meant dropping this salesperson.¹</p> <p>My firm is not very committed to this salesperson.¹</p> <p>My firm is quite willing to make long-term investments in the relationship with this salesperson.</p> <p>My firm's relationship with this salesperson is a long-term alliance.</p> <p>My firm is patient with this salesperson when he/she makes mistakes that cause us trouble.</p>
<p><i>Prior sales experience</i></p> <p>Have you ever worked in sales?</p> <p>If yes, how long?</p>
<p><i>Relationship duration</i></p> <p>About how long has this salesperson called on you?</p>

¹Indicates dropped item

SALESPERSON NETWORKING BEHAVIORS AND CREATIVITY: EXPLORING AN UNCONVENTIONAL RELATIONSHIP

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A great deal of emerging research explores the antecedents and outcomes of salesperson creativity. However, relatively fewer scholarly endeavors have delved into assessing the social antecedents of salesperson creativity. Addressing this issue, the current research focuses on the link between one critical social antecedent in sales research, namely that of networking behaviors, and creativity among salespeople. Specifically, we include customer and professional networking behaviors and study their direct, interactive, and curvilinear effects on salesperson creativity. Empirical findings show that professional networking as well as customer networking are positively related to salesperson creativity. Further, we demonstrate the non-linear effects of professional networking on the salesperson's creativity. Finally, we report that the salesperson's creativity is positively related to adaptive selling. These findings suggest that salesperson networking behaviors must be examined and carefully leveraged to gain tactical advantages.

INTRODUCTION

Creativity is used generally to describe the generation of novel and useful ideas, products, processes and solutions (Perry-Smith, 2006; Scott & Bruce, 1994). Scholars consider creativity as a critical skill for relationship management (Bradford et al., 2010) and the development of innovative sales approaches (Strutton, Pentina, & Pullins, 2009). One area that is relatively sparse within the salesperson creativity literature lies in the social antecedents of the salesperson's creativity (Amabile, 1983; Woodman, Sawyer & Griffin, 1993). In the profession of selling, which by nature is built upon social communications (Bagozzi, 2006), a salesperson's job is embedded within an array of social interactions (Bradford et al., 2010). Further, research reinforces the value of social interactions, because "social interactions with others in a domain should enhance one's understanding of the area and facilitate the generation of approaches that are feasible and unique" (Perry-Smith, 2006, p. 86).

The value of social interactions lies in the inherent information sharing, which enables creativity (Amabile & Khaire, 2008). One common form of salesperson social interactions is their networking behaviors, the degree to which salespeople engage in social interactions that possess the potential to assist them in their work and career (Forrett & Dougherty, 2004). Networking behavior has been noted as an important ability for one's career (Todd, Harris, Harris & Wheeler, 2009), and serves as a means of enhancing one's growth and development (Thompson, 2005). Hence, we suggest that networking behaviors plausibly lead to creative behaviors and enable greater adaptation in one's selling efforts.

This paper focuses on two common forms of salesperson networking behaviors, that of customer networking and professional networking. Salespeople must network with customers in order to develop and maintain relationships; and customers provide a source of ideas and understanding. Similarly, professionals may share their insights and best practices and provide exposure to information that may be critical to understanding the environment. The salesperson's quest lies in uniting the information from these respective

parties and incorporating them into the salesperson's own knowledge base. With an increased knowledge base, salespeople can pursue adaptive approaches in their selling behaviors (e.g., Weitz, Sujan & Sujan, 1986). Yet, the extent to which these networking behaviors can individually and synergistically enhance creativity has not been examined. It is plausible that the salesperson who increasingly engages with customers devotes less time to engage in professional networking opportunities. Thus, we examine the consequences of greater levels of customer and professional networking when evaluated individually.

Building upon the logic that "simple linear effects might be masking much deeper fundamental forces" (Singh, 1998, p. 69), past research (e.g., Johnson, 2014; Johnson & Sohi, 2014; Rapp, Bachrach & Rapp, 2013) has integrated non-linear effects into sales examinations. Because the inclusion of such non-linear terms can enhance the probity of sales relationships and provide a more comprehensive understanding of the effects of networking behaviors on salesperson outcomes, we propose and examine the curvilinear effects of salesperson networking behaviors on creativity. The literature supports our approach, as sales researchers have recently revisited salesperson-related variables such as customer orientation (Homburg, Müller, & Klarmann, 2011) and report non-monotonic relationships between such variables and performance. For the current research, we utilize the idea of information load that is defined as "complex mixture of the quantity, ambiguity and variety of information that people are forced to process" (Weick, 1995, p. 87) and explore the possibility that when salespeople are excessively engaged in networking behaviors, their creativity may be impacted.

In sum, our over-arching research goal is to evaluate the impact of networking behaviors on creativity and adaptive selling. To do so we develop a model linking networking behaviors to salesperson creativity and adaptive selling. We examine the linear, interactive, and curvilinear effects of networking behaviors (customer and professional oriented) on salesperson creative behaviors. We test our hypothesized linkages with a sample of

salespeople and conclude with results, implications and pathways for future exploration. In doing so, our research responds to recent calls for research on creativity in sales (Agnihotri, Rapp, Andzulis & Gabler, 2014) and we contribute to the literature and practice by (1) drawing research attention to a widely-acknowledged but seldom examined component of salesperson networking behaviors, (2) providing broader evidence of the value of networking behaviors in enhancing salesperson creative behaviors, (3) developing a foundation for actionable management practice, as behaviors are visible, diagnostic, and able to be trained and monitored.

SALESPERSON CREATIVITY

Creativity is a critical success factor for organizations (Lassk & Shepherd, 2013; Miao & Wang, 2016). Despite its ability to add value to the organization (Groza, Locander & Howlett, 2016), it has been one of the under-researched area in the sales literature (Evans, McFarland, Dietz & Jaramillo, 2012).

Past research has analyzed creativity as both an exogenous and an endogenous variable and has shown various antecedents and outcomes of creativity. The recent research has delved into a number of personal and attitudinal antecedents that plausibly enhance creativity. Specifically, Lassk & Shepherd (2013) show that the emotional intelligence of salespeople is related positively to creativity, and Groza et al. (2016) show that certain thinking styles can also enhance creativity. Relatedly, Sousa & Coelho (2011) posit that organizational commitment of frontline employees increases creativity in the job; and Gong, Cheung, Wang & Huang, (2012) argue that customer trust increases employee creativity.

Further, a limited number of explorations have hypothesized that certain antecedents, after some point, may have diminishing levels of returns on creativity. As such, this line of research has analyzed the non-linear antecedents of creativity. Gilson and Shalley (2004) show that organizational tenure has a non-linear relationship with creativity, such that moderate levels of tenure will result in the greatest level of creative behaviors. Similarly, Zhou, Shin, Brass, Choi & Zhang (2009)

empirically demonstrate that the number of an individual's contacts possesses a curvilinear relationship with creativity, thereby exhibiting an inverted U-shape relationship; and Suh & Badrinarayanan (2014) find that international experience possesses a curvilinear relationship with creativity.

Creativity also adds value to the organization, customer outcomes and the relationship process. The literature demonstrates that salesperson creativity may help in achieving customer satisfaction (e.g., Strutton et al., 2009), assist in developing customized solutions to customer problems (Wang & Netemeyer, 2004), and be useful in identifying customers' latent needs (Coelho, Augusto & Lages, 2011). Similarly, Coelho et al. (2011) argue that creative employees are better able to service their customers and solve customers' problems in an efficient manner; and creativity has been found to increase service behaviors (Agnihotri et al., 2014) and sales performance (Agnihotri et al., 2014; Martinaityte and Sacramento, 2013).

From our review of the literature, we surmise that recent studies has examined primarily attitudinal rather than behavioral antecedents of creativity. Further, knowing that one of the key elements to successful sales performance lies with the salesperson's adaptive selling abilities (Franke & Park, 2006), the literature examining links between the two variables is relatively sparse.

For our study, we examine creativity in a manner consistent with past research. Our conceptualization focuses on the salesperson's creative behavior, the generation of novel and useful ideas, products, processes and solutions (Ganesan & Weitz, 1996, Perry-Smith 2006, Scott & Bruce, 1994; Wang & Netemeyer, 2004). As such, our research question lies in what salesperson behaviors produce the creative behaviors that enable adaptiveness (i.e. where does the source of information emanate).

MODEL DEVELOPMENT

Networking Behaviors

Two prominent creativity models (Amabile, 1988; Woodman et al., 1993), propose that

social-based factors are important antecedents to creativity. Social interactions enable an information pipeline for the salesperson to add to their existing conceptual networks and understanding. The information pipeline provided by social interactions is important, as sales creativity results from both the acquisition of useful information, and its integration with existing knowledge to produce novel and useful ideas and behaviors (Wang & Netemeyer, 2004). Therefore, when the salesperson is faced with a task or problem, he or she reactivates the stored, relevant information which may be combined with the new information thereby enabling the commensurate response mechanism—a creative response (Coelho & Augusto, 2010; Agnihotri et al., 2014).

Similarly, the literature on organizational socialization re-affirms the value of social interactions, especially within work contexts. Socialization is defined as “the process by which an individual acquires the social knowledge and skills necessary to assume an organizational role” (Van Maanen & Schein, 1979, p. 3). Socialization involves a series of personal interactions which provide a pathway toward enhanced communication (Gupta & Govindarajan, 2000), and these social interactions enable individuals to learn about skills and information to conduct their position (Van Maanen and Schein, 1979).

One type of social interaction that is important to salespeople lies in their networking behaviors. Networking behaviors are “aimed at building and maintaining informal relationships that possess the (potential) benefit of facilitating work-related activities of individuals” (Forret & Dougherty, 2001). Networking behaviors represent an individual's investment to develop fruitful relationships. Similarly, networking behaviors have been shown as a means to exchange important information and resources (Joshi, 2006; Tsai & Ghoshal, 1998)

Networking behaviors enable salespeople to associate with individuals who can aid them in their career, such as by providing information, knowledge and even competitive intelligence. For salespeople, networking behaviors have long been recognized as an important tool for their careers. Scholars note the importance of

networking behaviors, as it has been observed as an important career skill (Todd et al., 2009), and an approach to personal growth and development (Thompson, 2005). For instance, managerial success is related to the time invested in social networking (Luthans, Hodgetts & Rosenkrantz, 1988); and the ability to develop and perpetuate relationships aids in an array of employment-related endeavors (e.g., Forret & Dougherty, 2004).

Conceptual Model

When applied to our research context, our conceptual model incorporates two common forms of salesperson networking, that of customer networking and professional networking, as antecedents to creative behavior. The customer networking variable describes the extent to which the salesperson develops and nurtures relationships with potential and existing customers. The literature reaffirms the value of customer networking, as scholarship has noted that “salespeople span the boundary between the firm and its customers, they are responsible for developing, maintaining, and expanding these customer relationships” (Bradford et. al., 2010, p. 240).

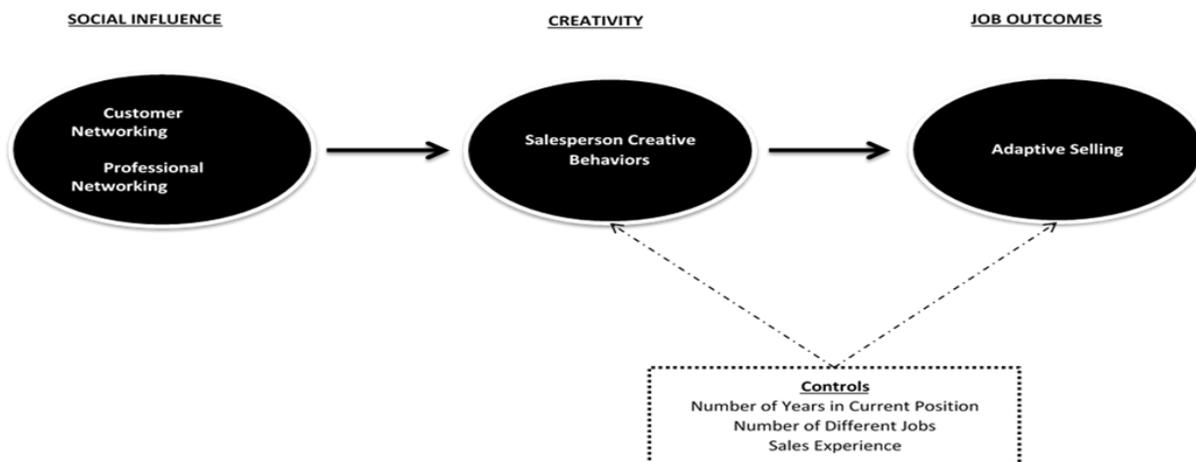
Our second antecedent lies in professional networking which describes the extent to which the salesperson develops and nurtures relationships with other industry professionals who have the potential to assist the salesperson with his/her work and career. Past research on

professional networking has shown its positive effects on sales outcomes. Clarke (2011) argues that participation in external networking events has positive effects on the self-efficacy of the salespeople. Further, Hartmann, Rutherford, Hamwi & Friend (2012) argue that participation in professional associations, an integral way to enhance external networking, increases the information flow for the salespeople by giving reliable information such as business trends. However, the effects of professional networking on creativity remains unexplored.

Further, our conceptual model follows the literature in seeking greater insight into the effects of these antecedents (Singh, 1998). As such, we seek to understand whether synergistic effects of the antecedents exist or whether beyond some optimal point, the positive effects of these antecedents diminish. As such, we test for interaction effects between the variables as well as the non-linear effects of the variables on creative behaviors. Finally, we integrate the link between creativity and adaptive selling. By doing so, we contribute to the literature by empirically determining how networking (both professional and customer) can help enhance the creativity of the salespeople.

Customer Networking Behaviors and Salesperson’s Creative Behavior. In our first hypothesis, we argue that customer networking behaviors are positively related to the salesperson’s creative behaviors. Research

FIGURE 1:
Theoretical Model



suggests that a key factor for creativity lies in the exposure to diverse and novel information (Baer, 2010). We suggest that as the salesperson increasingly interacts with customers, the salesperson is exposed to a diversity of information.

First, research suggests that diverse forms of knowledge can emanate from one's customer base, which enable the exchange of information, awareness and understanding (Verbeke, Franses, Le Blanc, & Van Ruiten, 2008). Networking with customers enables the transfer of rich information (Daft & Lengel, 1986), and "the ability of information to change understanding..." (p. 559). Specifically, customer networking provides access to information about industry trends, local environments and potential impacts to the customer. By personally meeting and interacting with customers, salespeople are able to create greater understanding of information and unravel patterns, needs, marketplace trends. Second, the organizational behavior literature notes that tacit knowledge- knowledge that is sticky, complex and difficult to codify and transmit to others (Szulanski, 1996), is best relayed through personal interactions (Lu, Leung, & Koch, 2006). As the salesperson's networking behaviors increase, she is effectively building a tacit information pathway. Such information becomes a key knowledge resource for salespeople and can help salespeople promote actionable insights and thus develop novel ideas on serving customers. Because exposure to such new information is a key factor for creativity (Baer, 2010), networking with customers should have a positive impact on creativity.

Third, scholars (e.g., Sethi, Smith & Park, 2001) highlight the value of customer information and interpersonal interaction, as it enables greater understanding of needs, and may impel the salesperson to explore and develop greater original answers to meet the customers' challenges. In sum, as the salesperson's degree of customer networking increases, it enables exposure to a diversity of information, the opportunity to receive tacit information and an understanding of the customer that may propel the salesperson to integrate the new information into their existing knowledge and seek to develop unique and

novel solutions for their customer base.

H₁: The greater the level of salesperson customer networking, the greater the salesperson's creative behaviors.

Professional Networking Behaviors and Sales Creative Behavior. We also suggest a greater extent of professional networking enhances the salesperson's creative behaviors. As noted by scholars (Newell & Simon, 1972), the exposure to perspectives that exist beyond an individual's focus, enables the individual to add to her knowledge stock and thereby enhance her potential "network of possible wanderings" (page 82). As the salesperson increasingly networks outside of the firm, she is exposed to unique ideas, perspectives and opinions that should enhance one's ability to develop a broader base of ideas and potential solutions within the sales domain. For instance, professionals may choose to attend seminars or conferences with the goal of gaining knowledge and information from others within their industry.

In addition, research has shown that information sharing increases among those with similar functional backgrounds (Bunderson & Sutcliffe, 2002). Hence, professional networking with other salespeople may create conduits of information and learning from others for future application. In effect, this unique and novel information gained from professional networking can add to one's personal repertoire of ideas, options, and worldviews, thereby enabling greater creative sales behaviors. Hence, we suggest the following:

H₂: The greater the level of salesperson professional networking, the greater the salesperson's creative behaviors.

Curvilinear Effects. Recently, researchers have started arguing a potential curvilinear relationship between networking behaviors and creativity, suggesting a point of diminishing returns may exist (Baer, 2010). Hence, we suggest there may be some optimum degree of networking (e.g. customer and professional) on the salesperson's creative behaviors.

Further, one theory suggests that socially-based variables may possess a positive effect up to a point; however, beyond this point, the positive effect diminishes. For example, the social/

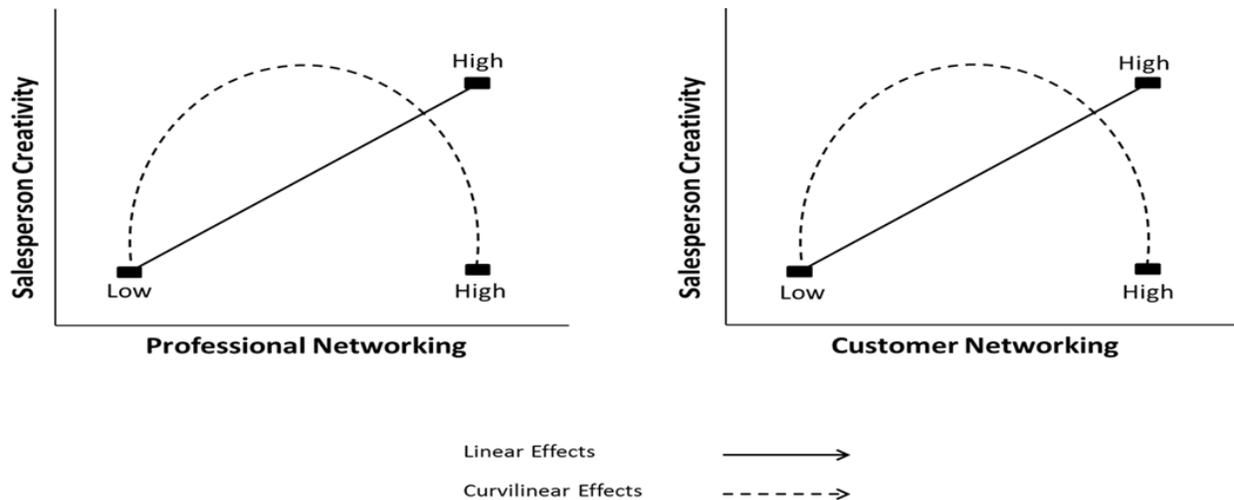
contextual factors evaluated through cognitive evaluation theory suggests the presence of non-linear effects. Cognitive evaluation theory states that contextual factors can play both an informational as well as a controlling role (Deci & Ryan, 1985) depending upon the situations. For example, in an organizational context, if an employee perceives contextual inputs as “supporting autonomy and promoting competence” such inputs have positive effects and are considered as *informational*. However, as the contextual input increases to a greater level it begins to yield a negative influence because it begins to represent *controlling* presence on the individual and employees “perceive them as pressure to think and behave in specified ways” (Coelho et al., 2011, p. 33). Therefore, we suggest it is important to test whether a nonlinear effect is possible between the networking variables and the salesperson’s creative behaviors.

Networking behaviors should positively affect salesperson creativity; however, it is possible that beyond some level, such behaviors may in fact hurt creativity. Conventional wisdom and theory supports the notion that a customer network helps salespeople access information and exposes the salesperson to a diverse level of information. However, it is also important to recognize the idea of maximum information

variety (Krackhardt, 1992). Beyond a certain level, customer networking interactions may effectively bring too much information. Salespeople who overly pursue customer networking behaviors may very well end up with information abundance that may be too diverse or difficult to interpret. Under such circumstances, the salesperson may find it difficult to develop and execute a creative response. Hence, a point of diminishing returns to customer networking may occur.

Similarly, with professional networking, the ability to sort, classify, and arrange the diverse information from other professionals may yield information overload. The greater levels of information may effectively create challenges for the salesperson in arranging and cataloging the information in novel and innovative ways (Hunter, 2004). The literature notes the potential for information overload in sales (Dixon, Gassenheimer & Barr, 2002) as well as the constraints on information processing (Simon, 1990). The additional information emanating from a high level of professional networking may effectively strain the salesperson and their temporal and cognitive resources. As such, as the salesperson’s professional networking extends beyond some optimal point, it may effectively deplete the salesperson’s ability to integrate these resources

FIGURE 2:
Hypotheses of Linear and Curvilinear Effects of Professional Networking and Customer Networking on Salesperson Creativity



within their existing knowledge base, and thereby reduce their creative behaviors.

Hence, we submit:

H₃: The effect of salesperson customer networking on salesperson's creative behaviors decreases as the extent of customer networking increases, such that an inverted u-shaped curve is expected.

H₄: The effect of salesperson professional networking on salesperson's creative behaviors decreases as the extent of professional networking increases, such that an inverted u-shaped curve is expected.

Interaction of Customer and Professional Networking. We suggest that the simultaneous use of professional networking and customer networking may be synergistic. That is, a greater degree of customer networking and professional networking would effectively create a greater level of salesperson creativity. We align our approach with the literature on group cognition and creativity where researchers argue that it is the combination of expected *and* unexpected or obvious *and* non-obvious information emerging from social interactions that enhances creativity in group settings (e.g., Hargadon, 1999). In the sales context, a combination of customer and professional networking would provide insight and information diversity which would propel salesperson creativity. For instance, while customer networking may enable the flow of information regarding needs and resources, information emanating from professional networking, such as best practices and process enhancement, may serve as a worthy complement.

H₅: Customer networking and professional networking interact in a synergistic manner, such that the greater the level of customer networking and professional networking interaction, the greater is the level of salesperson's creative behaviors.

Outcome of Creativity

Adaptive Selling. Lastly, we hypothesize the positive downstream effects of creativity on adaptive selling. Adaptive selling has been described as, "the altering of sales behaviors

during a customer interaction or across customer interactions based on the perceived information about the nature of the selling situation" (Weitz et al., 1986, p. 174). Adaptive salespeople gauge cues from their customers (Franke & Park, 2006) and perform customer-oriented tasks (Arnett & Badrinarayanan, 2005; Hughes, Bon & Rapp, 2013). Similarly, Chen & Jaramillo (2014) show that adaptive selling is positively related to customer loyalty.

Reviews and meta-analytic studies, that have examined the antecedents of adaptive selling, suggest that the primary research focus has been on either salesperson or characteristics of the firm (Franke & Park, 2006; Román & Iacobucci, 2010). Franke & Park (2006) show that gender and experience of the salesperson are significant antecedents of adaptive selling behavior. They show that adaptive selling behavior increases with the experience of the salesperson; and female salespeople are more adaptive than male salespeople. Chai, Zhao & Babin (2012) empirically show that learning orientation serves as a significant positive predictor of adaptive selling behavior. Similarly, Limbu et al. (2016) purport that salesperson interpersonal skills such as empathy enhance adaptive selling behavior. Román & Iacobucci (2010) show that firms' customer orientation is positively related to adaptive selling. We extend the past research on adaptive selling by showing creativity as an important antecedent of adaptive selling behavior.

Weitz et al. (1986) suggest that effective adaptive selling results from both knowledge (how and when to adapt) and motivation. The development of more elaborate selling knowledge requires that salespeople possess the ability to acquire useful information and integrate it with existing sales knowledge (Weitz et al., 1986). Selling knowledge may emanate from the salesperson's own selling experience (Franke & Park, 2006), the sharing of experiences by seasoned, and senior salespeople or from the firm sharing market research (Sujan, Weitz & Sujan, 1988). However, adaptability may often require an expanded search for new technologies, ideas, and methods that can improve or completely change existing routines (Basadur & Gelade, 2006).

This premise suggests that new, unique ideas and information provide a means to update the salesperson's knowledge and thus increase their adaptive selling ability. For the salesperson that possesses creativity, she may be motivated to continually seek useful information to integrate with her existing knowledge and in effect expand her total knowledge base. This expanded knowledge base allows the salesperson to broaden her personal array of approaches and service solutions, which effectively allows the individual to adapt continually to dynamic sales environments.

H₆: The greater the salesperson's creativity, the greater the salesperson's adaptive selling.

METHODOLOGY

We obtained our sampling frame from a commercial list of salespeople employed within the real estate industry. We received 223 surveys, of which 217 were usable for a response rate of 12.5 percent. To examine for the potential for non-response bias, we tested for differences between early and late respondents on the outcome measures (Armstrong & Overton, 1977). The test yielded no significant differences between the groups, thereby suggesting non-response bias is unlikely to influence our study.

Measurement

When possible, we used or adapted existing, validated measures (Appendix A). All measures were seven-point Likert scale and used multiple items.

Salesperson creative behaviors was adapted from the literature (Ganesan & Weitz, 1996; Scott & Bruce, 1994). It is a four-item Likert scale describing the salesperson's ability to generate new and novel ideas (e.g. "I try to be as creative as I can in my job"). *Adaptive selling* was adapted from the previous work in the sales literature (Robinson, Marshall, Moncrief & Lassk, 2002). It is a four-item Likert scale describing the salesperson's flexibility in approach (e.g. "I can easily use a wide variety of sales approaches").

The *customer networking behaviors* scale is a five-item Likert scale describing the degree to

which the salesperson interacts with clients. The scale emanated from previous networking scales (Forret & Dougherty, 2001; Michael & Yukl, 1993; Wolff & Moser, 2006) and items were adapted to our research context. The *professional networking behaviors* scale is a five-item Likert scale describing the extent to which the salesperson develops and nurtures relationships with other industry professionals who have the potential to assist the salesperson with his/her work and career (e.g. "Attend seminars or training with others in my profession in order to build my network"). The four-item scale was adapted to our context from previous networking scales (Forret & Dougherty, 2001; Michael & Yukl, 1993; Wolff & Moser, 2006).

Control Variables. To control for other potential influences on our study, we integrated three control variables. We controlled for the experience level of the salesperson, including the *number of previous sales positions*, their *sales experience* and the salesperson's *current tenure within the organization*. The literature suggests that sales experience and the tenure in an organization can plausibly enhance sales performance, creativity and adaptive selling (Franke & Park, 2006; Verbeke, Dietz & Verwaal, 2011).

Data Analysis

We used the two-step approach that begins with the evaluation of the constructs and then estimates a structural equation model (Anderson & Gerbing, 1988). EQS software was used for the structural equation model. The use of SEM versus hierarchical regression technique lies in its usefulness in avoiding measurement error complications and detecting misspecifications in a hypothesized model (Raykov, 2000). For the confirmatory factor analysis, the measurement model reflected adequate fit with the data. Key fit statistics include $\chi^2=134.359$ (102 d.f.), CFI= .99, NNFI = .98, RMSEA=.038 (.017, .055)

For each construct, we calculated the average variance extracted (AVE). The average variance extracted for each construct was greater than .50, except the professional networking which was .48. Then, the AVE for all constructs was compared with the shared

variances among all constructs (Anderson & Gerbing 1988). As the AVE was greater than the shared variances for all pairs, discriminant validity is indicated. Additionally, we used a series of chi-square difference tests to compare models in which two constructs held to unity with the freely estimated model. In each comparison, the freely estimated model possessed better fit than the covariance-constrained models. The results demonstrate discriminant validity between the constructs (Bagozzi & Yi, 1988). Next, we calculated composite reliability for all constructs. The composite reliabilities ranged from .78 to .92, thereby meeting the .60 threshold (Fornell & Larcker, 1981). Overall, we purport that the constructs demonstrate adequate reliability and validity. Table 1 describes each construct's composite reliability, average variance extracted (AVE) and the correlations among the constructs.

To reduce the potential for common method bias, we used informed respondents. On average, our respondents possessed over 13 years within their current organization and 21 years of selling experience (Table 2). Our respondents possess a high degree of sales experience. The respondents' mean for years of sales experience is 21.0 years. When examined in combination, we surmised that our respondents possessed the knowledge and experience for our research questions and this ability potentially reduces the opportunity for common method variance. Further, to assess

common method bias, we used Harmon's one-factor test. We compared our measurement model with a second measurement model in which one latent factor accounts for all variables. A chi-square test was used to compare the two models. The one-factor model reflected a significant difference in fitting the data than the measurement model did. Hence, we suggest that common method variance does not create a potential risk to our analysis. Next, we conducted an exploratory factor analysis in which we found four distinct factors explaining 70.15% of the cumulative variances. When we specified only one factor, only 32.92% of the variance was explained (Lindell & Whitney, 2001; Malhotra, Kim & Patil, 2006). Therefore, we conclude that the potential for common method bias to contaminate our analysis is attenuated. In addition, we incorporate non-linear hypotheses; and research finds that non-linear terms are not impacted by common method bias (Evans, 1985). Within the structural model, we included a common method factor. In this approach, the latent variables' items are loaded onto their respective latent variable as well as the method factor a common method factor (Podsakoff, MacKenzie, Lee & Podsakoff, 2003).

We also followed best practices regarding multicollinearity by standardizing all observed variables (Agustin & Singh, 2005). Further, the model contains nonlinear terms. Hence, we used the unconstrained model approach (Marsh, Wen & Hau, 2006; Seevers, Skinner & Kelley,

TABLE 1:
Correlations, Composite Reliabilities, and Average Variances Extracted

Constructs	C.R.	Ave.	1	2	3	4
1 Professional Networking	.78	.48	--			
2 Customer Networking	.92	.70	.354**	--		
3 Sales Creativity	.81	.52	.289**	.336**	-	
4 Adaptive Selling	.844	.64	.169*	.157*	.407**	--

Correlations reported are significant at the 0.05 level (two-tailed) **: significant at $p < .01$; *: significant at $p < .05$

2007), that has been previously utilized within the marketing literature (Homburg et al., 2011). For each quadratic term, we squared each indicator. As professional networking and customer network possess four and five indicators, respectively, we calculated four and five squared items for each construct (i.e. $x_1^2, x_2^2 \dots x_4^2$; $z_1^2, z_2^2 \dots z_5^2$). For testing the proposed interactive effects in H₅, Interaction term was created by multiplying each of the items of customer networking scale with those of professional networking scale (i.e. $x_1z_1; x_1z_2 \dots x_2z_2 \dots x_4z_5$).

TABLE 2:
Salesperson Characteristics

Sales Experience (years)	21.15
Tenure in Firm (years)	13.5

Results. The fit indices of the structural model suggested a reasonable model fit ($\chi^2 = 878.83$, $df = 483$, CFI = 0.92, NNFI = 0.90, RMSEA = 0.067 (90% CI = 0.055, 0.068). Table 3 reflects the results of the structural equation model. First, we found customer networking behaviors were positively related to salesperson creativity (H₁: $\beta = .19$, $p < .05$). Similarly, we found the relationship between professional networking and salesperson creativity was positive and statistically significant (H₂: $\beta = .34$,

$p < .05$). The quadratic term for customer networking was not statistically significant (H₃: $\beta = -.066$, $p > .05$). Hence, H₃ could not be supported. Interestingly, we find a non-linear effect of professional networking on salesperson creativity. The negative coefficient associated with the quadratic (-.792) along with the positive main effect of professional networking to salesperson creativity (.342) suggests that the fourth hypothesis is confirmed. Our fifth hypothesis examined the potential for a synergistic effect between the two forms of networking on creativity. This hypothesis was not supported, (H₅: $\beta = .405$, $p > .05$). Our final hypothesis found that the effect of creative sales behaviors was significant and positive on sales adaptive behaviors (H₆: $\beta = .500$, $p < .05$). In terms of our control variables, we did not find statistically significant relationships between the controls and salesperson creativity or the controls and adaptive selling.

DISCUSSION

Recently, scholars have started challenging researchers to approach the sales domain with a new lens, that of viewing salespeople as knowledge brokers (Verbeke et al., 2011) embedded in a multitude of relationships (Bradford et al., 2010). Accordingly, the focus

TABLE 3:
Results of Analysis

Hyp.	Independent Variable	Dependent Variable	Standardized Coefficient	t-value	Results
H ₁	Customer Networking	Salesperson Creativity	0.19	2.14	Supported
H ₂	Professional Networking	Salesperson Creativity	0.34	2.65	Supported
H ₃	Customer Networking ²	Salesperson Creativity	-0.07	-0.556	Not Supported
H ₄	Professional Networking ²	Salesperson Creativity	-.79	2.27	Supported
H ₅	Professional Networking x Customer Networking	Salesperson Creativity	.405	1.358	Not Supported
H ₆	Salesperson Creativity	Adaptive Selling	.500	4.466	Supported

Model Fit

χ^2	878.831
df	483
NNFI	.90
CFI	.92
RMSEA	.062 (.055, .068)

turns to the means by which knowledge is garnered by salespeople. The current study uniquely demonstrate that networking behaviors play a critical role that can be utilized in producing creative solutions and greater adaptive behavior. Our analysis, regarding the conventional relationships, shows that customer and professional networking are valuable.

The findings of this study contribute to better understanding the ever-evolving role of the salesperson. As Bradford et al. (2010) discuss, the nature of an embedded salesforce may enable the creation and transfer of tacit knowledge. This knowledge may enable the development of new, unique and novel information. Our results demonstrate that a significant amount of unique value can be accessed by both professional and customer networking behaviors. Moreover, our results support that networking behaviors should not be viewed as a binary option of either/or. Instead, our data suggests the necessity and value of both forms of networking.

Specifically, our findings reflected a direct linear effect from professional networking to salesperson creativity. This supports the contention that there is value in networking with a diverse set of individuals external to the firm. Professional networking behaviors expose the salesperson to a variety of ideas, processes and needs. This new knowledge and information can be integrated into their existing, personal knowledge stocks to effectively allow the salesperson to move upward on the personal learning curve and effectively allow creative behaviors to flourish. As the level of customer networking behaviors increases, the salesperson may draw from an environment that is conducive for the transfer of new perspectives and novel information. With this information and understanding, the salesperson may be able to generate a number of new methods, processes and sales activities that enable her to better adapt to the customer's needs. Similarly, the results demonstrate the value of an embedded salesperson in multiple collectives. Such findings contribute to the under-researched domain of networking and is consistent with the recent calls for research on networking (Macintosh & Krush, 2014).

While prior research on adaptive selling emphasizes the importance of developing selling knowledge, it does not explicitly acknowledge the role of creativity. The proposed framework suggests that creativity serves as an element for the adaptive foundation that aids the salesperson in an ever-changing environment. While past research has equivocally accepted that creativity is different from adaptive selling (Wang & Netemeyer, 2004), there has been a lack of research on determining the relationship between these two constructs. Our finding contribute to the research on creativity by explicating the relationship between adaptive selling and creativity and showing that creativity is an antecedent to adaptive selling behavior.

Contrary to our position, the interactive effects of professional and customer networking behaviors on creativity did not find the empirical support. Although, we outlined theoretical support from the literature, the lack of empirical evidence suggests that these behaviors may not have a complementary link. It can be interpreted that both professional and customer networking behaviors influence creativity but for different reasons and therefore we did not find an interactive effect on creativity.

We further extend the literature by proposing and examining a diminishing return beyond a certain level of professional networking practices. Considering the positive direct effect of such behaviors on creativity, it can be deduced that merely increasing the amount of professional networking behavior may not be sufficient to realize its benefits and in fact, excessive professional networking may ultimately hurt salesperson creativity. This study provides evidence that there exists an optimal level of professional networking behaviors for salespeople when it comes to enhancing their creativity. Our approach corresponds with the call from the sales researchers to avoid limiting the sales literature to "the-more-the-better" perspective and to consider "nonlinear relationships between key phenomena" (Johnson, 2014; Homburg et al., 2011, p. 68).

Managerial Implications

With the significance of networking as a backdrop, we suggest several implications to sales managers. First, we suggest that networking behaviors be viewed as major investments in equipping the salesperson. As the salesperson role continues to evolve as a polycentric, knowledge broker, it will be imperative for the salesperson to have access to information. We suggest that it will be the salesperson's networking behaviors, in part, which will provide the foundation for sales success. Hence, managers must do more than simply encourage salespeople to network. Managers will need to create an environment that fosters and the control systems that encourage customer and professional networking.

Second, we suggest that value emanates from our approach of measuring actual behaviors. The value of measuring sales networking behaviors is that behaviors may be trained, monitored, incented, and evaluated. Thus, sales networking behaviors can be both an important method to direct salesperson efforts and a diagnostic tool to assess the potential for salesperson success. Third, by providing empirical support for creativity as antecedents of adaptive selling, we offer managers an opportunity to make their salespeople aware of this pathway. Most of the practitioners' training models for adaptive selling focus on individual salesperson differences or firm differences, and thus largely ignore the acquisition of information through relationships inside and outside of the firm. Such managerial practices seem at odds with the paradigm currently adopted by the marketing literature and its focus on the value of relationships. Our results demonstrate the unique value and novel information acquired through networking behaviors.

For the practitioner, we suggest that networking behaviors are not merely a means to create a potential source of sales prospects but in today's environment, networking behaviors are a means to generate a useful pool of creative solutions. Hence, the salesperson should assume a strategic orientation regarding the development of networks. Within this perspective, the development of networks

ensures a pipeline of information and knowledge that could plausibly create greater job security. Finally, we do not suggest nor believe that networking does not have diminishing returns. We advocate that the sales force and the sales managers cooperatively develop a plan that logically prioritizes networking behaviors and the resources that will support such an investment in time. Our results show that there is a diminishing effect of professional networking on salesperson's creativity.

Limitations and Future Research

In this section, we outline the limitations to our study. However, one should note that the study's limitations yield a number of future research paths as well. For instance, since this study was cross-sectional, no claim is made to causality, even though theory and prior research suggested the hypothesized relationships. In order to overcome this limitation, scholars could conduct a longitudinal approach to studying networking behavior.

Our study assumes that networking provides information; however, we inferred rather than directly measured various forms of information acquisition. Future research could incorporate various forms or characterizations of information and knowledge to further our understanding. Further, our emphasis examined the benefits of networking behaviors in connection with creative behaviors. However, it may be interesting to see if networking behaviors have direct effects on other established constructs such as adaptive selling behaviors and customer oriented behaviors.

Also, networking may not always be positive, especially from the firm's perspective. For example, research suggests that employees with strong externally based networks may plausibly have higher turnover, because they have more access to jobs outside the organization but also because they have less solidarity within the organization (Brass et al., 2004). Along the same line, creativity could also produce negative outcomes. More recently, scholars argue that creativity is expected "to exercise both positive and negative effects on performance" (Soda & Bizzi 2012, p. 99). Therefore, future researchers also need to discuss the dark side of creativity.

Finally, we examine salespeople in only one industry, so scholars should be cautious when generalizing the findings across all sales contexts. Future research could use a sample across multiple industries. Additionally, future research could examine individual, firm and contextual differences that plausibly affect creative behaviors within sales.

Our conceptual framework and networking behavior measures provide a foundation that could stimulate additional research on the role of networking behavior in personal selling. As noted by scholars, research on networking in sales has been limited, particularly, research focusing on the value of networking behaviors that contribute to salesperson performance, beyond those of interacting with customers.

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APPENDIX A:

Adaptive Selling (Adapts SV) (Robinson et al. 2002;)

- *I like to experiment with different sales approaches*
- *I can easily use a wide variety of sales approaches*
- *When I feel that my sales approach is not working, I can easily change to another approach*
- *I am very flexible in the selling approach I use.*

Creative Behavior (Ganesan and Weitz 1996; Scott and Bruce 1994)

- *When new trends develop, I am usually the first to get on board.*
- *I am on the lookout for new ideas*
- *I try to be as creative as I can in my job.*
- *My boss (Others) thinks I am creative in my job.*

Professional Networking (Forret and Dougherty 2001; Michael and Yukl 1993; Wolff and Moser 2006)

How frequently do you:

- *Make presentations at seminars or workshops that may aid you at work*
- *Attend conferences to develop professional or industry contacts*
- *Attend seminars or training with others in my profession in order to build my network*
- *Take part in trade association meetings that are pertinent to my industry*

Customer Networking (Forret and Dougherty 2001; Michael and Yukl 1993; Wolff and Moser 2006)

How frequently do you:

- *Meet with clients and customers to discover how to satisfy their needs*
- *Call or visit with clients who can provide good information*
- *Ask current clients for referrals*
- *Keep in touch with clients regarding their needs*
- *Contact clients about current issues*

THE IMPACT OF COGNITIVE AGE ON MATERIALISM, STATUS CONSUMPTION AND LOYALTY PRONENESS ON THE INDIAN ELDERLY

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JACQUELINE K. EASTMAN, Georgia Southern University
RUPPAL W. SHARMA, Indian Institute of Foreign Trade
KEVIN L. EASTMAN, Georgia Southern University

This research found Indian seniors with a younger cognitive age to be more materialistic and more motivated to consume for status, but not significantly more loyalty prone. In terms of moderating variables, self-confidence as a moderator did impact the relationship between cognitive age and materialism as well as for loyalty proneness, but not for status consumption. In terms of social involvement, it had a moderating impact between cognitive age and materialism, status consumption, and loyalty proneness. This suggests the importance of social relationships for Indian elderly and the impact they have on consumption variables.

INTRODUCTION

India is of interest to marketers due to its transition from socialism to a market economy in the early 1990s (the liberalization period that included industrial deregulation, privatization of state-owned enterprises, and reduced regulation) (CIA, 2014; Khare, 2011; Lysonski and Durvasula, 2013). This liberalization period resulted in radical changes in the Indian economy that allowed for faster economic growth, greater choice in consumer products, and the entry of multinational firms (Lysonski and Durvasula, 2013) along with increased income levels, a higher priority toward education, and rapid industrialization (Khare, 2011). With the rapid emergence of the Indian economy, including growth of discretionary income and luxury consumption, little is known about how consumers behave in this market (Schultz and Jain, 2015; Knorringa and Guarin, 2014; Sanyal, Datta, and Banerjee, 2014).

Given India's population of more than one billion, 17 percent of the world's population (Krishnaswamy et al., 2008), it should be a country of interest to marketers. India is seen as a collectivist emerging economy with a high power distance culture (Sharma, 2011). However, the Indian market is complex and multi-hued (Krishnaswamy et al., 2008), as

Indians are influenced by both western and local cultures, and not all Indians are similar in how they consume (Eng and Bogaert, 2010; Knorringa and Guarin, 2014; Sanyal, Datta and Banerjee, 2014; Schultz and Jain, 2015). One segment of the Indian market that has not been adequately addressed by market researchers is the senior market (Verma and Gupta, 2014). As this market segment is expected to grow by 20 percent by 2050, representing almost 300 million consumers (Ray, 2009), it is an attractive segment for marketers to target (Verma and Gupta, 2014).

While age can be an important segmentation variable, research suggests that perceived (cognitive) age may be a better predictor of consumer attitudes and behavior than chronological age (Barak and Schiffman, 1981). Cognitive age, or variants of it, has been examined in terms of American seniors (Barak and Schiffman, 1981; Sherman, Schiffman and Mathur, 2001), Japanese seniors (Van Auken, Barry and Bagozzi, 2006), Italian seniors (Amatulli, Guido and Natarajan, 2015), Turkish seniors (Dogan, 2015), and cross culturally (Barak, 2009; Barak, Guiot, Mathur, Zhang, and Lee, 2011; Kohlbacher, Riley and Hofmeister, 2011); however, it has not been examined with the Indian senior market. This research examines this gap in the literature to determine if cognitive age is a meaningful variable for better understanding Indian seniors. It contributes to the literature by addressing the need "to better understand the consumption

experiences of older adults in developing countries” which has grown in importance given the increase in the proportion of older consumers globally (Dogan, 2015, p. 564) and answers the call to further study cognitive age and its measurement cross-culturally (Barak, 2009; Barak et al., 2011).

This paper explores the impact of cognitive age on the level of materialism, status consumption, and loyalty proneness for Indian seniors, and determines if these relationships are moderated by self-confidence and social involvement. By gaining a richer picture of this international market, we aim to aid marketers in better reaching and serving this segment. Additionally, this paper makes a contribution by demonstrating whether the construct of cognitive age is useful to consider for the Indian market and how it relates to other consumer behavior variables. For this research, the terms senior and elderly are utilized as both are seen to describe the same population in the literature. For our sample, we looked at seniors sixty-five years or older. We first present our literature review discussing the Indian senior market, cognitive age, self-confidence, social involvement, materialism, status consumption, and loyalty research, along with our hypotheses. Then we discuss our methodology and sample. Finally, we offer our results and discussion.

LITERATURE REVIEW

The Indian Senior Market

With an increase in life expectancy, demographic aging has become an issue in India (Krishnaswamy et al., 2008). Per the 2011 Census, there were 103.8 million people in the 60+ years category, which was about 8 percent of the total population (Government of India, 2011; Krishnaswamy et al., 2008). The elderly population in India has several features including the majority are located in rural areas, there is an increase in older-old people (over 80 years old), a significant number (30 percent) are below the poverty line, and a majority of Indian seniors are female (Ota, 2013; Krishnaswamy et al., 2008).

Indian seniors have been culturally conditioned to believe that their children will look after

them when they become old (Ota, 2013), but the rural-urban migration of younger Indians and decline of traditional extended family systems (Krishnaswamy et al., 2008) has increased the likelihood that India’s elderly may be living alone (Biswas, 2009). This issue is especially critical for Indian elderly women (Ota, 2013; Krishnaswamy et al., 2008). As the extended Indian family structure changes to a more nuclear family structure (Krishnaswamy et al., 2008), there are significant financial and emotional concerns for those Indian seniors who do not live with family (Ota, 2013). While the literature has examined Indian seniors in terms of their growth as a segment (Ray, 2009), technological behaviors (Amma and Panicker, 2013), and importance of family (Biswas, 2009), it has not examined the impact of cognitive age on consumer behavior constructs.

Cognitive Age

Cognitive age captures different aspects of age than chronological age (Barak and Schiffman, 1981). Research consistently shows that seniors are more likely to have a younger cognitive age than their chronological age (Barak and Schiffman, 1981; Sherman, Schiffman and Mathur, 2001; Barak, 2009) and that those who report a younger cognitive age have better social support, income, education, and health (Gwinner and Stephens, 2001; Eastman and Iyer, 2005). Amatulli, Guido and Natarajan (2015), in looking at Italian seniors, suggests that cognitive age may be related to seniors’ approach to luxury consumption, where elderly luxury consumers who consume for external reasons feel younger than those who consume for more internal reasons. Dogan (2015), in looking at Turkish seniors, suggests that those seniors who feel cognitively younger relative to their chronological age (RFY) are more materialistic. However, neither of these studies looked at Indian seniors. This study contributes to the literature by examining if these relationships hold for Indian seniors and what moderates these relationships.

The research clearly demonstrates that for the U.S. market and abroad (Van Auken et al., 2006; Amatulli et al., 2015; Kohlbacher, Riley and Hofmeister, 2011), cognitive age is superior to chronological age for understanding and segmenting the elderly market, and

important in understanding seniors' consumer behavior (Barak and Schiffman, 1981; Wilkes, 1992; Mathur, Sherman and Schiffman, 1998; Sherman et al., 2001). While the cognitive age measure has been found to have universality (Barak, 2009; Barak et al., 2011), research suggests that how cognitive age impacts the elderly may vary by culture (Kohlbacher et al., 2011). Given the importance of the family and others in India (Krishnaswamy et al., 2008), cognitive age needs to be examined in terms of social involvement and self-confidence.

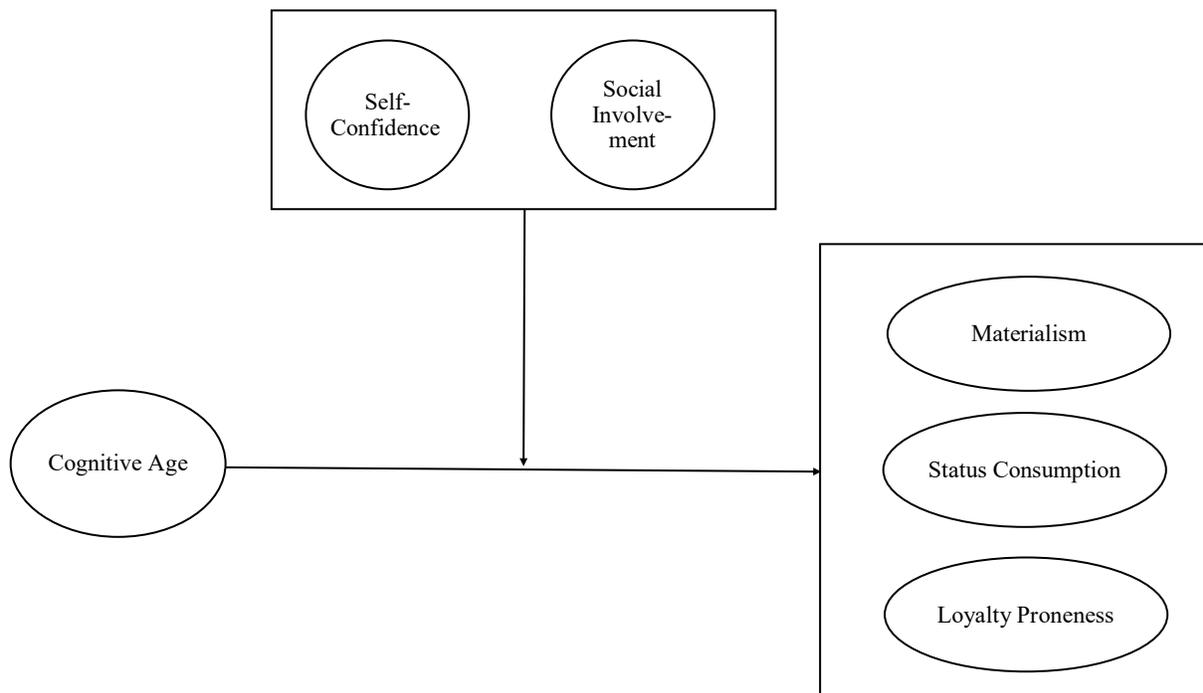
Self-Confidence and Social Involvement

The 'activity theory' of social aging suggests that seniors engage in compensatory activities to remain socially and psychologically fit (Smith and Moschis, 1984). Cognitively younger seniors have been found to exhibit higher self-confidence (Wilkes, 1992; Chowdhary, 2000) and greater social involvement (Wilkes, 1992; Chua, Cole and Leong, 1990), and to lead healthier and more active lives (Chua et al., 1990). Dogan (2015) finds that feeling younger is important for older consumers to feel more integrated with society.

What the literature has not examined is how the influence of cognitive age for Indian elderly is impacted by their level of self-confidence and social involvement.

Social identity theory (Tajfel and Turner, 1979) offers that group membership impacts a person's self-identity and is an important source of pride and self-esteem (McLeod, 2008). We suggest that social involvement and self-confidence are of particular importance to Indian elderly, given that India is a collectivist culture with high power distance (Sharma, 2011) and that the family is a vital group to Indian elderly (Ota, 2013; Krishnaswamy et al., 2008) as part of their social identity. What has not been examined in the literature is how self-confidence and social involvement impact the effect of cognitive age on other consumer behavior variables, such as materialism, status consumption, and loyalty, in the Indian culture for senior citizens. Given the importance of family and others in Indian culture and that group membership impacts how one feels about oneself, we feel it is important to examine the proposed relationships between these variables as conceptually illustrated in Figure 1.

**FIGURE 1:
Conceptual Model**



Materialism

Materialism has been examined as a personality trait (Belk, 1985) and as a value (Richins and Dawson, 1992; Richins, 1994). As a personality trait, materialism has been looked at in terms of possessiveness, lack of generosity, envy, and tangibility/preservation (Belk, 1985; Ger and Belk, 1990; Wong, 1997). As a set of values, materialism has been looked at in terms of acquisition centrality, happiness, and success (Richins and Dawson, 1992; Wong, 1997; Podoshen and Andrezjewski, 2012). Consumers who are more materialistic are seen as placing more importance on the external values of belonging and being well respected than those who are less materialistic (Clark and Micken 2002). However, Sirgy et al. (2012) proposed and developed a measure of materialism based on three dimensions (social recognition, happiness, and uniqueness) and suggest that using material possessions to make people feel unique promotes self-regard, an idea suggested by others in the literature (Belk, 1988; Tian, Bearden and Hunter, 2001; Shrum et al., 2013). Materialistic consumption may enhance well-being and self-identity (Ger and Belk, 1996; Ger and Belk, 1999; Kilbourne, Grunhagen and Foley, 2005; Karabati and Cemalcilar, 2010; Shrum et al., 2013) and increase certainty in one's life (Micken and Roberts, 1999).

Research suggests that materialistic values can occur in consumers across cultures and subcultures, but differences in the level of materialism can result from differences in economic and cultural influences across countries (Griffin, Babin and Christensen, 2004) and materialism may represent different things in different cultures (Handa and Khare, 2013). The literature suggests that there is not a consistent pattern in the levels of materialism between less- and more-affluent countries (Ger and Belk, 1996; Kilbourne et al., 2005). Cleveland, Laroche and Papadopoulos (2009, 2011) found that average materialism scores were equivalent in different countries, but their relationship with other variables and the objects selected to meet materialism needs varied by country.

Dogan (2015, p. 566) suggests that because older consumers are more interested in the

functional rather than the social benefits of products, "the materialism perception of older people can be thought to be different than the materialism perception of younger people" and that those seniors who feel younger consume more like younger consumers and are more materialistic. The literature also suggests that materialism may be related to social positioning and the drive to pursue a desirable image (Amatulli and Guido, 2012; Amatulli et al., 2015). As India is a more collectivist culture (Sanyal, Datta and Banerjee, 2014), being seen positively by others may serve a purpose in establishing social identity (Tajfel and Turner, 1979) for oneself and their group, particularly for seniors who see themselves as younger and thus may be more active consumers (Schiffman and Sherman, 1991). We suggest that cognitively younger seniors will be more materialistic than cognitively older seniors (Dogan, 2015). Additionally, the literature suggests that those driven for social purposes will be more materialistic as will those who see possessions as a source of identity (Amatulli and Guido, 2012; Amatulli et al., 2015). Given the importance of family and others in Indian culture, we offer that these relationships will hold for Indian seniors. Thus, we propose the following hypotheses:

- H₁: Indian elderly with an older cognitive age will have lower levels of materialism than those with a younger cognitive age.
- H_{1a}: The relationship between cognitive age and materialism is stronger for Indian elderly with a high level of self-confidence than for Indian elderly with a low level of self-confidence.
- H_{1b}: The relationship between cognitive age and materialism is stronger for Indian elderly with a high level of social involvement than for Indian elderly with a low level of social involvement.

Status Consumption

Status consumption is "the motivational process by which individuals strive to improve their social standing through the conspicuous consumption of consumer products that confer and symbolize status both for the individual and surrounding significant others" (Eastman, Goldsmith, and Flynn 1999, p. 41). Status comes from the evidence of wealth with

conspicuous consumption and the power that results from the associated consideration, respect, and envy of others (Veblen, 1899; Eastman et al., 1999) rather than from the value of the product itself (Mason, 2001; Husic and Cicic, 2009; Kuksov and Xie, 2012). Status consumers illustrate information about themselves to their reference groups (Husic and Cicic, 2009) by surrounding themselves with visible evidence of the higher rank they are claiming (Packard, 1959). Kastanakis and Balabanis (2014) suggest that status consumption can occur through either a bandwagon effect (for approval) or a snob effect (to stand out and be unique).

With respect to luxury consumption and culture, Souiden, M'Saad and Pons (2011) find evidence of conspicuous consumption in different cultural contexts (Canada and Tunisia). There has been some discussion of luxury marketing in India, though none of the research has focused on elderly marketing. In a study of non-senior Indians, Schultz and Jain (2015) suggest that luxury consumption can vary based on one's level of self, with the interdependent (outer) self being more motivated to consume externally (such as with conspicuous consumption) while the independent (inner) self is more motivated to consume internally (such as with individual luxury consumption for one's own enjoyment). This suggests that younger Indians may be motivated to consume for either external or internal reasons, similar to status versus style motivations (Amatuilli and Guido, 2012; Amatulli et al., 2015). Schultz and Jain (2013) suggest that Indian consumers specifically may be more motivated by the independent self, with an emphasis on pampering, indulging, and rewarding oneself. In a study of Indian households, Eng and Bogaert (2010) offer that both psychological and cultural factors impact Indians' luxury consumption and the need to signal wealth and status in their society. While Sanyal et al. (2014, p. 332) suggests that luxury consumption decisions are linked to one's self-concept and fulfill self-esteem needs and personal aspirations as well as social motivations, they specifically found that in the "Indian market environment, customers give more importance to subjective norms rather than their own attitudes while having intention to purchase luxury items."

In terms of seniors, Guiot (2001) suggests that those who feel younger than their chronological age spend more on luxury products. Thus, younger seniors are more motivated to consume for status (Amatulli et al., 2015) and this could be moderated by internal as well as external motivations (Schultz and Jain, 2015) in establishing one's social identity for either themselves and/or their group. This suggests that cognitively older seniors will be less motivated for status than cognitively younger seniors. Schultz and Jain (2013) suggest younger Indians focusing on the independent self will be focused on luxury, and we offer that this may hold for older seniors as well. Additionally, we think that those who are more socially involved will be more focused on what others think about luxury and status. Specifically, we propose the following hypotheses:

- H₂: Indian elderly with an older cognitive age will have lower levels of status consumption than those with a younger cognitive age.
- H_{2a}: The relationship between cognitive age and status consumption is stronger for Indian elderly with a high level of self-confidence than for Indian elderly with a low level of self-confidence.
- H_{2b}: The relationship between cognitive age and status consumption is stronger for Indian elderly with a high level of social involvement than for Indian elderly with a low level of social involvement.

Loyalty to the Brand/Product

Research has shown that seniors are more likely than younger consumers to remain brand loyal because it simplifies their buying decision (Stephens, 1991) and because of their early relationship with long-established brands (Lambert-Pandraud and Laurent, 2010). In India, seniors grew up with fewer brand choices, which also enhances brand loyalty.

With respect to cognitive age, research has shown that cognitively younger consumers are more open to trying new brands, switching brands, and seeking information, and are less cautious and more confident in their purchasing skills than consumers with older cognitive ages (Gwinner and Stephens, 2001; Szmigin and

Carrigan, 2001; Iyer, Reisenwitz and Eastman, 2008). In terms of luxury brands, Amatulli et al. (2015) suggests that senior consumers may be relatively more loyal to brand names. As Indian elderly have aged during India's liberalization period, with its increasing options of products and brands, their level of brand and product loyalty may have changed (Khare, 2011; Lysonski and Durvasula 2013). Thus, the literature offers that cognitively older seniors are more brand loyal, which we suggest will hold for Indian seniors. Furthermore, we suggest that for Indian seniors who are self-confident and socially involved, this link will be even stronger as they will not feel the need to look for new options for themselves. Thus, in looking at the relationship of cognitive age and brand loyalty for Indian seniors, we propose the following hypotheses:

- H₃: Indian elderly with an older cognitive age will have higher levels of loyalty to the product/brand than those with a younger cognitive age.
- H_{3a}: The relationship between cognitive age and loyalty to the product/brand is stronger for Indian elderly with a high level of self-confidence than for Indian elderly with a low level of self-confidence.
- H_{3b}: The relationship between cognitive age and loyalty to the product/brand is stronger for Indian elderly with a high level of social involvement than for Indian elderly with a low level of social involvement.

METHODOLOGY

Sample

Data were gathered from a sample of elderly consumers from the capital city of India. Following established field research data gathering procedures (e.g., Arnold and Reynolds, 2003; Bitner, Booms and Tetreault, 1990; Jones and Reynolds, 2006; Iyer and Muncy, 2016), the researchers recruited graduate students and trained them to administer a printed survey. The students were trained in proper data collection procedures and instructed to contact elderly consumers and to explain the nature of the research study, and to ask that s/he participate by completing a questionnaire form. These consumers were

promised complete confidentiality and those who agreed to participate in the study completed the questionnaire at that time and immediately returned it to the student helper. The elderly consumers were required to provide their name and contact information for verification of their participation in the study. Later that day, student helpers gave the completed questionnaires to the researchers. The entire data collection process lasted four weeks and a total of 705 questionnaires were completed. After all questionnaires had been gathered, the elderly consumers received a follow-up phone call from the researchers' secretary to thank them for participating in the study and to verify that they had actually completed the questionnaire themselves. Next, the researchers reviewed each questionnaire form to identify and delete those from any elderly consumer who did not meet the age parameter for inclusion in the study (e.g., less than 65 years of age were excluded). This procedure led to a final sample of 676 usable responses. The average respondent was a male (69%), aged 65 years, with an undergraduate degree or higher, and 47 percent of the respondents were still employed.

Construct Operationalization

All items were adapted from established scales (shown in Table 1). Cognitive age utilized the four indicants of feel, look, act and interests as developed by Barak and Schiffman (1981). The scale measured seven points of ten-year intervals ranging from 30's to 90's. All other items were measured on a seven point Likert scale from "1 = strongly disagree" to "7 = strongly agree," with a 4 being neutral.]

Measures and Purification

Following Anderson and Gerbing's (1988) process, we evaluated the measurement quality of the indicators. Every factor was submitted to a confirmatory factor analysis. All factor loadings were significant at the 0.01 level with all individual reliabilities above the required value of 0.4 (Bagozzi and Baumgartner, 1994), and the composite reliability exceeded the required value of 0.7 (Bagozzi and Yi, 1988; Bagozzi and Baumgartner, 1994). After examining the individual factors, a reduced set of items was subjected to a confirmatory factor

TABLE 1:
Measurement Items

Scale/Items *	Standardized Loading (t-values)	Source/adapted from
Cognitive Age		Barak and Schiffman (1981)
Most of the time...		
I feel like I'm in my...	0.85 (26.83)	
I look like I'm in my...	0.86 (27.09)	
My interests are those of a person in his/her...	0.86 (27.27)	
I do the things a person does in his/her...	0.76 (22.65)	
Materialism		Sirgy et. al. (2012)
I enjoy owning expensive things that make people think of me as unique and different.	0.85 (27.06)	
I usually buy expensive products and brands to make me feel unique and different.	0.95 (32.59)	
I usually buy expensive things that me look distinctive.	0.89 (29.45)	
Status Consumption		Eastman et al. (1999)
I would buy a product just because it has status.	0.85 (26.44)	
I am interested in new products with status.	0.88 (27.30)	
I would pay more for a product if it had status.	0.77 (22.66)	
Loyalty to the Product/Brand		Lichtenstein, Netemeyer and Burton (1990); Raju (1980)
I generally buy the same brands that I have always bought.	0.73 (21.30)	
Once I get used to a brand I hate to switch.	0.83 (25.71)	
If I like a brand, I rarely switch from it just to try something different.	0.89 (28.23)	
Even though certain products/services are available in a different number of brands,		
I always tend to buy the same brand.	0.80 (24.19)	

analysis using maximum likelihood estimation via LISREL 8.5 (shown in Table 2 with construct inter-correlations and information on the reliability and validity). While the chi-square value for the measurement model was significant (440.70 with 71 d.f, $p < 0.001$), other goodness-of-fit measures demonstrated a good overall fit of the model to the data (Baumgartner and Homburg, 1996): RMSEA = 0.08 (NNFI = 0.94, IFI = 0.95 and CFI = 0.95).

Construct Validity Assessment

We then examined the validity of the model. Each item illustrated acceptable loadings (path estimate > 0.50) that were significant (t-value > 2.0), indicating acceptable convergent validity. For discriminant validity, none of the confidence intervals of the phi matrix included 1.00 (Anderson and Gerbing, 1988). The amount of variance extracted for each construct was compared with the squared phi estimates (Fornell and Larcker, 1981) and the estimates for all constructs were greater than the squared phi estimate, demonstrating sufficient

discrimination between the variables. All factor loadings were significantly different from zero, shown by their consistently large t-values. The scale reliability was determined via the calculation of composite reliability scores. These ranged from 0.73 to 0.93, all above the cutoff of 0.6 (Bagozzi, Yi and Phillips, 1991). Thus, the measures had sufficient validity and reliability for testing the hypothesized model.

Structural Model Estimation

The hypotheses were tested (shown in Table 3) using structural equation modeling through LISREL 8.5 (Jöreskog and Sörbom, 1993). We tested for common method variance using the marker variable approach (e.g., Fang, Palmatier and Evans, 2008) and found no evidence that it was biasing the overall results.

Data Analysis

Moderating effects were tested with subgroup analysis per Kohli (1989). The respondents were classified into three groups based on their

TABLE 2:
Construct Correlations, Means, Standard Deviations and Variance Extracted
(Construct Reliabilities on the Diagonal)

Construct	1	2	3	4
1. Cognitive Age	0.90			
2. Loyalty to Product Brand	0.058	0.89		
3. Materialism	-0.093*	-0.053	0.93	
4. Status Consumption	-0.057	-0.021	0.541**	0.87
Mean	3.41	4.79	2.63	2.76
Standard Deviation	1.00	1.60	1.51	1.49
Variance Extracted	0.69	0.66	0.80	0.69

** correlation significant at $p < 0.01$

* correlation significant at $p < 0.05$

TABLE 3:
LISREL Results for the Hypothesized Model

Hypothesis Path	Completely Standardized Estimate	t-value	Result
H ₁ Cognitive Age → Materialism	-0.12	-2.80	Supported
H ₂ Cognitive Age → Status Consumption	-0.09	-2.18	Supported
H ₃ Cognitive Age → Loyalty to Product/Brand	0.05	1.20	Not Supported

Structural Model: ($\chi^2_{(74)} = 661.58, p < 0.01$; RMSEA = 0.09; IFI = 0.92; CFI = 0.92; NNFI = 0.90) and the significance of the proposed paths/relationships is provided in Table 3.

moderator score, with the lowest 35 percent of respondents considered low on that dimension and the highest 35 percent considered high. The middle 30 percent were eliminated to maximize contrast between the low and high groups and enhance the power of further statistical tests.

This process (shown in Table 4) was used to examine the moderators (social involvement and self confidence) and the three dependent measures (loyalty to the product/brand, materialism, and status consumption). For each, a regression analysis with either loyalty to the product/brand or materialism or status consumption as the dependent variable and cognitive age as the independent variable was run with all respondents in the high and low moderator subgroups. A second regression was run allowing different regression coefficients for the two subgroups. A Chow test (Chow, 1960) was done on the difference in the sums of squared residuals from the two regressions to determine the statistical significance of the difference in the coefficients of cognitive age between the high and low groups. This process

was repeated for each moderator. This is an accepted process to test moderation per Posakoff, MacKenzie, Ahearne, and Bommer (1995).

RESULTS

Per Table 3, we found empirical support for two of the three direct relationships between the constructs (H₁ and H₂ were supported). Our results indicate that cognitive age has a negative relationship with materialism ($t = -2.80$) and status consumption ($t = -2.18$). As Indian elderly consumers feel cognitively old, their level of materialism and motivation for status diminishes. In terms of loyalty to the product/brand, our hypothesis was not supported ($t = 1.20$) though it was the hypothesized direction of cognitively older Indian seniors being more product/brand loyal. This lack of significance could be attributed to the proliferation of products and brands in the India market (since liberalization). Per Table 4, we find empirical support for five of the six research hypotheses on moderating effects. The results indicate that social involvement and self-confidence serve as a moderator of the

TABLE 4:
Regression Coefficients Across Low and High Levels of Moderator Variables (Unrestricted Run)

Hypotheses	Moderator Variable	Dependent Variable	R ²	Moderator Level	<u>Independent Variables</u>	
					Cognitive Age	Chow Test
H _{1a}	Self Confidence	Materialism	0.016	Low	-0.185*	F = 6.11**
				High	-0.221	
H _{2a}	Self Confidence	Status Consumption	0.015 0.000	Low	-0.153*	F = 0.94 (NS)
				High	-0.034	
H _{3a}	Self Confidence	Loyalty to	0.002	Low	0.072	F = 10.33***
		Product/Brand	0.031	High	0.284	
H _{1b}	Social Involvement	Materialism	0.033 0.001	Low	-0.294	F = 10.35***
				High	-0.036*	
H _{2b}	Social Involvement	Status Consumption	0.021 0.003	Low	-0.207*	F = 6.44**
				High	0.087*	
H _{3b}	Social Involvement	Loyalty to	0.000	Low	0.151	F = 14.15***
		Product/Brand	0.000	High	-0.014*	

*** p < 0.01
 ** p < 0.05
 * p < 0.10

effects of cognitive age on loyalty, materialism and status consumption for elderly consumers.

Moderating Effects of Self Confidence

For H_{1a} and H_{3a}, the moderating effect of self-confidence for elderly consumers is significant as demonstrated by the test of differences between the regression coefficients of high and low levels of self-confidence when exhibiting materialistic tendencies (F = 6.11, p < 0.05; Table 4) and when being loyal to a product/brand (F = 10.33, p < 0.01; Table 4). However for H_{2a}, self-confidence is not a moderator when these elderly consumers engage in status consumption (F = 0.94, Table 4).

One possible explanation of the significance of the moderating effect of self-confidence for materialism and loyalty is that these elderly consumers have seen India go through a transformation from being a closed economy to a more liberalized economy. As these consumers grew older, the cognitively young

consumers felt that this was the time to satisfy their materialistic cravings. These same consumers also exercise loyalty towards the products introduced into India after liberalization. However, self-confidence may not be a moderating factor when it comes to consuming for status because of the importance of others in Indian culture and the fact that many Indians derive their social identity from group membership (Tajfel and Turner, 1979).

Moderating Effects of Social Involvement

For H_{1b}, H_{2b} and H_{3b}, the moderating effect of social involvement for elderly consumers is significant as demonstrated by the test of differences between the regression coefficients of low and high levels of social involvement when exhibiting materialistic tendencies (F = 10.35, p < 0.01; Table 4) and motivated by status consumption (F = 6.44, p < 0.05; Table 4) and when being loyal to a product/brand (F = 14.15, p < 0.01; Table 4). As their level of social involvement increases, Indian seniors

enjoy their materialistic pleasures, consume for status and are loyal to the products/brands.

DISCUSSION

This study examined the Indian senior market, looking at the cognitive age of seniors to determine if there was a relationship between those Indian seniors' cognitive age and their level of materialism, status consumption, and loyalty proneness. Indian seniors with a younger cognitive age were more materialistic and motivated to consume for status. This suggests that for marketers of luxury products, those seniors who perceive themselves to be younger may be more interested in consumption of luxury products to meet status needs. This relates to Amatulli et al.'s (2015) finding that cognitively younger seniors are more motivated for status than style. Given the increasing economic power of the Indian market, particularly among those who are older and may have more wealth (Knorringa and Guarin, 2014), this suggests that cognitively younger seniors may be an important market for luxury brand name products.

We then examined two moderators, self-confidence and social involvement, impacting the relationship between cognitive age and materialism, status consumption, and loyalty proneness. We found that the moderator of self-confidence did impact the relationship between cognitive age and materialism as well as loyalty proneness. However, self-confidence did not impact the relationship between cognitive age and status consumption. This suggests that it is a more interpersonal external motivation, such as conspicuousness, or a social bandwagon motivation (Eastman and Eastman, 2015; Kastanakis and Balabanis, 2014) in demonstrating one's social identity (Tajfel and Turner, 1979), rather than a more personal internal motivation, such as experiential, reward, or quality (Eastman and Eastman, 2015) that may be impacting Indian seniors' motivations for status.

We also found that social involvement had a moderating impact between cognitive age and materialism, status consumption, and loyalty proneness. This relates to the idea of interdependent self as suggested by Schultz and Jain (2015), which is consistent with the

importance of family for India's elderly (Ota, 2013; Krishnaswamy et al., 2008). It also relates to the importance of the influence of subjective norms on luxury brand intention as suggested by Sanyal et al. (2014). This may aid in explaining why Indians gave extra importance to subjective norms, how Indians think important others will perceive their luxury behaviors rather than their personal perceptions of luxury brands in Sanyal et al.'s (2014) study, as well as the moderating impact of social involvement found in our study. Eng and Bogaert (2010, p. 55) offer that luxury consumption for Indians "reflects conspicuous consumption and status, and signals wealth for individuals, and conveys social identity and status in Indian society." In terms of the materialism, it relates to Clark and Micken's (2002) finding that those who are more materialistic place more importance on belonging and being respected by others. Thus, our results suggest that Indian seniors may be motivated for luxury more by traditional conspicuous consumption and bandwagon status motivations than by personal, style motivations. This illustrates the importance of social relationships for Indian elderly and their impact on marketing variables. Cognitively younger consumers may derive their social identity (Tajfel and Turner, 1979) in part from consumption.

Our study examined social involvement in terms of the Indian elderly respondents enjoying and liking being around others. Our results indicating the important moderating impact of social involvement suggest that marketers targeting the Indian senior market need to consider social relationships in trying to reach and communicate with this market. This is particularly true for status brands as they may serve an important role in developing social identity for cognitively younger Indian seniors. Marketing efforts aimed at Indian seniors need to recognize their collective cultural traits and the importance of groups, such as the family, as well as their psychological motivations for luxury products and brands (Eng and Bogaert, 2010). Luxury marketers need to stress the social aspects of their status products and how they aid not just the individual senior, but their collective family and group, in enhancing status and social identity among others.

Research is needed to see if the moderating

impact of social involvement on status consumption and materialism found in this study holds in other emerging markets with collectivist cultures. If so, there are tremendous managerial implications for luxury marketers in such markets, particularly because conspicuous consumption (Souiden et al., 2011) and hedonic elements of products (Sharma, 2011) have been found more with individualistic cultures. Our findings suggest that by focusing on the social involvement aspect, luxury marketers may be effective in reaching the cognitively younger elder interested in status consumption in a more collectivist culture, such as India, as a means for social identity and enhanced social comparison (Tajfel and Turner, 1979).

Future Research and Limitations

This research contributes to the literature by being one of the first to examine the senior Indian market. We demonstrate that similar to American seniors, the construct of cognitive age does have an impact, and we highlight several variables that are impacted. Specific to the Indian market, we illustrate the importance of social involvement in considering the influence of cognitive age on status consumption, materialism, and brand loyalty. However, we recognize that there are a number of variables that future research can examine that may be impacted by cognitive age or moderate the impact of cognitive age for Indian seniors, and we acknowledge that significantly more research is needed to better understand the role of cognitive age for Indian seniors. Thus, while this research establishes the relationship between cognitive age and status consumption, materialism, and brand loyalty, along with the importance of social involvement, future research is needed to see what other variables may also be influenced by cognitive age for Indian seniors. For example, while this study examines the importance of social involvement, social positioning may be a useful variable for future consideration with India seniors given its examination with materialism and image in the literature (Amatulli and Guido, 2012; Amatulli et al., 2015).

In terms of status consumption, research is needed to better determine what specific external motivation is influencing this interest

and how it relates to purchase behavior. Research is also needed to examine cultural variables more specifically associated with Indian culture, such as collectivism and power distance. Future research could also examine contextual factors in India that impact older consumers to feel cognitively younger, similar to that done in other countries (Amatulli et al., 2015). Research is also needed to determine how Indian seniors meet their needs for social involvement, given the changing Indian family structure.

Finally, the data for our study was collected from the capital city (New Delhi) in India and, as a result, our study cannot be generalized over other populations of India. Our sample is from an urban center and needs to be replicated to capture the rural centers. As a significant number of Indian elderly are females who live in rural areas (Ota, 2013; Krishnaswamy et al., 2008), more research is needed to enhance the representation of the country. From a methodological perspective, the fit indices of the study just met the acceptable criteria of a good fit. There is a need to develop measures aimed primarily at emerging markets that can capture the nuances of market composition.

This research illustrates that cognitive age is an important segmentation variable for the Indian elderly market, as it was in the United States. Additionally, this research demonstrates the link between cognitive age and other consumer behavior constructs, such as status consumption and materialism. Finally, this paper illustrates that for the Indian elderly, social involvement has a significant moderating impact on these relationships. Given the size and importance of the Indian market (Krishnaswamy et al., 2008; Verma and Gupta, 2014), this paper hopes to contribute to the needed research in the ever-growing Indian market.

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AN EMPIRICAL STUDY OF CONSUMER MOTIVATIONS TO USE IN-STORE MAPPING APPLICATION

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This study examines how consumers' motivations and personality characteristics influence the use of in-store mapping applications. In-store mapping applications are mobile applications that provide real time location information to consumers while also providing a means by which marketers may deliver to consumers both coupons and other sales promotions at the target location. In-store mapping applications enhance consumers' in-store experiences by providing the means to more efficiently research and purchase products. In this study, we draw on theories concerning utility and technology acceptance to develop a model that suggests that perceived usefulness, perceived ease of use, and entertainment benefits are significant in explaining intentions to use in-store mapping applications. Moreover, perceived unwillingness to sacrifice market security and deal proneness are important consumer traits for the usage of in-store maps. Overall, we conclude that in-store maps may provide an added value to the consumer shopping experience by providing functional and emotional benefits.

INTRODUCTION

This research is designed to empirically investigate the motivational and personality characteristics of young American consumers which affect adoption of in-store mapping applications. Mobile technology has become a ubiquitous feature of consumer culture and the predominant means by which consumers interact with one another and the Internet (Xu, 2016). In retailing, smartphone mapping applications have been developed which allow consumers to track their locations inside stores. Pioneered by Google in late 2012, in-store electronic maps have since been adopted by individual retail chains such as Home Depot, Walgreens, Schnucks, and Ikea, as well as such diverse consumer environments as Mall of America, Caesar's Palace Casino in Las Vegas, Wembley Stadium in London, and the Atlanta Jackson International Airport (Fiegermanov, 2012; Tode, 2013). While experts suggest this shift has far-reaching implications for marketers (Tode, 2013), there are no empirical studies in the marketing literature that examine American consumers' motivations to use in-store mapping applications. This is particularly troublesome in an era where shortened product lifecycles are the norm for technology

businesses in advanced western economies. Due to the practical importance of this subject, efforts to develop an empirical analysis of what motivates shoppers to use in-store mapping applications in the U.S. are necessary.

In-store mapping applications help both customers and businesses. They allow customers to see their positions inside a retail store. They also provide information regarding products and promotions, as well as customer reviews. Some mapping applications also allow users to create shopping lists, check prices, and locate items in the store (Halter, 2014). Customers benefit from the convenience of information and discounts. Businesses are afforded the ability to focus customers' attention on inventory they want to move quickly and reduce the need for customer service, among other things. Despite concerns on the part of both businesses and building owners over issues ranging from the control of indoor data to revenue sharing, stores remain committed to expanding these applications (Burrows, 2012).

This paper is developed as follows. First, we provide an overview of the literature on both physical maps in retail settings and the mental maps which consumers construct to help guide them in the navigation of retail spaces. We then provide a theoretical framework, reviewing expected utility theory, the technology

acceptance model, and more general consumer traits, to construct a series of hypotheses. Third, we detail our method, analysis, and findings. Finally, we discuss implications for both retailers and future researchers.

LITERATURE REVIEW

Understanding the customer-environment relationship is essential to the formulation of important marketing decisions such as store layout, design, and merchandising. Studies in environmental psychology highlight consumer orientation as a significant factor that impacts buyer behavior at the point of sale (Donovan & Rossiter, 1982; Eroglu & Harrell, 1986). The existence of physical maps in store environments (e.g., displaying the location of service points, products, escalators) influences customer sentiments concerning shopping convenience (Groepel-Klein & Bartmann, 2008). These studies also suggest that consumers store mental maps of retail stores. These help consumers internally represent large-scale environments cognitively (Gulliver, 1908; Trowbridge, 1913; MacKay & Olshavsky, 1975). Consumers use their mental maps to determine the value of traveling a distance to obtain certain products or to create efficiencies in shopping (by combining purchases in one-stop shopping or choosing one location over another for more product variety in a single trip, for example). When consumers have better mental maps, their ease of orientation can be improved (Groepel-Klein, Bartmann, 2008).

Most previous studies on mental maps focus solely on consumers' mental representations of their existing location relative to a store. They have not extensively studied consumers' mental maps of store interiors. Exceptions exist including work concerning the relationship between the level of mental map detail of store interiors and perceived ease of orientation (Sommer & Aitkens, 1982) and the relationship between stimulating in-store spatial knowledge and retailing success (Groepel-Klein, & Bartmann, 2008). In the latter study, presentation of merchandise was found to manipulate buying decisions at the point-of-sale. Groepel-Klein and Bartmann (2008) point to significant evidence in marketing research that the existence of maps of shops

correlate to shopping convenience, product recall, positive evaluations towards the store and willingness to spend money. In earlier work, these researchers found that when ease of orientation is improved, approach behaviors result. Approach behaviors involve extended duration of stay, increased likelihood to recommend the store to others, and a heightened positive overall impression of the store. Approach behaviors are considered crucial for the success of stores. Grossbart and Rammohan (1981) found that cognitive maps, by providing indicators of direction and distance, allow consumers to more easily locate merchandise, stores, and sales, and to form more favorable impressions of salespersons. As customers mentally position themselves within retail spaces, they are better able to predict the stores, merchandise, and activities they will encounter as they move about the retail space. This network of beliefs can provide a basis for evaluating the consequences of various shopping behaviors such as coming to the area, choosing routes for multipurpose trips, visiting certain stores, and finding certain merchandise and services. Thus, by referencing cognitive maps and consequently evaluating these, customers are better able to make a variety of shopping decisions.

In an early study of store interiors and mental mapping of spatial behavior and cognitive orientation, Sommer and Aitkens (1982) showed floor plans for two supermarkets to customers and asked them to indicate the placement of various product categories. Items on peripheral aisles were recalled more frequently and accurately than items in central aisles. Moreover, the study found that accuracy of mental maps was directly related to frequency of patronage. Further, large and diversified interior environments such as office buildings, department stores, supermarkets, hospitals, and airports were frequently confusing to their occupants. As buildings get larger and more differentiated in function, orientation becomes a more acute problem. This was found to be particularly problematic for supermarkets (the size of which had doubled in the thirty years prior to the study).

Arguably, studies of mental maps must be revisited with the widespread adoption and availability of both street-by-street navigation

and more recent in-store mobile maps, which to some extent, changed the way we use mental maps. We argue that it is precisely the expansion of these tools that dictates more contemporary understandings of the relationship between improving consumers' knowledge of store interiors and retailing strategy. A small number of studies in the marketing literature examine the changes imposed by technology on the retailing landscape. The paucity of this work is surprising, given the fact that technology is perhaps the most profound environmental variable used to gain competitive advantage. In retailing, recent examples of innovative technologies include digital displays with interactive features and virtual reality practices (Pantano & Corvello, 2010; Pantano & Naccarato, 2010). Yet, consumers' adoption and usage of innovative retail applications remains an underdeveloped area of exploration in the marketing literature. Relatedly, technological innovation is seen as key to enhancing the buying process – a process which has, from the consumer's perspective become increasingly multichannel in nature – and providing a more stimulating shopping experience. In this last event, technology offers opportunities for retailers to enhance promotions, movement, sights and sounds that make shopping more appealing (Pantano & Laria, 2012).

We assess how motivational and personality characteristics of consumers affect behavioral intentions to use in-store mapping applications. Consistent with prior research on the adoption of technology in the domain of both mobile applications and social media (Yang, 2013; Zolkepli and Kamarulzaman, 2015), we investigate the adoption of smartphone mapping applications by young consumers. These consumers (often described as Generation X and Y) are considered highly responsive to technology and tech savvy. They are commonly reported to invest significant money, time and effort to learn about and use the newest technology products.

Theoretical Framework

In this study, we combine expected utility theory (Mongin, 1997; for perceived unwillingness to sacrifice security) with the

technology acceptance model (TAM) (Davis, 1986, 1989; Davis, Bagozzi & Warshaw, 1989), and consider several consumer traits of general deal proneness (Lichtenstein, Netemeyer, & Burton, 1995) (or involvement with sales promotion deals), market mavenism, and time pressure, in order to study consumer intentions to use in-store mapping applications.

Expected utility theory (Mongin, 1997) holds that consumer decisions are a tradeoff between a subjective assessment of risks and expected utilities for each consumer choice. The consumer weights utility values of decision outcomes, multiplied by their corresponding contingencies (Mongin, 1997). This is a cost/benefit assessment based on the individual's subjective appraisal of available knowledge. Therefore, consumers will consider the tradeoff between the utility gained by the usage of technology and the loss that may be incurred as a result of this usage (Rust et al. 2002; Milne & Gordon, 1993; Angeles, 2007). We believe that this kind of tradeoff relates to user response to in-store mapping applications.

The technology acceptance model (TAM; Davis, 1986) is adapted from the theory of reasoned action (TRA) by Fishbein and Ajzen (1975). TRA was developed to model user acceptance of information systems. The objective of the TAM is “to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behavior across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified” (Davis, Bagozzi & Warshaw, 1989, p. 985). TAM conceptualizes perceived convenience as having two dimensions: perceived ease-of-use (PEU), defined as the “degree to which a person believes that using a particular system would be free from effort,” and perceived usefulness (PU), defined as the “degree to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989, p. 320). The constructs of ease of use and usefulness are closely associated with the adoption of technology by consumers. These constructs are allied to the perceived value of in-store mapping applications' benefits through expected utility theory (Angeles, 2007). From these constructs,

we hypothesize that:

H₁: There is a positive relationship between PU and behavioral intention to use in-store mapping applications.

H₂: There is a positive relationship between PEU and behavioral intention to use to use in-store mapping applications.

From the consumer's standpoint, the utility of in-store mapping application may not be limited to the convenience that derives from its features. Early research on acceptance of mobile technology conducted by Nysveen et al. (2005) suggests that the consumer's motivation to adopt specific media ranges from functional to non-functional, including the degree to which the consumer is entertained. Similarly, Bauer et al. (2005) emphasize the importance of tailoring mobile marketing messages to consumers' entertainment preferences. More recent scholarship (Watson et al., 2013) finds that consumers rely on their phones for information, communication, and entertainment purposes. Yang (2013) finds that adoption of mobile applications by young American consumers is driven, in part, by entertainment and enjoyment. Consumers, then, value being entertained during the mobile consumption experience. Situated in the TAM model, entertainment benefits (EB) are emotional features which represent the utility of excitement consumers experience when interacting with new technology. Innovations are compelling because they bring a unique improvement to consumer lifestyles. They also provide stimulation through being novel and interesting. Hence, we posit:

H₃: There is a positive relationship between EB and behavioral intention to use in-store mapping applications.

Consistent with Expected Utility Theory, Hossain and Prybutok (2008) define perceived security as the degree to which a consumer feels protected against security threats resulting from the use of technology. Our assessment focuses on the perceived unwillingness to sacrifice security (SS) dimension of the perceived security concept (Hossain & Prybutok, 2008). Concurrently, when consumers are concerned about sacrificing security, they are less likely to use new technology. Therefore,

H₄: There is a negative relationship between SS and behavioral intention to use in-store mapping applications.

As defined by Lichtenstein, Netemeyer and Burton (1995), consumer general deal proneness (DP) is a construct measuring a consumer's tendency to buy products associated with sales promotions and the enjoyment that accompanies this process. It indicates a broad leaning rather than the probability that the behavior materializes for any specific product class. DP (Lichtenstein, Netemeyer, & Burton, 1995) is also cited as involvement with sales promotion deals. DP is associated with a multitude of marketplace behaviors. Because in-store maps can be used to provide consumers with contests, sweepstakes, coupons or other promotional deals by retailers, we believe that consumers who are more disposed to sales promotions would be more likely to use in-store mapping applications. Hence,

H₅: There is a positive relationship between DP and behavioral intention to use in-store mapping applications.

Market mavenism (MV) measures the degree to which a person has a wide range of knowledge regarding products to buy, places to shop, and other consumption-related activities and influences others by sharing this information. Urbany, Dickson & Kalapurakal (1996) developed a model of price search for the retail grocery industry that included a relatively complete accounting of economic and noneconomic returns, as well as search costs. They found that market mavenism accounted for a significant amount of variance in specials-related search beyond that explained by economic costs and returns. Since in-store mapping applications directly relate to obtaining knowledge on the stores as well as special promotions and discounts, we argue that market mavenism is potentially a predictor of intentions to use in-store mapping applications. Therefore,

H₆: There is a positive relationship between MV and behavioral intention to use in-store mapping applications.

Originally used by Mittal (1994), the time pressure measure (TP) denotes the lack of time

a person perceives there to be available for doing what needs to be done in her/his life. Higher scores on this scale indicate that respondents consider themselves to be very busy. We argue that consumers who feel time crunched would be more prone to using in-store maps and take advantage of their benefits. Hence,

H₇: There is a positive relationship between TP and behavioral intention to use in-store mapping applications.

Overall, our study model comprises several constructs – perceived usefulness (PU), perceived unwillingness to sacrifice security (SS), perceived ease of use (PEU), entertainment benefits (EB), deal proneness (DP), market mavenism (MV), time pressure (TP) and the behavioral intention to use in-store mapping applications (Figure 1).

METHODOLOGY

We used a quantitative research methodology to test the hypothesized relationships. Descriptive research is well-suited to our research question because it is possible to identify the relevant constructs within a theoretical framework that matches our problem (Burns & Bush, 2010; Leedy & Ormrod, 2013). Existing research fails to address our research question because of a lack of focus on electronic versions of store maps.

The data for this study were collected from a convenience sample of students at three state universities located in the American Midwest, South and Pacific regions through an online questionnaire administered outside class hours. Even though the use of a convenience sample of college students is far from ideal, they are frequently used in marketing and consumer behavior research; up to 75% of research subjects in two leading academic marketing journals were college students (Peterson and Merunka, 2014). We believe that the use of a

FIGURE 1:
Model for Behavioral Intention to Use In-store Mapping Applications

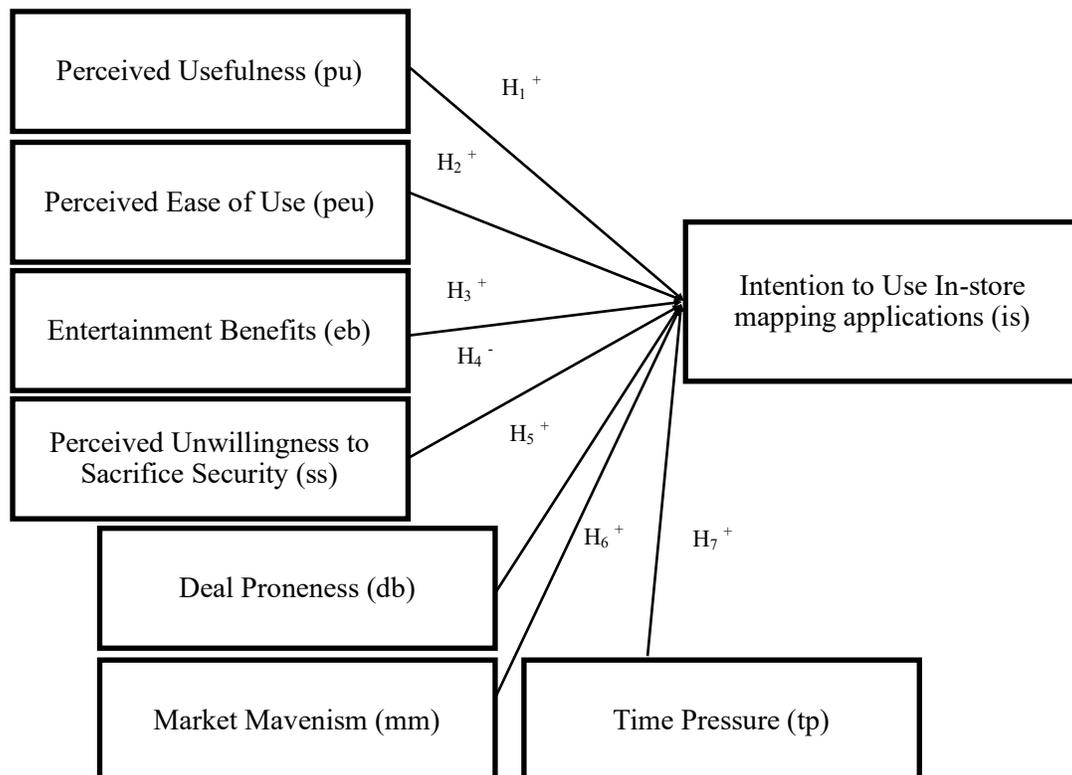


TABLE 1:
Construct-wise Sources of Pre-existing Scales

Dependent Variable	Construct	Source
is	Usage Intention (behavioral intention to use In-store mapping applications)	Okazaki, Skapa and Grande (2008); Jong-Hyuok, Somerstein & Kwon (2012); Jeong (2011)
Independent Variables		
pu	Perceived Usefulness	Davis (1989)
eb	Entertainment Benefits	Adapted from Dwyer & Kim (2011); Jong-Hyuok, Somerstein & Kwon (2012); Jeong (2011)
dp	General Deal Proneness (Involvement with Sales Promotion Deals)	Lichenstein, Netemeyer & Burton (1995)
peu	Perceived Ease-of-use	Davis (1989)
ss	Perceived unwillingness to sacrifice security	Ajzen (1991), Malhotra & Galletta (2005)
mv	Market Mavenism	Feick & Price (1987)
tp	Time Pressure	Mittal (1994)

convenience sample of college students is justified in our study because, as indicated in Table 2, 95.7% of our sample was a member of either Generation Y or Generation X, with a nearly even distribution for gender. In particular, our sample consisted of the age ranges of 18-21, 22-25, 26-29, and 30-33 with percentage composition of 45.1%, 35%, 8.6% and 3.1% respectively. All scale items were pre-existing constructs that were previously validated in the literature (Table 1).

Survey instrument design. For behavioral data collection for this research, all items were rated on a psychometric scale. A six-item Likert scale that ranged from “Strongly Disagree” (1) to “Strongly Agree” (6) was utilized, to exclude neutrality in responses. The questionnaire opens with a brief introductory paragraph that describes the context of the study, indicating that smartphone map applications recently have made it possible for users to zoom into retail environments as well as track their location inside the stores. The psychographic items were followed by the demographics questions.

ANALYSIS AND RESULTS

The respondents in this study were college students that are representative of the target demographic (Table 2). The questionnaires were administered to students of several classrooms with sizeable non-traditional student populations from March through May 2015 by an online questionnaire prepared in Qualtrics. In total, 304 students participated. Forty-six responses were deemed invalid because all or most questions were left unanswered, leaving 258 valid responses. The requirement for the minimum final sample size for exploratory factor analysis (EFA) was satisfied for a medium effect size and seven independent variables. The detailed demographics of the surveyed students show that respondents were members of Generation X and Y. Hence, the sample accommodates generalizability to the study population of Generation X and Y consumers (Huck 2008; Kerlinger & Lee 2000; Hair et al. 2010).

TABLE 2:
Profile of the Survey Respondents

Demographics (sample size=258)*		Frequency	Percentage	
Gender	Male	126	48.8	%
	Female	132	51.1	%
Age	18-21	116	45.1	%
	22-25	90	35.0	%
	26-29	22	8.6	%
	30-33	8	3.1	%
	34-37	10	3.9	%
	Over 37	11	4.3	%
	Education Level	Some High School	3	1.2
High School / GED		97	37.6	%
A.A. or A.S. Degree		71	27.3	%
Bachelors Degree		78	30.2	%
Masters Degree		9	3.5	%
Doctoral Degree		0	0	%
Annual Household Income	Below \$20,000	108	41.9	%
	\$21,000 – 40,000	55	21.3	%
	\$41,000-60,000	33	12.8	%
	\$61,000-80,000	19	7.4	%
	\$81,000-100,000	21	8.1	%
	Above \$100,000	22	8.5	%
Employment Status	Unemployed	47	18.2	%
	Part-time	121	46.9	%
	Full-time	64	24.8	%
	Summers Only	26	10.1	%
Own a device that can connect to the Internet	Yes	258	100	%
Smartphone map application already downloaded on smartphone	Yes	147	57.0	%
Tried an in-store mapping application before	Yes	76	30	%

*One respondent did not provide age data.

Analysis. In order to assess the internal factor structure of the scales, we conducted a principal component analysis with varimax rotation. We dropped one item from the deal proneness scale due to poor loading. The remaining constructs had satisfactory loadings (see Table 3). The bivariate correlation chart showed higher within-construct correlation than across-construct correlation in the case of each of the seven constructs (Nunnally, 1978).

Regression. We performed stepwise multiple linear regression. The resulting t-statistics, beta weights, and the significance values are in Table 4.

According to the regression results, the model was found to be significant for intentions to use in-store mapping applications ($R^2=.696$, F

(7,257) =81.891, $p<.000$). Perceived usefulness (pu) ($\beta=.440$, $p<.005$), perceived ease of use (peu) ($\beta=.173$, $p<.005$), entertainment benefits (eb) ($\beta=.322$, $p<.005$), deal proneness (dp) ($\beta=.211$, $p<.005$), perceived unwillingness to sacrifice security (ss) ($\beta=-.103$, $p<.005$) are significant at the 0.05 level in predicting consumer intentions to use in-store mapping applications and hence support for H_1 , H_2 , H_3 , H_4 and H_5 at 0.05 level.

The p -value was found to be 0.395 for market mavenism ($\beta = -.007$) as the independent variable, and hence H_6 was not supported. Thus market mavenism (MV) was not found to be significant for predicting consumers' behavioral intention to use in-store mapping applications. The p -value was found to be 0.169 for time pressure ($\beta = -.0053$) as the independent

TABLE 3:
Factor Structure with Cronbach's Alpha

	1	2	3	4	5	6	7
Perceived Ease of Use							
pez1 Learning to operate in-store mapping applications would be easy for me	0.805						
pez2 I would find it easy to get in-store mapping applications to do what I want it to do	0.781						
pez3 My interaction with in-store mapping applications would be clear and understandable	0.739						
pez4 I would find in-store mapping applications to be flexible to interact with	0.708						
pez5 It would be easy for me to become skillful at using in-store mapping applications	0.781						
pez6 I would find in-store mapping applications easy to use	0.801						
Perceived Usefulness							
pu1 Using in-store mapping applications in my shopping would enable me to accomplish tasks more quickly		0.826					
pu2 Using in-store mapping applications would improve my shopping performance		0.852					
pu3 Using in-store mapping applications in my shopping would increase my efficiency		0.835					
pu4 Using in-store mapping applications would enhance my effectiveness on the shopping		0.772					
pu5 Using in-store mapping applications would make it easier to do my shopping		0.768					
pu6 I would find in-store mapping applications useful in my shopping		0.726					
Entertainment Benefits							
eb1 I use in-store map applications because it makes learning about stores more enjoyable			0.489				
eb2 I use in-store map applications because it is a fun way to spend my time			0.76				
eb3 I use in-store map applications because it provides an entertaining escape from my day to day activities			0.777				
eb4 I use in-store map applications when I have nothing better to do			0.82				
eb5 I use in-store map applications to pass time when I am bored			0.816				
Perceived Unwillingness to Sacrifice Security							
ss1 I am willing to sacrifice secure applications in my decision to use a network computing system				0.761			
ss2 I am willing to sacrifice computer and network system security in my decision to use a network system				0.864			
ss3 I am willing to sacrifice protection from malicious software in my decision to use a network system				0.731			
ss4 I am willing to sacrifice user identification and authentication in my decision to use a network system				0.838			
ss5 I am willing to sacrifice backup and recovery in my decision to use a network system				0.847			
General Deal Proneness							
dd1 I enjoy buying a brand that is "on deal"					0.658		
dd2 Beyond the money I save, buying brands on deal makes me happy					0.764		
dd3 Compared to other people, I am very likely to purchase brands that come with promotional offers.					0.676		
dd4 Receiving a promotional deal with a product makes me feel like I am a good shopper.					0.754		
dd5 I'm usually not motivated to respond to promotional deals on products (reverse coded)							
dd6 When I purchase a brand that is offering a special promotion, I feel that it is a good buy					0.793		
dd7 I feel like a successful shopper when I purchase products that offer special promotions					0.775		
dd8 I love special promotional offers for products					0.781		
Time Pressure							
tp1 I am too busy to relax						0.841	
tp2 I am often juggling my time between too many things						0.845	
tp3 "So much to do, so little time", this saying applies very well to me.						0.82	

TABLE 3 (continued)

Market Mavenism

mv1 I like introducing new brands and products to my friends	0.65
mv2 I like helping people by providing them with information about many kinds of products	0.62
mv3 People ask me for information about products, places to shop, or sales	0.81
mv4 If someone asked where to get the best buy on several types of products, I could tell him or her where to shop	0.78
mv5 My friends think of me as a good source of information when it comes to new products or sales	0.74
mv6 Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but does not necessarily feel he or she is an expert on one particular product. This description fits me very well.	0.62

FACTOR STRUCTURE: 73.8% of total variance explained	12.3	13.4	9.3	10.1	12.9	6.1	9.61
CRONBACH'S ALPHA for RELIABILITY: For Dependent Variable: 0.892	0.93	0.95	0.90	0.91	0.91	0.85	0.88

Italicized item dropped from analysis due to poor loading

Independent variable (purchase intentions)

is1 My general intention to use in-store mapping applications is very high

is2 I will think about using in-store mapping applications

is3 I will use in-store mapping applications in the future

TABLE 4:
Multiple Linear Regression Results

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.834 ^a	0.6956	0.688	0.607
ANOVA				
ANOVA	Sum of Squares	df	Mean Square	F (Sig.)
Regression	211.612	7	30.230	81.891 (0.000 ^a)
Residual	92.288	250	0.369	
Total	303.90	257		
Coefficients				
	Unstandardized Coefficients		t	Sig.
	B	Standard Error		
(constant)	-0.162	0.362	-0.448	0.655
pu	0.440	0.056	7.839	0.000
peu	0.173	0.065	2.661	0.008
dp	0.211	0.063	3.364	0.001
mv	-0.007	0.056	-0.129	0.898
eb	0.322	0.048	6.749	0.000
tp	-0.053	0.039	-1.380	0.169
eb	-0.103	0.043	-2.404	0.017

^adep. var.: is; predictors: ss, tp, pu, peu, mv, eb, dp, (constant)

variable. Hence, our study did not indicate support for H₇, in that time pressure (TP) is significant for predicting consumers' behavioral intention to use in-store mapping applications.

DISCUSSION

The goal of this study was to examine the motivation behind using in-store mapping applications among young American consumers. The investigation simultaneously modelled and tested this objective with the inclusion of several key consumer traits.

The significance of perceived usefulness, perceived ease of use, and entertainment benefits in explaining intentions to use in-store mapping applications, while perhaps not counter-intuitive, is important. This implies that consumers perceive significant benefits from this electronic instrument not just functionally, but also emotionally. This differs from one's conventional beliefs concerning the use of printed maps. Retailers must now consider not merely clarity in communicating directions but, rather, the consumer experience. When consumers feel confident that they can operate in-store maps with ease, they have higher intentions to use them and gain added overall value during their physical store shopping experience. Therefore, businesses that add this tool to their retailing total product can benefit from increased customers' value and hence be more competitive in the overall marketing exchange process.

Our study also highlights the significance of key consumer traits of perceived unwillingness to sacrifice security and deal proneness on the usage of in-store mapping applications. Security is an important consideration for consumers in online media and other viral forms of communications in the adoption of innovations, and their impact could be investigated more thoroughly in future empirical research. In addition, marketing managers should note the finding that consumers who are interested in getting discounts and store deals are prone to using this instrument, and it is suggested that sales promotions be made a part of their in-store mapping applications.

Finally, our analysis indicates that market mavenism was not a significant factor that influenced consumers' intentions to use in-store mapping applications. This may be explained by the fact that most consumers use their smartphones without regard to their level of knowledge about markets. Therefore, this consumer characteristic is not instrumental in differentiating intentions to use this instrument. Time pressure also was not seen as a factor that significantly related to usage intentions. The fact that time pressure was not statistically significant in explaining intentions to use in-store mapping applications may be more due to the fact that consumers, whether time crunched

or not, may be interested in using this novel instrument, and hence inability of our construct to differentiate between the two. It is recommended that future studies employ different constructs and/or research methodologies in order to further explore the effect of time pressure on in-store map application usage.

Overall, we conclude that in-store mapping applications may be a feasible alternative to printed maps and signage in store environments. In-store maps can also be used to provide coupons and other sales promotions at the target location. Hence, due to their effectiveness, they can be a viable alternative to mail-in or printed coupons. In addition, in-store mapping applications are useful in accompanying consumers throughout their website browsing as well as physical store visits for the purposes of researching and purchasing products. Smartphone in-store mapping applications may be an additional means by which retailers may enhance consumers' shopping enjoyment. In light of the importance of mobile recognition in the future of marketing, this study is expected to have a significant contribution in the technology and retailing area.

The findings of our study lay the foundation for successive studies in both the area of in-store mapping applications and other mobile recognition instruments which may accompany or replace in-store mapping applications in the future. Our study considered the motivations of young American consumers. It sheds little light on the motivations of these consumers' parents, grandparents, or younger siblings, who may arguably vary in the extent to which they are motivated by, for example, the need to be entertained or the need for security. However, it should be noted that the sample was drawn from a subset of these consumers, all of whom were college students. We did not test for differences in motivations between college and non-college students. Nor did we examine other potential points of differences between those two groups that might affect, for example, deal proneness or comfort with technology. Similarly, while we suggest benefits to retailers of in-store mapping applications, we can also imagine limitations. A highly functional consumer might utilize in-store mapping

applications to effectively counteract retailers' efforts to extend the time consumers remain in the store and might be less influenced by point-of-sale marketing materials. Research concerning the "darkside" of in-store mapping applications might be particularly interesting.

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