UNT

G. BRINT RYAN
COLLEGE OF BUSINESS
Department of Marketing

UNIVERSITY OF NORTH TEXAS
G. BRINT RYAN COLLEGE OF BUSINESS
DEPARTMENT OF MARKETING ADVISORY BOARD

Dedicated to providing students with well-rounded, state-of-the-art education in the modern principles of marketing.

ABOUT THE DEPARTMENT OF MARKETING

What is marketing?

Marketing is often mistakenly identified with selling and promotion. There is actually much more to Marketing than one might realize. Most people are surprised to learn that the most important functions of the marketing professional often have little to do with selling. Marketing's major concern is satisfying customers' wants and needs.

The heart of Marketing is matching supply and demand in a complex, advanced economy. Marketing consists of many activities including: identifying customer needs; developing goods and services to satisfy those needs; communicating information about products to potential customers; and logistics and distribution management, which assures that products are delivered to customers as needed.

Where the jobs are

The field of marketing is so large that almost any business organization may be viewed as a potential employer of the marketing professional. Estimates say approximately one third of private sector jobs are marketing related. Nonprofit organizations also have to market their products and services, and the marketing discipline addresses the special needs of such organizations. Furthermore, marketing positions often lead to top management positions. A great many of the CEO's in Fortune 1000 companies come from the ranks of marketing professionals.

The demand for marketing professionals is looking better than ever; some say that this is the best job market in history. Corporate America is not just looking for mid and senior level executives, they are flocking to college campuses focusing on entry-level recruiting more than ever before.

Career Paths

Marketing offers a wide variety of functional areas as possible directions for career seekers. Some of these are:

- Advertising
- Retailing
- Wholesaling
- Professional Sales and Sales Management
- Sales Promotion
- Logistics
- Market Research
- Product Management
- Public Relations
- Sales Support
- Purchasing Management
- Brand Management
- Marketing Communications
- Entrepreneurship

Possible Employers

Marketing is an integral part of all organizations. The possibilities are endless:

- Manufacturing Firms
- Marketing Research Firms
- Transportation and Distribution Firms
- Advertising Agencies
- Equipment Manufacturers and Dealers
- Consulting Firms
- Universities (Professors/Instructors)
- Nonprofit Organizations
- Print Media (Publishers/Editors)
- Broadcast Media I Communications Firms
- Government/Military I Software/Computer Firms
- Wholesale Distributors
- Telecommunications and Other Service Firms
- Retail Firms

A MESSAGE FROM DR. MARYLYN WILEY, DEAN OF THE G. BRINT RYAN COLLEGE OF BUSINESS

Thank you for your commitment to one of the largest business schools in the nation. As a board member of the Department of Marketing at the UNT G. Brint Ryan College of Business, you are supporting nationally-ranked programs and resources that help transform students' lives.

Ranked sixth in the nation by *BachelorsDegreeCenter.org*, our undergraduate marketing program gives students unparalleled opportunities through experiential learning and top-tier faculty. Our online marketing programs have also earned recognition on a national scale—ranking 24th in the nation by *Intelligent.com*.

We are grateful to have you join the department's inaugural board to promote these achievements and propel us forward as we continue to offer students a well-rounded, state-of-the-art education in the modern principles of marketing.

Thank you for sharing in our commitment to academic excellence. We are excited to see where our partnership will take us and appreciate your support and guidance along the way.

With UNT pride,

Dr. Marilyn K. Wiley
Dean of the G. Brint Ryan College of Business

A MESSAGE FROM DR. CHARLES BLANKSON, CHAIR OF THE MARKETING DEPARTMENT

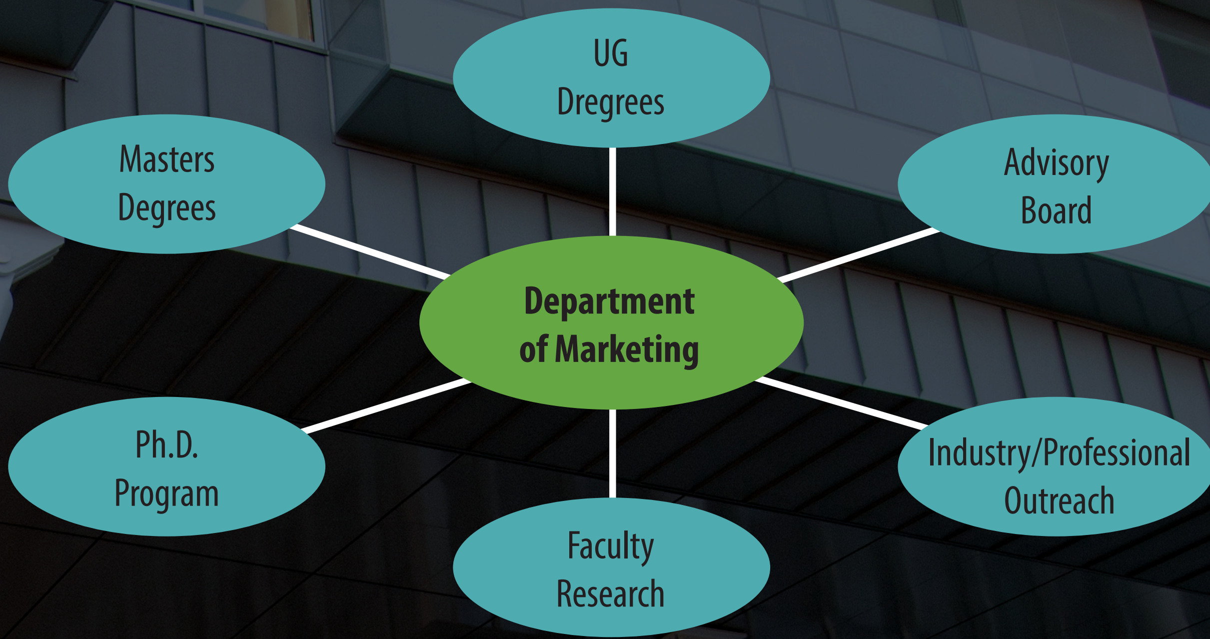
The Department of Marketing at the G. Brint Ryan College of Business, University of North Texas is an important unit inside the College of Business and a growing center of excellence for teaching and research in marketing and professional sales. We are thrilled to welcome our inaugural board members to our department and look forward to your commitment as we continue to grow our reputation as a nationally-recognized research institution that delivers research-led education in support of the Ryan College of Business' Tier one research strategy. The Department looks forward to continuing to educate the next generation's industry leaders; individuals who will be prepared and poised to challenge the status quo.

The Department of Marketing develops graduates who possess the exact sorts of career-ready knowledge and skill-sets that are sought-after by the industry and society. The Department is diverse and features 37 members. Specifically, the Department consists of twenty-five instructors (seven Adjunct Professors, two Lecturers, two Senior Lecturers, three Assistant Professors, three Associate professors, and eight Full Professors), two Administrative Personnel, and 10 Ph.D. students. Two Ph.D. students recently accepted offers from the University of North Georgia and San Jose State University, respectively, following the completion of their studies. Another former Ph.D. student joined Appalachian State University last semester. Two years ago, one of our Ph.D. graduates joined the faculty at Indiana University. The Department will welcome three new Ph.D. students in Fall, 2022.

Our faculty members routinely publish in the highest-ranked and most widely respected journals in the marketing discipline. These Journals include the ***Journal of Marketing*** (FT-50-ranked & UTD-list), the ***Journal of Marketing Research*** (FT-50-ranked & UTD-list), the ***Journal of Consumer Research*** (FT-50-ranked & UTD-list), the ***Journal of the Academy of Marketing Science*** (FT-50-ranked), ***Journal of Consumer Psychology*** (FT-50-ranked), ***Journal of Public Policy and Marketing***, ***Journal of Retailing***, ***Journal of International Marketing***, and many others. Our faculty members are experts in consumer information processing, consumer emotions, consumer decision making, positioning and branding, marketing strategy and marketing channels etc. Additionally, we have expertise in the business to business, banking and credit card, franchising and political marketing fields.

To achieve our goal of becoming a globally-recognized research department, we intend to excel in our pursuit of the six key strategic directions shown below. More specifically, we want to embark upon research activities and academic programs of outstanding quality and state/national repute in marketing and professional sales in our undergraduate, master's and doctoral programs. We see our Advisory Board playing a crucial, encouraging, advising and enabling role in helping us deliver outstanding research within the marketing and

Department of Marketing Strategic Conversation/Directions



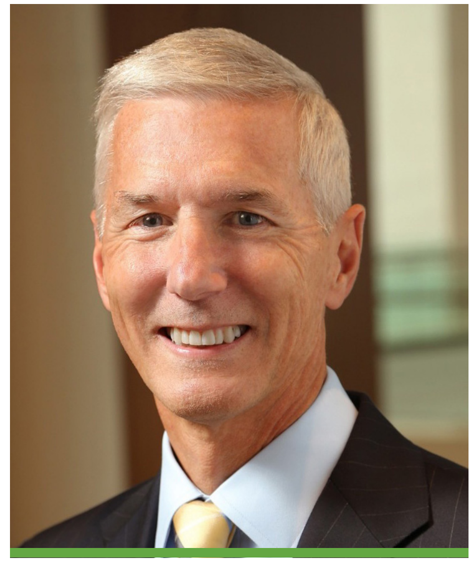
professional sales domains that in turn helps us move towards the cutting edge in the classroom within the undergraduate, master's and doctoral programs. Specifically, in collaboration with our Advisory Board, we intend to provide academic leadership in research-informed teaching across the Undergraduate, Masters and Doctoral levels; cutting-edge research, and service to the state of Texas, and the United States within the marketing and professional sales domains.

With these ends in mind, we hope that our Advisory Board will provide the Department with thought leadership; share growth-related ideas with the Department; and keep the Department up to date about current and future direction of marketing and professional sales in industry and in society. These Board deliverables will assist in the Department's curriculum development and research activities. Further, we also hope that Advisory Board members (and the organizations they represent) will engage with students' case studies and offer our students internships, job placements, and/or professional referrals. Above all, we hope our Advisory Board will assist the Department by providing financial support in exchange for the values that we provide each Advisory Board member or his/her organization. In this Advisory Board-dedicated booklet, we present a sampling of faculty members' research output for your leisure reading. I hope you find the document useful as you begin a formal yet personal relationship with us. We look forward to your support. Please feel free to contact me Charles Blankson (Charles.Blankson@unt.edu, Department Chair) or Shelly Beattie (Shelly.Beattie@unt.edu, Department Administrative Coordinator), with any questions, feedback or suggestions you may have.

Go Mean Green!

Dr. Charles Blankson
Interim Chair of the Department of Marketing

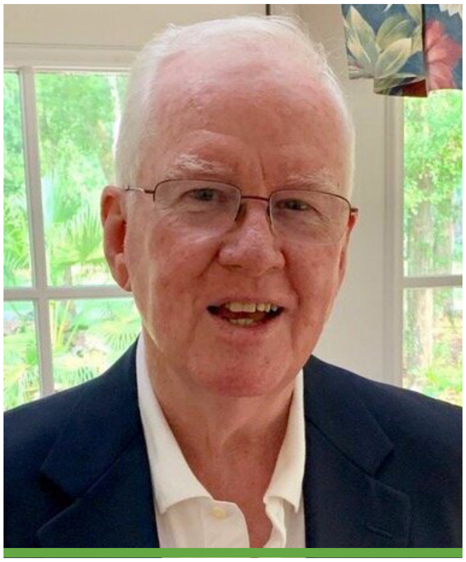
DEPARTMENT OF MARKETING ADVISORY BOARD MEMBERS



BOB BLACK

Bob Black is currently Chairman for RTIC Outdoors, Good2Grow, and Targeted PetCare Group. He is on the Edgewell Personal Care (NYSE), LevelField Capital Acquisition Corp (NASDAQ SPAC) & Corsicana (PE) boards. Bob is a Senior Advisor for Boston Consulting Group and Executive Advisory Partner Pvt. Equity.

Bob was formerly Board Director, President and Chief Operating Officer at Sammons Enterprises and Group President of Kimberly-Clark. Bob earned his BS in Management at University of Buffalo and MBA at Harvard Business School.



MARTY CUNNINGHAM

Marty is an expert in strategic communications, consumer research, marketing insights and business and profit growth strategies. Marty has helped countless firms grow top line revenues and net gross profit margins by implementing proven business growth tactics and profit coaching strategies/techniques. He was a co-founder, partner and president of The Servio Group for 25 years, a research and management consulting firm. Since then, he has been a Managing Partner in BrightStar Strategy Group and Latin Insights, both based in NYC.

DIANA HOVEY

Diana Hovey serves as Senior Vice President at Share Our Strength, a leading national non-profit committed to ending hunger and poverty in the U.S. and abroad. Diana currently leads Share Our Strength's portfolio of corporate partnerships, spanning a considerable breadth of industries including brands such as Citi, Williams Sonoma, General Mills and Walmart, in addition to a broad restaurant portfolio representing every sector of the industry. Working with partners' marketing executives and their agencies, Diana and her team are committed to creating differentiated campaigns that drive measurable business results and contribute to the unwavering mission of ending childhood hunger.

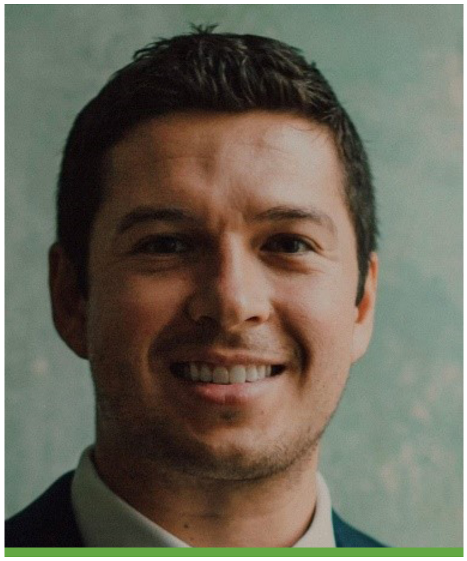
Diana's deep passion for creating purpose-driven brands runs deep. For over 30 years, Diana applied her strategic marketing expertise across many sectors of the restaurant industry. She directed T.G.I. Friday's first national media buy and developed marketing and brand strategy for its new concepts division before joining Brinker International's executive team to lead marketing and brand development for several brands in its portfolio, including On the Border, Cozymel's and Romano's Macaroni Grill. Diana joined the leadership team at Corner Bakery Cafe in 2006, which had just recently spun off from Brinker to new private equity ownership. In her role as Chief Marketing Officer, Diana led brand marketing strategy for the rapidly growing fast casual concept.

A firm believer that 'doing good is good for business', Diana has seen firsthand the immense impact that a strong purpose-driven culture can have on key brand objectives while delivering significant and much needed support to underserved communities. This led Diana to put her passion into practice at a larger scale. In 2015, Diana was recruited by Share Our

Strength to lead its campaign to unite the restaurant industry behind ending childhood hunger, engaging more than 200 brands to raise over $100 million to end child hunger in the U.S. She now leads all corporate partnerships for Share Our Strength, its largest and most prominent revenue center.

Diana has been actively involved in the National Restaurant Association, and is a former chair and board member of its Marketing Executives Group. Through personal mentorship and guest lectures, Diana enjoys working with marketing and non-profit students as they seek to understand the value of a purpose-driven career.

Diana is an alumna of University of North Texas and Texas Woman's University. Diana and her husband live in Austin and enjoy spending time with their children who have also pursued careers in the communications and digital disciplines.



DUSTIN IPSON

Dustin is a 2008 graduate of the UNT College of Business with a degree in marketing. He has spent his career in various roles within the CPG world of food, beauty, and beverage. His first role out of college was with a local food manufacturer, Daisy Brand, where he was in Trade and Category Management. He next spent time with Mission Foods as a Senior Marketing Analyst supporting the marketing department before departing to pursue a role with global beauty giant, L'Oreal. In this role he was based in Dallas supporting Sally Beauty and Target as a Category Manager before moving into a Sales Analytics and Junior Sales Manager role.

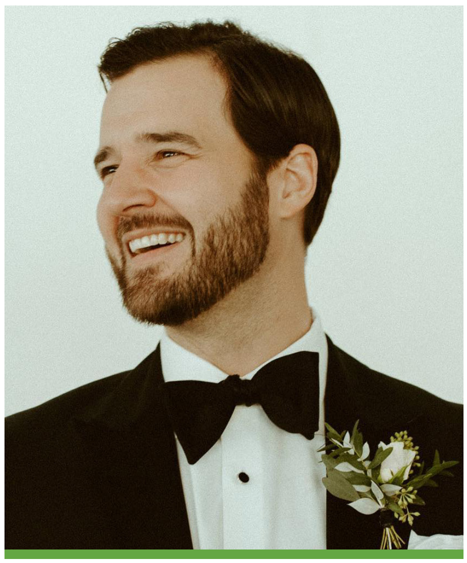
From here he assisted with the launch of a start-up energy drink as a Trade Manager; securing distribution in 7-Eleven and other convenience stores. This experience helped him move into a Net Revenue Manager role with global spirits company, Diageo. He supported Louisiana and Missouri with pricing initiatives to help grow revenue and expand margin while keeping an eye on share. Recently, he accepted a new role within Diageo as a Performance Manager for South and Central Texas working cross-functionally to ensure best in class execution in market with our distributor partner.

DUSTIN JOOST

Dustin Joost has spent his career building technology companies at the intersection of purpose, impact, and digital empowerment. He currently serves as the Chief

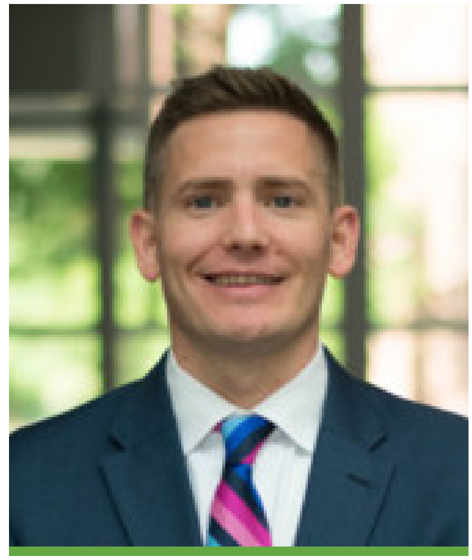
Revenue Officer of Osano, a B corporation whose mission is to make the internet more transparent. As the leading data privacy platform, Osano touches over a third of all global internet users each month and helps companies build more trusted brands while keeping them compliant with global privacy regulations.

Prior to Osano, Dustin has spent nearly 15 years building SaaS companies from seed stage to exit. His expertise in sales and marketing alignment, story-based selling, and developing purpose-driven teams have allowed him to help companies deliver both significant shareholder returns and societal impact. At YourCause, the top corporate social responsibility solutions provider, he developed a revenue organization that enabled nearly $5B to be donated to nonprofits in more than 180 countries. Dustin is active in the startup, technology, revenue, and social good communities. He serves as a partner and board member for Social Venture Partners Dallas, co-chapter head for DFW Pavilion, member of the GTMramp program, mentor for the University of North Texas' Professional Leadership Program, and advisor to early-stage SaaS companies on go-to-market strategy and revenue organization design. However, none of that is as much fun as being a dad to his two young kids, attention-seeking golden retriever, and husband to his loving wife, who constantly encourages him to build. He is a 2009 graduate of UNT.



LANDON LEDFORD

Passionate, executive marketer and food entrepreneur with a broad range of experience – specializing in launching proven, yet innovative, methods to drive revenue and grow brands! Landon has led marketing for a group of 43 casual dining restaurants for 7+ years, while managing his consultancy Double L Brands that provides growth marketing solutions to organizations across multiple verticals.



CHRIS LESTER

Chris Lester is a proud husband and father of 3 boys. He is the Chief Revenue Officer for Catapult Solutions Group and has been in the IT Staffing and Solutions space for 12 years. He oversaw the growth of 275% over a 3-year period for the Dallas office increasing final revenues from $8 million in 2018 to $22 million in 2021, including growth to $16 million during the pandemic. He steers business development strategies in the healthcare, technology services, staffing services sectors, and ensures seamless integration of offerings and proper client saturation.

JILL MATTHEWS

Jill Matthews leads marketing for Bimbo Bakeries USA's (BBU) Acelerada division of high growth potential brands including Bays English Muffins and Lender's Bagels.

In her role, Jill develops and implements brand strategies and marketing efforts including strategy, media, innovation, insights, and shopper marketing to drive consumer awareness, trial, and engagement. Prior to joining BBU, Jill founded and led Bright Cactus, a brand strategy and insights firm, that provided consulting services to loved global brands and entrepreneurial start-ups primarily in the CPG, retail, and restaurant industries.

Jill received her MBA from Washington University in St. Louis and her BBA from The University of Texas at Austin.

AL REID

Al is the Managing Director of Saatchi & Saatchi, Dallas, where he leads the Saatchi organization on behalf of their client Toyota Motor North America. Humanitarian, husband, father and passionate about culture, Al has undeniably made a life of leading and inspiring ideas.

Al began his advertising career at sister agency Team One in 1992 after graduating with an MBA from The Simon School of Business, at The University of Rochester. After working with Saatchi & Saatchi in both San Francisco, Hong Kong & New York – Al became one of the legendary Team One "boomerangs", returning in 2003 as Executive Director of Interactive & Relationship Marketing with responsibility for guiding a group that grew from 33 to more than 75 digital professionals.

Most recently – in addition to his leadership role in Dallas – he has led a collective team in partnership with Dentsu, to bring Toyota's Global Olympic Campaign to life. While his career has included various brands, his relationship with Toyota has directly contributed to some of the most memorable ideas in the last 10 years.

ALLYSON SELLERS

As vice president of Sales for Mary Kay Inc., Allyson Sellers is responsible for sales force development, sales force education, and total rewards.

During Allyson's 29-year tenure at Mary Kay Inc, she has held various positions in manufacturing, human resources, communications and marketing. She was selected by the Global Executive Team as Mary Kay's Leader of the year in 2013.

In 2021, she was selected as one of the top 100 Women Leaders in Consumer Products, and currently serves on the Direct Selling Education Foundation Board of Directors.

Allyson earned a Bachelor of Science in journalism from The University of North Texas in 1994 and a Master of Business Administration from The University of Dallas in 2004.

HEATHER TROTTER

Heather Trotter holds the role of Senior Vice-President, Customer Leadership Foodservice, South. She is based in Atlanta, GA leading the foodservice organization which is comprised of regional and national chains headquartered in the 16 states of the South Zone and delivering over $700MM in revenue. In this role she leads a team of 44 sales and marketing professionals. Heather has held a variety of sales and marketing roles focusing on foodservice customers during her 20-year career with The Coca-Cola Company. She is an Innovation Ignitor Black Belt, member of Women in Leadership and Women in Foodservice Forum.
Prior to joining The Coca-Cola Company, Heather began her foodservice career with Burger King Corporation where she held roles in brand marketing and global advertising. She credits this experience as a key enabler to her success in the foodservice industry.

Heather holds a Bachelor of Business Administration in Marketing from The University of North Texas where she graduated during the Centennial in 1990. At UNT she began developing her leadership by taking advantage of opportunities the University had to offer. This included leadership roles in the Greek system where she founded Kappa Theta Delta, a local sorority which affiliated with Kappa Kappa Gamma in 1989, and of which she is a Charter Member and served as VP Programming. She was also elected to the esteemed NT40 where she gained exposure to the Administration including past Chancellor Alfred Hurley. Heather is on the Board of Directors for the Georgia Restaurant Association and previously served on the Board of Trustees for Reinhardt University. She lives in Johns Creek, GA with her husband Scott, teenage daughter Avery, and son Rob who attends Georgia College.

ADITYA VARANASI

Aditya Varanasi is the Founder and Chief Executive Officer at Awarity. He graduated with a B.S. in Chemical Engineering from Purdue university and started his career at PepsiCo in the R&D group. Here he helped develop and launch new products like Lay's Stax and Tostitos Scoops and earned multiple US Patents for his work. It was during this time he had an opportunity to work alongside the brand marketing teams and developed a passion for consumer marketing.

He went on to earn his MBA from Northwestern University's Kellogg School of Management with a focus on Marketing and Strategy. He then transitioned to the brand marketing team at PepsiCo and went on to manage Frito Lay's first ever content based digital campaign, unlock the power of digital and social in shopper marketing, and lead brands like Cheetos, Cracker Jack, and Lays Stax.

After 14 years at PepsiCo, Aditya saw an opportunity to adapt emerging advertising technology that had been reserved for large companies to enable small businesses to build impactful, targeted awareness. In 2016, Aditya launched Awarity, with a mission of making world class advertising affordable to everyone. Awarity is powered by a proprietary A.I. based media buying system that delivers industry leading results by being more efficient and effective than alternatives. Awarity's platform of placing targeted Banner Ads and Connected TV commercials is used by hundreds of businesses, big and small, all across the country, including NTT DATA, ESPN, The University of North Texas, and over 100 professional and collegiate sports properties, including the Dallas Mavericks.

Aditya is a lifelong Boilermaker and enjoys watching football and basketball games with his 2 sons. He is always on the hunt for the next home improvement project, enjoys playing basketball with friends, and spending time with his family. Aditya and his wife Thara are also passionate about helping the community and serving others.

DREA WILLIAMS

Drea has 17 years of experience working in Marketing and Design, starting with Drucker Labs in Plano, TX where she was quickly promoted to Director of Marketing and Design. 5 Years ago, she joined the Marketing team at EZ-FLO International in Rockwall, TX in the role of Marketing Manager for their EZ-FLO/Eastman division. EZ-FLO was acquired in late 2021 by Reliance Worldwide Corporation and Drea is currently playing a vital role in the transition process of merging each company's Marketing departments and processes into one department.

A long-time athlete, in 2018 Drea became a Certified Personal Trainer and took on an additional role as Owner and Head Trainer of City Surf Fitness Plano. Unfortunately, due to the pandemic the brick-and-mortar location had to be closed, however Drea still trains clients on a one-on-one basis.

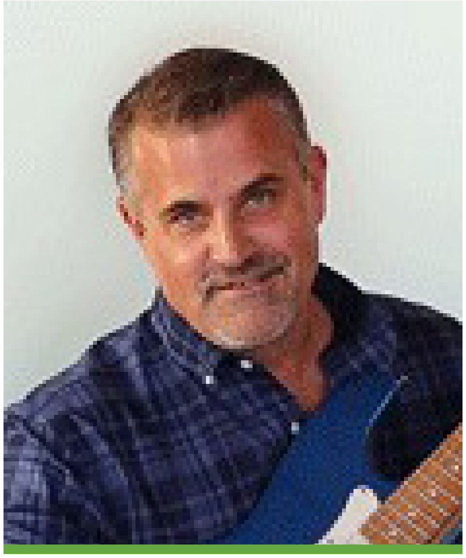
In her spare time, Drea shares her passion for plants with the world as a YouTube content creator on her channel, Aloha Plant Life. Over the last year she has also been propagating and growing her own plants which she plans to start selling to the public this Spring, with a portion of the proceeds being donated to the non-profit organization My Possibilities.

Drea is a graduate of the University of Louisiana Lafayette with a Degree in Industrial Design and a Minor in Marketing and has an MBA in Marketing from the University of North Texas. She obtained her Personal Training certification and Sports Nutrition Specialist certification from the National Academy of Sports Medicine.

NOAH WITTMAN

Noah has spent over 10 years in B2B tech sales and is also a two-time entrepreneur, executing his first successful startup in 2012. Noah is currently the Co-founder and CEO of Cloudabo, a B2B platform helping companies optimize their SaaS stacks.

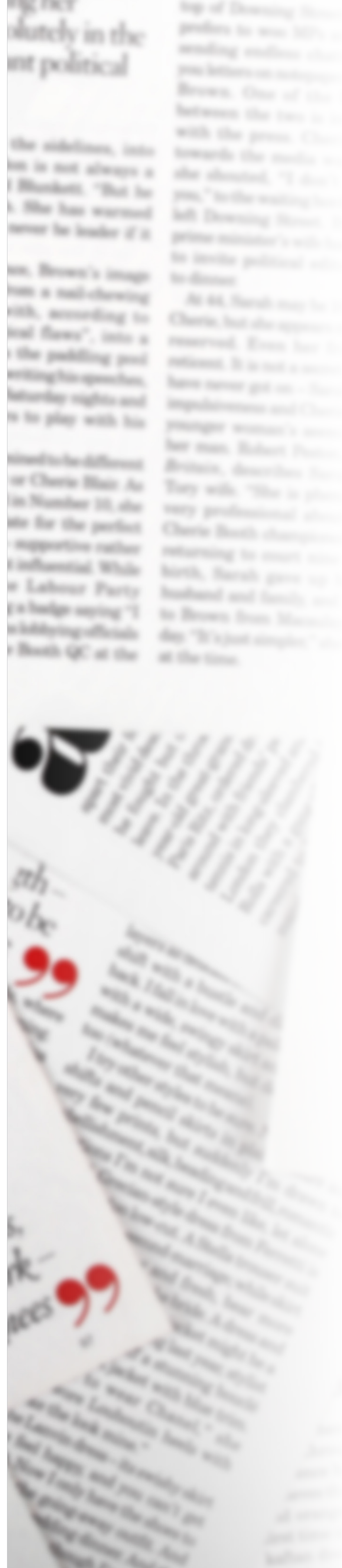
A two-time UNT alumnus, Noah completed his MBA Cum Laude in 2011. In his spare time Noah enjoys writing and recording music, as well as traveling around the country with his wife Sara, his baby girl Rylan, and their dog Prince.



DAVID YOUNG

A 1996 graduate of UNT, David started his career as an assistant media planner before spending a few years in Brand Management at The Richards Group. He now leads Slingshot, one of the premier advertising agencies in the Southwest. He is a former President of the DFW Interactive Marketing Association and recipient of the AMA's Eagle Award for Best Account Lead in DFW. Slingshot has become a recognizable agency brand nationwide, working with blue chip brands such as Texas Tourism, Visit Dallas, Minute Rice, and Children's Health. He currently sits on the Board of Dallas CASA. David and his wife of 25 years, Lorie (also a UNT grad) have two sons, one a senior in high school and the other a sophomore at UNT.

A SELECTION OF ARTICLES BY FACULTY MEMBERS IN THE DEPARTMENT OF MARKETING



Article

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Leveraging Creativity in Charity Marketing: The Impact of Engaging in Creative Activities on Subsequent Donation Behavior

Lidan Xu, Ravi Mehta, and Darren W. Dahl

Abstract

Charities are constantly looking for new and more effective ways to engage potential donors in order to secure the resources needed to deliver services. The current work demonstrates that creative activities are one way for marketers to meet this challenge. Field and lab studies find that engaging potential donors in creative activities positively influences their donation behaviors (i.e., the likelihood of donation and the monetary amount donated). Importantly, the observed effects are shown to be context independent: they hold even when potential donors engage in creative activities unrelated to the focal cause of the charity (or the charitable organization itself). The findings suggest that engaging in a creative activity enhances the felt autonomy of the participant, thus inducing a positive affective state, which in turn leads to higher donation behaviors. Positive affect is demonstrated to enhance donation behaviors due to perceptions of donation impact and a desire for mood maintenance. However, the identified effects emerge only when one engages in a creative activity—not when the activity is noncreative, or when only the concept of creativity itself is made salient.

Keywords

autonomy, creativity, donation, positive affect

Online supplement: https://doi.org/10.1177/00222429211037587

Charitable organizations exist to support a wide variety of causes, such as helping malnourished children, caring for the homeless, supporting animal welfare, and meeting environmental concerns, to name a few. The success of these organizations in supporting their causes largely depends on the donations they secure. According to the National Center for Charitable Statistics (2020), approximately 1.56 million registered nonprofit organizations exist in the United States, together raising an estimated $390 billion in donations annually. Despite these large numbers, fundraising remains a major challenge for such organizations, with approximately 45% of charities unable to secure the required level of resources needed to deliver their services (Nonprofit Finance Fund 2018).

In light of this, it is not surprising that marketers at these organizations seek more effective ways to solicit donations, often utilizing nontraditional approaches and fundraising events (e.g., ice-cream socials, silent auctions, trivia nights) to engage potential donors (Chung 2020). For example, in 2014, the ALS Association invited people around the globe to participate in its "Ice Bucket Challenge" to increase awareness of ALS, raising approximately $220 million from individual donors in the process (Holan 2014). Bloodwater.org devised the "Real Game of Thrones" campaign, which called on people to participate through Twitter and used a combination of pop culture, humor, and bathroom puns to raise money to build latrines throughout Africa. This creative campaign successfully raised enough money in 24 hours to build 21 latrines in Rwanda. Cookies for Kids, another charitable organization, sponsors creative charity events each year such as cookie swap parties, where participants decorate cookies and swap recipes to raise donations. These fundraising anecdotes suggest that charities are defining new ways of engaging potential donors, while raising questions about which types of activities most effectively enhance donation behaviors.

The current work meets this challenge by examining how engaging potential donors in creative activities can positively influence their propensity to donate money to a charitable cause. We argue that engaging in a creative activity induces a

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positive affective state, which in turn increases both the likelihood and amount of monetary donation made to the charitable organization. While prior work has independently examined links between creativity and positive affect (e.g., Chermahini and Hommel 2012; Koehler and Neubauer 2020), as well as between positive affect and helpfulness (e.g., Aknin, Dunn, and Norton 2012; Andreoni 1990), we provide a deeper understanding of why and how creativity leads to enhanced donation behaviors. Specifically, we show that the link between creativity and positive affect is driven by the sense of autonomy that is induced by engaging in a creative activity (i.e., an attempt to create something novel). Further, by identifying the roles that desire for mood maintenance and perceived donation impact play, we provide insight into why the positive affect resulting from a creative activity leads to enhanced donation behavior.

The current research makes several important contributions. From a practical perspective, this research offers a simple and effective way for marketers to improve their donation appeals; it suggests that engaging potential donors in a creative activity enhances subsequent donation behavior. This recommended approach provides a real opportunity for charity marketers to increase the efficacy of their fundraising campaigns. At the theoretical level, the present work advances the marketing and charity literature streams in several ways. First, we demonstrate the positive effect of creative engagement on donation behavior. To our knowledge, no research thus far has examined whether and how engaging in creative activities can impact an individual's subsequent donation behavior toward a charitable organization. Second, we explicate the reasons and conditions that drive the relationship between creativity and donation behavior. We demonstrate that it is the act of actually engaging in a creative activity—rather than simple priming or making the concept of creativity salient—that drives the effect. Further, while prior work has consistently shown that a sense of autonomy can facilitate creativity (e.g., Dahl and Moreau 2007), we demonstrate that engaging in a creative activity also heightens one's sense of autonomy, which in turn induces positive affect. As noted previously, we also highlight that the positive affect experienced during a creative activity bolsters desire for mood maintenance and perceived donation impact, thereby enhancing the likelihood of donation and the monetary amount donated. Finally, we find evidence that the positive effect of engaging in a creative activity on monetary donation is context independent. That is, engaging potential donors in a creative activity not directly related to the charitable cause or organization still has a positive influence on their donation behavior. Thus, the current work not only offers marketers a way to build effective donation campaigns but also provides a deeper theoretical understanding of the relationship between creativity and donation behavior.

Conceptual Framework

Donation Behavior

Researchers have explored many facets of donation behavior, from the demographic and socioeconomic determinants of donation (Bussell and Forbes 2002; Chrenka, Gutter, and Jasper 2003; Hudson and Jones 1994) to the extent to which other factors—such as motivation, psychological characteristics, and social cognition—can affect donation (Harvey and McCrohan 1988). In addition, prior research has proposed and examined various marketing strategies and tactics used to increase donations. For example, using public recognition (Winterich, Mittal, and Aquino 2013), taking advantage of price promotions (Zhang, Cai, and Shi 2021), designing more attractive appeals (Liang, Chen, and Lei 2016), expressing one's identity (Rifkin, Du, and Berger 2021), and using positioning to enhance the effectiveness of the charity (Winterich, Zhang, and Mittal 2012) have all been investigated.

More relevant to the current research, recent work has also started to examine the merits of engaging potential donors in different types of activities and tasks before soliciting donations. For example, Robiady, Windasari, and Nita (2021) examined the influence of a storytelling event in the crowdfunding context, finding that direct (vs. indirect) storytelling positively affects customer engagement and donation likelihood. In contrast with more traditional donation requests (Tysiac 2016), some charities are utilizing physical activities (e.g., walks and runs [Higgins and Lauzon 2003], sporting events [Hendriks and Peelen 2013], silent auctions [Issac and Schnier 2005], ice cream socials, trivia nights [Chung 2020]) as precursors to the donation solicitation. Despite the initial academic interest in these tactics, the effectiveness of such approaches has been understudied in the literature, and reporting has shown mixed results. For example, while Higgins and Lauzon (2003) have argued that positive fundraising outcomes result from physical activity events (e.g., running activities, golf tournaments), Woolf, Heere, and Walker (2013) did not find a positive relationship between sports activities and charitable event outcomes. The current work aims to add to the literature in this regard by validating the use of activities to increase the likelihood and amount of donation contributions. Specifically, we examine the impact of engaging potential donors in creative activities.

Creative Engagement, Autonomy, and Positive Affect

Activities involving creation of an output span a continuum ranging from routine tasks, such as simply copying a given design, to highly creative activities, such as creating an original work of art (Dahl and Moreau 2007). Within this context, we argue that the inherent characteristic of creative engagement, which is differentiated from priming or simple salience of creativity and/or creativity-related concepts, is that an individual must engage, physically or mentally, in an activity requiring the production of something novel (i.e., the activity leans to one side of the continuum referenced previously). For example, actively generating an original cookie design would lead to creative engagement, but copying a cookie design or simply being primed by the concept of creativity (e.g., through exposure to creative stimuli) would not.

Importantly, we propose that engaging in a creative activity induces positive affect for the creator. In support of this notion, liberal arts literature finds that engaging in creative activities to generate novel outputs (e.g., music composition, visual arts, creative writing) can bring about positive thoughts and feelings (Stuckey and Nobel 2010). Relatedly, Chermahini and Hommel (2012) show that engaging in a divergent creative task induces higher levels of positive affect. Results reported in the psychology literature also support these findings. Csikszentmihalyi (1997), while explicating the construct of flow, interviewed people who engage in creative work on a regular basis (i.e., artists and musicians) and found that these individuals often experience positive affect and happiness when creating something original. Cseh, Phillips, and Pearson (2015) confirm these findings in an experimental lab setting and show that engagement in a creative activity induces a state of flow, leading to higher positive affect.

Why does engaging in creative activities lead to positive affect? One potential driver of this positive relationship is a heightened sense of autonomy (i.e., having a sense of choice and freedom from external control; Forman 2007; Kim et al. 2015; Ryan, Rigby, and Przybylski 2006), attained by engaging in a creative activity.[1] By definition, an attempt to generate a creative output requires one to actively recognize remote associations between broad and distant concepts and then combine these loosely connected ideas and concepts in a novel fashion (Dietrich 2004; Guilford 1968, 1982; Runco 1991). Such a process requires and encourages one to think freely and make different combinations and choices without being constrained by norms and rules (Ashton-James and Chartrand 2009; Guilford 1959; Isen, Daubman, and Nowicki 1987). Thus, the process associated with creative generation should manifest a sense of choice and freedom (i.e., autonomy), which we contend induces positive affect.

Prior work offers initial support for this proposition. As we have discussed, engaging in a creative activity induces a state of flow, which then leads to higher positive affect (Cseh, Phillips, and Pearson 2015); notably, empirical work has shown the state of flow to be associated with a sense of autonomy (Kowal and Fortier 1999). Similarly, Dahl and Moreau (2007) found that being involved in a creative activity can enhance experienced enjoyment, but only when the activity imparts a sense of autonomy. Koehler and Neubauer (2020) conducted a daily-diary study following the routine of 1,042 hobby musicians and found that the participants reported higher positive affect on the days they engaged in music composition and performance. Importantly, the authors found that this relationship was driven by satisfaction of one's needs for autonomy. Finally, Kaimal, Ray, and Muniz (2016) found that creative generation, such as the production of visual art, significantly reduced cortisol levels (a biomarker and proxy measure of stress in humans) and increased feelings of relaxation, pleasantness, and enjoyment. Their work shows that such art making is associated with the experience of being free from constraints (i.e., the sense of autonomy).

Given this discussion, we argue that engagement in creative activities heightens one's sense of autonomy, which in turn leads to positive affect. We further propose that the positive affect induced by participation in a creatively engaging activity will lead to enhanced donation behavior. We elaborate on this prediction in the following subsection.

Positive Affect and Donation Behavior

Findings reported in the extant literature offer compelling evidence that being in a positive affective state enhances donation behavior (Aderman 1972; Cunningham, Steinberg, and Grev 1980; George 1991; Isen 1970; Isen and Levin 1972; O'Malley and Andrews 1983). While prior work has consistently demonstrated a positive relationship between positive affect and donation behavior, it offers disparate explanations for this relationship (Carlson, Charlin, and Miller 1988). Indeed, we recognize that the relationship between positive affect and donation behavior is likely to be multiply determined, and we therefore identify three mechanisms that are most relevant to the context of creative engagement in question.

Perhaps the most common explanation for the clear link between positive affect and helping behavior derives from the mood maintenance model. This line of reasoning proposes that people tend to maintain positive mood states (Carlson, Charlin, and Miller 1988; Handley et al. 2004). Thus, individuals tend to help more when in a positive affective state, because doing so enables them to prolong said state (Clark and Isen 1982; Isen and Simmonds 1978). In the context of our work, this suggests that the positive affect realized by participating in a creative activity can best be maintained when a subsequent behavior, such as helping others through enhanced donation behavior, also fosters positive feelings (Carlson, Charlin, and Miller 1988).

A second potential mechanism derives from the social aspects associated with positive affect. Indeed, it has been argued that being in a positive affective state can directly influence one's perceived social connectedness (Hollway, Tucker, and Hornstein 1977; Hornstein et al. 1975). As such, the positive affect defined by participation in a creative activity is likely to enhance the value of creating and maintaining social connections (Crimston et al. 2016; Fredrickson 2001). Further, valuing social connections has been shown to enhance feelings of care and concern toward others (Cavanaugh, Bettman, and Luce 2015), which should subsequently enhance the donation behaviors of the individual.

Finally, prior work reports that positive affect can also boost self-efficacy and/or the perceived impact of one's actions (Baron 1990; Schutte 2014). That is, experiencing positive affect can lead to the belief that one's actions are more

[1] Prior work has proposed and examined autonomy and competence as two components of creative generation (e.g., Dahl and Moreau 2007; Kaimal, Ray, and Muniz 2016). We center our conceptualization on the importance of autonomy in defining the benefits of engaging in a creative activity (on donation behavior). In a supplementary study (follow-up to Study 3), we empirically test the role of competence in our research context.

efficacious, thus creating a heightened expectancy of positive outcomes (Masters and Furman 1976). Thus, we contend that positive affect can enhance the perceived impact of one's potential donation and, in turn, raise the likelihood and amount of one's donation behavior (Cryder, Loewenstein, and Scheines 2013). In our empirical work, we explicitly test the proposed chain of effects (i.e., engagement in a creative activity → autonomy → positive affect → enhanced donation behaviors), and the three aforementioned potential mechanisms underlying the impact of positive affect on donation behavior. Summarizing our arguments, we hypothesize the following:

> **H_1:** Engaging in a creative activity (vs. an activity that does not provide an opportunity for novel creation) leads to enhanced donation behaviors (i.e., the likelihood of donation and the monetary amount donated).

> **H_{2a}:** The relationship between engaging in a creative activity and donation behavior is serially mediated by autonomy and positive affect.

> **H_{2b}:** The influence of positive affect on donation behavior is driven by (a) mood maintenance, (b) social connection, and/or (c) perceived donation impact.

Overview of Studies

We utilized a combination of field studies and controlled lab experiments to test our hypotheses. First, we conducted a pilot study in collaboration with a nonprofit organization as an initial test of our focal hypothesis and found support for the prediction that engaging in a creative activity enhances donation behavior (H_1). Study 1, conducted in a controlled lab setting, replicated the initial pilot study findings, thus reconfirming support for H_1. Study 2, a quasi-field experiment, shows that engaging in a creative activity increases both the likelihood and amount of monetary donations, whereas simply priming the concept of creativity does not (H_1). Study 3 tested the full serial mediation prediction (H_{2a}) by demonstrating that creative engagement induces a sense of autonomy, which in turn heightens positive affect, leading to higher donation behavior. Study 4 tested H_{2b}, showing that the path from positive affect to donation behavior is indeed multiply determined. In every study, we report all experimental conditions and measures as collected and disclose any eliminated data points when applicable. The sample size was predetermined for each study based on current experimental norms but varied within an acceptable range depending on actual participant sign-ups. Study 3, a supplementary study (follow-up to Study 3 reported in the Web Appendix), and Study 4 were preregistered on aspredicted.org (see respective studies for details).

Pilot Study: Creativity and Monetary Donations—A Field Experiment

To gain an initial understanding of whether engaging in a creative (as compared with neutral) activity enhances monetary donation, we collaborated with a registered U.S. nonprofit organization operating an animal shelter in a small city in the Southwestern United States (population 46,000 according to 2010 U.S. Census data). Every year, employees of this charity produce T-shirt designs that are printed and used as giveaways or sold in fundraising activities. To test our focal hypothesis, the charity agreed to open the T-shirt design activity to the public and use it as a fundraising event. The T-shirt design campaign was launched by the charity via its social media platform, inviting members of the public (i.e., potential donors) to create T-shirt designs as part of a donation appeal. The charity had set two overarching guidelines for this T-shirt design campaign: (1) the submitted designs were to follow the theme of "Rescue 2020" and (2) the charity's logo had to be part of the design. The charity managed the entire event.

Relevant to our prediction (H_1), we manipulated the opportunity to be creative (vs. not) within the T-shirt design campaign. While participants in both conditions had to develop a T-shirt design reflecting the charity's yearly theme and including its logo, those in the creativity condition were invited to develop an innovative T-shirt design and were explicitly instructed to be creative while doing so. Those in the neutral condition were not specifically instructed to be creative. Once participants submitted their designs, the charity presented them with a donation appeal that included a link to the donation page. At the end of the campaign period, the charity forwarded us the designs along with the corresponding donation amounts, having removed donors' identifying information (for additional methodological details, see Web Appendix A.1).

To examine the relationship between creativity and donation behavior, we first coded the participants who did not donate as 0 and those who donated (any amount greater than zero) as 1. We then conducted a binary logistic regression analysis testing the effect of engaging in a creative T-shirt design activity on donation rate (i.e., the percentage of participants who donated to the charity). We found that a significantly higher percentage of people in the creativity condition (34.48%) donated, as compared with the percentage of people in the neutral condition (12.20%; $\chi^2 = 4.97$, $p = .026$). Next, we examined the effect of creative engagement on the amount of money that was donated. A Shapiro–Wilk test (Shapiro and Wilk 1965) indicated that the donation amount data was not normally distributed ($p < .001$). Thus, in accordance with prior research (Munz, Jung, and Alter 2020; Rifkin, Du, and Berger 2021), we used a nonparametric Mann–Whitney U test for the analysis. We found that the average donation amount made by participants in the creativity condition ($M = 7.07$, $SD = 13.06$) was significantly higher than that of participants in the neutral condition ($M = 1.10$, $SD = 3.26$; $U = 739.50$, $p = .016$; for additional results, see Web Appendix A.2).

By collaborating with a registered charity and assessing actual donation behaviors, we found initial evidence showing that including a creative activity as part of a donation appeal can be an effective approach to enhance donation behaviors (i.e., both higher donation rates and amounts). Interestingly, one could argue that the creativity of the generated output (i.e., the T-shirt design) may also have impacted the donation behavior. To test this alternative explanation, we asked two trained research assistants (employed within the domains of creativity and advertising, respectively) to rate each T-shirt design on its creativity (1 = "not at all creative," and 7 = "very creative"). Both raters were blind to the conditions and hypothesis. Validating our manipulation, a one-way analysis of variance (ANOVA) showed that the designs produced in the creative condition ($M = 3.62$, $SD = .80$) were rated as significantly more creative than those in the neutral condition ($M = 3.05$, $SD = .98$; $F(1, 68) = 6.72$, $p = .01$). However, we did not observe a significant relationship between rated creativity of the generated designs and the donation rate ($B = .04$, $t < 1$) or the donation amount ($B = .83$, $t < 1$). We conducted a similar analysis using only the creative condition, where natural variability in output creativity may occur (even though everyone was instructed to be creative). Again, we did not find a significant relationship between the creativity of the generated designs and the donation rate ($B = -.15$, $t = -1.34$, $p = .19$) or the donation amount ($B = -3.07$, $t < 1$). Importantly, our conceptualization argues that it is the act of engaging in a creativity activity that leads to enhanced donation behavior, not the level of creative output achieved. Subsequent studies replicate this finding, consistently demonstrating that creative engagement itself, rather than the creativity of the generated outcome, positively impacts donation behavior (for brevity, these findings are reported in the respective Web Appendices).

This pilot study provided initial evidence of the proposed effect, but as a real-life field study conducted in collaboration with a third party, it is not without limitations (dependence on the charity's social media platform for sampling, the messaging guidelines set by the charity, etc.; for discussion, see Web Appendix A.3). As such, our first study aimed to replicate these initial findings observed in the field in a more controlled lab setting (i.e., provide a more robust test of H_1).

Study 1: Creativity and Monetary Donations

Study 1 used a donation context inspired and adapted from a real-life social enterprise known as Elephant Parade. This organization invites everyday consumers to create/paint their own elephant toy using an "Artbox Kit" (containing a small white clay elephant and a variety of colors) in return for a monetary donation. The proceeds are subsequently used for elephant welfare and conservation projects worldwide.

Method

Eighty-nine undergraduate students (49 women; $M_{age} = 20.04$ years, $SD = 1.27$ years) at a large North American university completed this study in exchange for course credit. To begin, participants were checked in and assigned to a designated computer desk, each of which was equipped with a small donation box (see Web Appendix B.1) and a white envelope containing $2 in quarters (i.e., eight quarters). The donation box was labeled with an Elephant Parade sticker and had a slit on the top. Four quarters were left in each donation box, creating the impression that the study administrator would not be able to tell if the participant donated or not, thus reducing any demand effects and obligation to donate. Participants were told that, in addition to the course credit, they would receive $2 (in an envelope on their desks) as a token of appreciation for their participation.

The experiment adopted a one-way design in which participants were assigned to complete either a creative or neutral activity, randomized by session (i.e., we ran only one condition per session). A drawing activity (inspired by Elephant Parade's clay elephant painting) was used to induce the focal manipulation. Participants were told that the researchers wanted to put their minds at ease before the study commenced and would therefore like them to engage in a coloring activity. All participants were given a sheet of paper with a picture of an elephant (see Web Appendix B.2) and asked to color it. Those in the creative condition received a box of Crayola markers in ten different colors and were told to be as creative as possible while coloring and decorating their elephant pictures. They were also told to use any number and variety of colors they liked for the task. In contrast, those in the neutral condition received gray crayon markers only, and were told to simply color the elephant picture. In both conditions, participants were asked to spend no more than five minutes on the coloring activity. The elephant coloring task, though based on a real-life activity (i.e., Elephant Parade donation protocol), mimics a widely used creativity task in the literature: the alien task (Ward 1994). In these types of activities, creative thinking encourages people to violate standard characteristics of a stereotypical object (e.g., an elephant, as in our study; Kozbelt and Durmysheva 2007; Marsh, Landau, and Hicks 1996). A stereotypical elephant picture would be colored gray, whereas a non-stereotypical elephant picture would be multicolored.

Next, participants were presented with the donation opportunity and informed that the researchers were helping raise money for the nonprofit organization Elephant Parade. Participants read a short description and donation appeal from Elephant Parade (see Web Appendix B.3), and were asked if they would like to contribute; they could donate any amount of the participation money (eight quarters) they wished, and put it in the donation box. The number of quarters each participant donated served as the key dependent variable. Finally, all participants provided their demographic information (age and gender) and were debriefed before being dismissed. (Gender and age were captured in all studies. However, no effects were observed for these variables in either this or any other study. For the sake of brevity, we do not discuss them further.) After each session, the research assistants removed the quarters from the donation boxes and recorded the number of donated quarters (i.e., the total number of quarters in the box minus the four quarters initially placed in each donation box).

Results

Preliminary analyses. The elephant designs were rated on creativity (1 = "not at all creative," and 7 = "very creative") by a research assistant who was blind to the conditions and hypothesis (for sample designs, see Web Appendix B.4). A one-way ANOVA confirmed that the designs produced in the creative condition (M = 4.24, SD = 1.61) were significantly more creative than those produced in the neutral condition (M = 1.51, SD = .95; F(1, 87) = 97.41, $p < .001$).

Donation behaviors. First, we explored whether there was any difference between the two conditions on the donation rate (i.e., the percentage of participants who donated to the Elephant Parade foundation) and found that a significantly higher percentage of participants (80.95%) in the creative condition—as compared with those in the neutral condition (55.32%)—donated ($\chi^2 = 6.83$, $p = .009$). Next, we analyzed the effect of activity type on donation amount, which was assessed by the number of quarters donated to the Elephant Parade after completing either the creative or neutral activity. The donation data did not meet the normal distribution criteria (Shapiro–Wilk test: $p < .001$; Shapiro and Wilk 1965); therefore, a nonparametric Mann–Whitney U test was again used for the analysis. We found that those who completed the creative activity (M = 4.50 quarters, SD = 3.19) donated a significantly higher number of quarters than those who completed the neutral activity (M = 2.98 quarters, SD = 3.54; U = 720, $p = .022$).

Discussion

The obtained results provide support for our focal hypothesis (H_1), namely, that engaging in a creative activity enhances donation behavior, in terms of both the likelihood of donation (i.e., donation rate) and the donation amount. The study utilized a creative activity adapted from a real-life charity and assessed donation behavior through real monetary donations. It demonstrated that engaging potential donors in creative activities, before soliciting them for donations, can be an effective way to enhance donation behavior.

One potential criticism of this study could be the different number of colors provided in the creative versus neutral conditions. However, this procedure was necessary to manipulate creativity within the context of the study. Offering a variety of colors provides participants with an opportunity for creativity, that is, to think outside the box and beyond the stereotypical characteristics of an elephant (i.e., all gray). The sole use of gray crayon markers in the neutral condition, in contrast, conforms to the stereotypical characteristics of an elephant and curtails creative opportunity. To address this potential limitation, in future studies we adopt contexts in which we can provide the same materials to participants in both conditions.

In both the pilot study and Study 1, the creative activity was directly related to the charitable cause, thereby raising a question about the generalizability of the effect—that is, whether the observed effect is domain specific or whether it holds when the creative activity is independent of the donation context. We explore this possibility in Study 2. In addition, our studies do not delineate whether the obtained results were observed because participants engaged in a creative activity (as hypothesized), or simply because the concept of creativity was salient for the participants in the creativity condition. In other words, is it necessary to actually engage in a creative activity, or can mere exposure to the concept of creativity also enhance donation behaviors? Prior research has shown that priming creativity (making creativity salient without engagement) can influence cognitive processing, thereby affecting people's propensity to engage in dishonest behaviors (Gino and Ariely 2012). We examine this question in the next study.

Study 2: Creative Stimuli Versus Creative Activity

Study 2 was aimed to discern whether engagement in a creative activity is needed to obtain the identified effects, or rather, if exposure to a simple creative prime would suffice. To this end, we added another focal condition to the experimental design used in Study 1: this time participants were exposed to creative stimuli only, with no opportunity to participate in a creative activity. Interestingly, this condition mimics the default strategy of many charitable organizations, in which potential donors are presented solely with a donation appeal (without an opportunity for active engagement). In addition, to test the context-independent nature of the effect, the creativity activity was kept independent from the donation context (i.e., the charitable cause). Finally, we conducted the study in a real-life setting; we followed a format used by baked goods company C. Krueger's, which hosts a holiday charity event wherein customers are invited to decorate cookies and make purchases. For our study, two booths were set up in the lobby of a university building with high foot traffic, featuring large signs advertising a cookie decoration event sponsored by the charity ChildHelp. Passersby were invited to participate in the event and decorate a cookie before being solicited for a monetary donation.

Method

One hundred seventy adults (82 women; $M_{age} = 21.09$ years, SD = 2.47 years) agreed to participate in the event and were assigned to one of the three treatment conditions: creative engagement, creative exposure without engagement, or neutral engagement. The conditions were randomized and rotated by the hour. Once passersby agreed to participate in the event, they were told they would receive $2 as a token of appreciation for participating in the event. They were given a white envelope containing eight quarters and asked to sign a form indicating receipt of the money. The signing process was necessary for participants to feel ownership of the money they had earned, before being solicited for donations later in the study. Prior research has shown that signing one's name increases this sense of ownership (Dunn, White, and Dahl 2020; Trudel, Argo, and Meng 2016;).

Next, one of the "staff members" guided individual participants to a table bearing a plain cookie on a paper plate, four different icing colors, and a spatula. They were also handed an event participation instruction sheet, which served as our key manipulation. Each instruction sheet had the ChildHelp Foundation logo at the top, with "ChildHelp Foundation Annual Charity Event" printed underneath (see Web Appendix C.1). The task manipulation for the two engagement conditions (i.e., cookie decoration) was adapted from Dahl and Moreau (2007). In the creative engagement condition, participants were told that this was an annual charity event hosted by the ChildHelp Foundation and, as part of the event, we wanted them to decorate their cookie in the most creative manner possible using the provided materials. Those in the neutral engagement condition were given a picture of a routinely (i.e., noncreatively) decorated cookie (see Web Appendix C.2) and asked to ice the cookie as shown in the picture, using the provided materials. Those in the creative condition had the freedom to use their imagination and creativity to come up with a novel cookie design, thereby promoting creative engagement. However, in the neutral condition, participants were simply asked to copy the noncreative cookie as depicted, negating any potential creative engagement process. In the creative exposure (without engagement) condition, in keeping with prior research showing that exposure to creative images can make the concept of creativity accessible (Yang et al. 2011), we simply showed participants three creative cookie designs (see Web Appendix C.3) and asked them to choose the most creative one.

To assess whether our manipulation made the concept of creativity salient, we conducted a separate online study. In this study, participants were randomly assigned to complete one of the three treatment condition tasks used in the main study (creative engagement, neutral engagement, or creative exposure without engagement). They were then presented with two types of measures that captured the salience of creativity implicitly and explicitly. The obtained results showed that, as anticipated, the concept of creativity was equally salient for both the creative engagement and creative exposure conditions, and both were significantly higher than the neutral condition (for study details and complete results, see Web Appendix C.4).

Next, in the main study, all participants were given a manila envelope with a survey featuring a donation appeal and some questions about the cookie event. Each envelope was marked with a unique identification number to enable us to match participants' survey responses, donation amounts, and their assigned condition. All participants were presented with a donation appeal from the ChildHelp Foundation: a nonsectarian, nonpolitical, registered charity dedicated to helping children living in distress in North America and overseas. Furthermore, participants were told that if they decided to contribute, they could put the quarters they wanted to donate in the manila envelope and leave it in the box beside their table. Lastly, to gain initial insights into the underlying process, we captured exploratory measures of participants' positive affective state and their perceived donation impact (for details, see Web Appendix C.5). At the end of the study, the participants in the two engagement conditions were invited to take their cookie with them, while those in the creative exposure without engagement condition were given a cookie at the end of the study (for consistency with the other two conditions).

Results

We first examined the donation rate by calculating the percentage of participants who donated in each condition. A logistic regression revealed a significant difference in the donation rates across the three conditions ($\chi^2(2) = 12.26$, $p = .002$). A significantly higher percentage of participants in the creative engagement condition (81.03%) donated, compared with both those in the creative exposure (without engagement) condition (50.88%; $\chi^2(1) = 11.01$, $p = .001$) and those in the neutral condition (61.82%; $\chi^2(1) = 4.98$, $p = .026$). We observed no difference between the latter two conditions ($p = .244$). Next, we assessed the donation amount, with the number of donated quarters serving as our key dependent variable. A Shapiro–Wilk test (Shapiro and Wilk 1965) indicated that our data were not normally distributed ($p < .001$); therefore, we used the nonparametric Kruskal–Wallis test for the analysis. The obtained results revealed a significant overall main effect of the activity type on monetary donation ($H(2) = 9.8$, $p = .007$). Pairwise comparisons showed that those in the creative engagement condition ($M = 6.10$ quarters, $SD = 3.30$) donated significantly more quarters than both those who were in the creative exposure (without engagement) ($M = 4.04$ quarters, $SD = 3.97$, $p = .003$) and neutral engagement ($M = 4.49$ quarters, $SD = 3.85$, $p = .021$) conditions. There was no difference between the latter two conditions ($p = .52$).

Discussion

In this study, we created a charity event in which individuals participated in different activities before receiving a donation solicitation. In line with our predictions, we found that participating in an activity that enabled creative engagement (i.e., creatively decorating a cookie) enhanced donation behavior (as compared with those who either reproduced a routine cookie design or were merely exposed to creative cookie designs). Importantly, the obtained results showed that donation behavior is only enhanced when participants actually engage in a creative activity, not simply when the notion of creativity is made salient. Further, the creative activity utilized in this study was independent of the charity cause, thereby demonstrating the context-independent nature of the effect.

Our findings, so far, provide consistent evidence for the hypothesized relationship between creative engagement and donation behavior. In the following studies, we extend our examination to understand the underlying process through which creative activity and higher donation behavior are connected. In particular, we examine the mediating role of positive affect in this relationship. In addition, in Study 3 we also test the role of autonomy as a driver of creative engagement's impact on positive affect, which consequently influences donation behavior. Study 4 then explores why positive affect has such a significant impact on donation behavior. Finally, given the null findings in the creative exposure condition (on donation behavior), we dropped this condition from subsequent studies.

Study 3: Testing the Role of Autonomy and Positive Affect

Study 3 was conducted to fully test H_{2a} and identify the underlying process through which creative engagement impacts donation behavior. In particular, we tested our prediction that engaging in a creative activity heightens one's sense of autonomy, which in turn induces positive affect, leading to higher donation behavior. This study was preregistered on aspredicted.org (https://aspredicted.org/blind.php?x=ag5ci3).

Method

Two hundred adults (117 women; $M_{age} = 32.76$ years, $SD = 11.51$ years) recruited from the online platform Prolific completed this study in exchange for a small monetary compensation. At the outset, participants were told that in addition to their regular compensation, they would also receive $1 as a thank-you bonus for completing the study, with an opportunity to spend this money later if they chose to. They were further informed that the study was being conducted in collaboration with the charitable organization ChildHelp Foundation and were provided with information about the organization (see Web Appendix D.1). Next, all participants were told that the ChildHelp Foundation runs an annual charitable event, wherein individuals are invited to participate in various tasks. However, given the COVID-19 pandemic, this year's event would be virtual, and the organization needed help planning the function. Thus, the organization was inviting them to participate in this study as if they were actual donors participating in the event.

The activity type manipulation used an idea generation task, mimicking the "Think outside the cereal box" campaign Kellogg launched several years ago. In the creative condition, participants were told that as part of its annual charity event, the ChildHelp Foundation was inviting them to "think outside the cereal box" and generate a fun and creative way to use Froot Loops cereal, besides eating it for breakfast. Further, participants were told to be as creative as possible and use their imagination to generate an innovative way to use Froot Loops cereal. In the neutral condition, participants were asked to "think about the cereal" and share a traditional way of how they eat the Froot Loops cereal (for detailed instructions, see Web Appendix D.2).

Once participants completed the Froot Loops task, we assessed their donation behavior, sense of autonomy, and affective state. To capture participants' donation behavior, they were told that the ChildHelp Foundation was seeking donations, and they could help by donating part or all of their $1 bonus (in multiples of $.10) to the charity. All participants were then provided with a scale from $0 to $1 in increments of $.10 to indicate their donation amounts.

Sense of autonomy was measured by adapting established measures defined in the literature (i.e., Dahl and Moreau 2007; Moreau and Herd 2010). Specifically, participants were asked to indicate how they felt while generating their ideas during the Froot Loops task: (1) "To what extent did you feel you had autonomy in generating your ideas during the Froot Loops task?," (2) "To what extent did you feel you had freedom in coming up with your ideas for the Froot Loops task?," (3) "How free did you feel in generating your ideas for the Froot Loops task?," and (4) "How much did you feel you were able to express yourself when generating your ideas for the Froot Loops task?" (1 = "not at all," and 7 = "very much"). Next, to measure positive affect, they were asked to think back to the Froot Loops activity and indicate how they felt during this activity on 11 items adapted from De Dreu, Baas, and Nijstad (2008) and Dahl and Moreau (2007). Specifically, all participants reported how they felt while completing the Froot Loops activity: (1) 1 = "very negative," and 7 = "very positive"; (2) 1 = "very unpleasant," and 7 = "very pleasant"; (3) 1 = "not at all nice," and 7 = "very nice"; and (4) 1 = "very bad," and 7 = "very good." This was followed by seven items anchored with 1 = "not at all," and 7 = "very much," asking (5) how positive they felt during the Froot Loops activity, (6) the extent to which they enjoyed the Froot Loops activity, (7) the extent to which they had a good time during the Froot Loops activity, (8) how much fun the Froot Loops activity was, (9) how satisfied they felt during the Froot Loops activity, (10) how pleasurable the Froot Loops activity was, and (11) how exciting the Froot Loops activity was.

Results

Preliminary analyses. A trained research assistant blind to hypothesis and condition rated the creativity of the generated Froot Loops ideas. As we expected, a main effect of creativity emerged such that those in the creative condition ($M = 3.89$, $SD = 1.29$) generated more creative ideas than those in the neutral condition ($M = 1.24$, $SD = .81$; $F(1, 198) = 301.96$, $p < .001$, Cohen's $d = 2.46$).

Donation behaviors. We first examined the effect of engaging in the creative (vs. neutral) activity on the donation rate. A binary logistic regression revealed that a significantly higher percentage of participants in the creative condition (63.37%) donated money, compared with the percentage of participants in the neutral condition (45.45%; $\chi^2(1) = 6.50$, $p = .01$). Next, we examined the difference between the creative and neutral conditions' donation amounts. As in previous studies, a Shapiro–Wilk test (Shapiro and Wilk 1965) indicated that the data were not normally distributed ($p < .001$); thus, we used the nonparametric Mann–Whitney U test for the analysis. Replicating the results from the previous studies, those who engaged in the creative ($M = 41.49¢$, $SD = 41.60¢$) versus the neutral ($M = 27.07¢$, $SD = 37.04¢$) activity donated significantly more money ($U = 6,034.50$, $p = .007$).

Process measures. Factor analysis showed that all four items used to capture participants' sense of autonomy loaded onto the same factor; therefore, we averaged them to create a sense of autonomy index ($\alpha = .92$). A one-way ANOVA revealed that those in the creative condition ($M = 6.05$, $SD = 1.02$) reported a significantly higher sense of autonomy than those in the neutral condition ($M = 4.94$, $SD = 1.73$; $F(1, 198) = 30.61$, $p < .001$, Cohen's $d = .78$). In addition, factor analysis showed that the 11 items used to capture participants' positive affective state loaded onto the same factor, and we therefore averaged them to create a positive affect index ($\alpha = .96$). A one-way ANOVA revealed that those in the creative condition ($M = 5.24$, $SD = 1.24$) reported a significantly higher positive affective state than those in the neutral condition ($M = 4.52$, $SD = 1.31$; $F(1, 198) = 16.15$, $p < .001$, Cohen's $d = .56$).

Mediation analysis. To test the potential underlying process paths, we first examined the mediation effect of positive affect on the creative engagement/donation rate relationship. A bias-corrected bootstrap confidence interval obtained by resampling the data 10,000 times (with activity type as the independent variable, positive affect as the mediator, and the donation rate as the dependent variable) did not include zero ($\beta = .31$, $SE = .12$, bias-corrected 95% confidence interval [CI] = [.11, .59]), indicating a significant indirect (i.e., mediation) effect. Next, we conducted a serial mediation analysis to understand the role of autonomy in this relationship. Serial mediation (Model 6, Hayes 2013) conducted with activity type as the independent variable, sense of autonomy and positive affect as the serial mediators (in that order), and the donation rate as the dependent variable together revealed the presence of a significant indirect effect ($\beta = .21$, $SE = .09$, bias-corrected 95% CI = [.07, .41]).

We also conducted the same mediation analyses for the donation amount. A bias-corrected bootstrap confidence interval obtained by resampling the data 10,000 times (with activity type as the independent variable, positive affect as the mediator, and the donation amount as the dependent variable) did not include zero ($\beta = 4.71$, $SE = 1.99$, bias-corrected 95% CI = [1.32, 9.02]), indicating a significant indirect (i.e., mediation) effect. Next, we conducted a serial mediation analyses to understand the role of sense of autonomy. A serial mediation (Model 6, Hayes 2013) conducted with activity type as the independent variable, sense of autonomy and positive affect as the serial mediators (in that order), and the donation amount as the dependent variable together revealed the presence of a significant indirect effect ($\beta = 2.99$, $SE = 1.48$, bias-corrected 95% CI = [.29, 6.10]).

Discussion

Study 3 results replicated the findings from the previous studies and showed that engaging in a creative (as compared with neutral) activity enhances donation behaviors (H_1). Further, the findings from this study highlighted the underlying processes through which creative engagement affects monetary donation. As we hypothesized, creative (vs. neutral) engagement induces a higher positive affect, which in turn leads to enhanced donation behavior. Importantly, we found that sense of autonomy drives the relationship between creative engagement and positive affect (H_{2a} is fully supported). To further confirm the role of autonomy in this relationship, we conducted a supplementary study in which we directly manipulated the sense of autonomy felt by the participant. Here, we showed that when felt autonomy is mitigated, the positive effect of creative engagement on positive affect (and, in turn, the donation behavior) is attenuated (for the details of this supplementary study, see Web Appendix E).

In the next study, we further explicate the underlying process through which creative engagement impacts donation behavior by examining the pathways through which positive affect leads to higher donation behavior.

Study 4: Exploring Why Positive Affect Impacts Donation Behavior

We conducted Study 4 to test H_{2b} and provide additional insight into the underlying process through which creative engagement impacts donation behavior. In particular, we assessed the possible role of mood maintenance, social connection, and perceived donation impact in driving positive affect's influence on donation behavior outcomes. This study was also preregistered on aspredicted.org (https://aspredicted.org/blind.php?x=j8rj2w).

Method

Two hundred adults (109 women; $M_{age} = 34.84$ years, $SD = 12.91$ years) recruited from the online platform Prolific completed this study in exchange for a small monetary compensation. At the outset, participants were told that in addition to their regular compensation, they would also receive $1 as a thank-you bonus for completing the study, with an opportunity to spend this money later if they chose to. They were further informed that the study was being conducted in collaboration with the charitable organization Healthier Tomorrow and were provided with information about the organization (see Web Appendix F.1). Next, all participants were told that Healthier Tomorrow runs an annual charitable event, wherein individuals are invited to participate in various tasks. However, given the COVID-19 pandemic, this year's event was going to be virtual, and the organization needed help planning the function. Thus, the organization wanted to invite them to participate in this study as if they were actual donors participating in the event.

Next, participants were randomly presented with either the creative or neutral version of the event and asked to create (reproduce) a T-shirt design. Those in the creative condition were specifically asked to design an innovative T-shirt and be as creative as possible (for detailed instructions and the sample designs produced by participants, see Web Appendix F.2). In the neutral condition, participants were simply provided with a generic T-shirt design and asked to reproduce it, thus negating any potential creative engagement (for detailed instruction and the T-shirt design provided to the participants, see Web Appendix F.3). Participants were then directed to the T-shirt customization website (customink.com) to complete the design activity. Once participants had finished creating (reproducing) their designs they were asked to save them with a unique ID provided in the survey and then use the save/share function in the T-shirt customization website to email their design to a designated email address created for the study.

Once participants completed and submitted information about their designs, we assessed their donation behavior, affective state, mood maintenance, social connection, and perceived donation impact. To capture participants' donation behavior, we told them that Healthier Tomorrow was seeking donations, and they could contribute by donating part or all of their $1 bonus (in multiples of $.10) to the charity. All participants were then provided with a scale from $0 to $1 in increments of $.10 to indicate their donation amounts.

To assess participants' positive affective state, we asked them to think back to the T-shirt design task and indicate how they felt during this activity, on the same 11 items used in Study 3 (adapted from De Dreu, Baas, and Nijstad [2008] and Dahl and Moreau [2007]). Participants responded to a mood-maintenance measure adapted from Ferguson, Farrell, and Lawrence (2008), where they were asked to think about their donation decision and indicate their agreement with the following statements on seven-point scales (1 = "not at all," and 7 = "very much"): "I thought …" (1) "I would feel good about myself if I donate," (2) "donating will make me feel good," and (3) "if I donate it would be a personally rewarding experience." To measure social connection, we adapted items from Cavanaugh, Bettman, and Luce (2015) to suit the context of our study. Participants responded to the following items on seven-point scales (1 = "not at all," and 7 = "very much"): "To what extent did you feel …" (1) "closer to Healthier Tomorrow," (2) "connected to Healthier Tomorrow," and (3) "that completing the design task affected the way you think about the relationship with Healthier Tomorrow." We measured participants' perceived donation impact by means of three items adapted from Cryder, Loewenstein, and Scheines (2013) and Taylor and Gollwitzer (1995). These items specifically asked the participants how much they thought their donation could (1) make a positive difference, (2) be valuable, and (3) do a lot of good (1 = "not at all," and 7 = "very much").

Results

Preliminary analysis. Ten participants did not complete the T-shirt design activity and were excluded from the analysis (including these participants in the analysis does not change the significance or pattern of results; see Web Appendix F.4).

Donation behaviors. We first examined the effect of engaging in the creative (vs. neutral) activity on the donation rate. A binary logistic regression revealed that a significantly higher percentage of participants in the creative condition (47.87%) donated money, compared with the percentage of participants in the neutral condition (27.08%; $\chi^2(1) = 8.85$, $p = .003$). Next, we examined the difference in donation amounts between the creative and neutral conditions. As in previous studies, a Shapiro–Wilk test (Shapiro and Wilk 1965) indicated that the data were not normally distributed ($p < .001$); thus, we used the nonparametric Mann–Whitney U test for the analysis. In a replication of the results from the previous studies, those who engaged in the creative (M = 22.34¢, SD = 31.81¢) versus the neutral (M = 11.25¢, SD = 24.63¢) activity donated significantly more money (U = 5,517, $p = .002$).

Process measure. Factor analysis showed that all 11 items used to capture participants' positive affective state loaded onto the same factor, and we therefore averaged them to create a positive affect index ($\alpha = .97$). A one-way ANOVA revealed that those in the creative condition (M = 5.32, SD = 1.32) reported a significantly higher positive affective state than those in the neutral condition (M = 4.72, SD = 1.40; $F(1, 188) = 9.26$, $p = .003$, Cohen's d = .45).

Mediation analysis. As an initial step, we examined the mediation effect of positive affect on the creative engagement/donation rate relationship. A bias-corrected bootstrap confidence interval obtained by resampling the data 10,000 times (with activity type as the independent variable, positive affect as the mediator, and donation rate as the dependent variable) did not include zero ($\beta = .19$, SE = .11, bias-corrected 95% CI = [.03, .48]), indicating a presence of a significant indirect (i.e., mediation) effect.

Next, we examined the pathways through which positive affect, as induced by engaging in creative activity, impacts donation rate. We tested a sequential-parallel mediation model with creative engagement as the independent variable, positive affect as the first mediator, three factors (mood maintenance, perceived donation impact, and social connection) as a second set of mediators in parallel, and donation rate as the dependent variable (see Figure 1) using structural equation modeling (for statistics for each path in the model, see Table 1). This model is very similar to a serial mediation model; however, no order is assumed among the second set of mediators (i.e., mood maintenance, perceived donation impact, and social connection) (Dohle and Montoya 2017). We used bootstrapping procedures to compute 95% CIs by generating 10,000 resamples. The results indicated significant serial indirect effects through positive affect and mood maintenance ($\beta = .031$, SE = .014, bias-corrected 95% CI = [.011, .068], $p = .001$) and positive affect and perceived donation impact ($\beta = .031$, SE = .014, bias-corrected 95% CI = [.010, .067], $p = .001$). However, the serial indirect effect of positive affect and social connection on the creative engagement and donation rate relationship was not significant ($\beta = .005$, SE = .012, bias-corrected 95% CI = [−.015, .035], $p = .57$). Interestingly, with positive affect in the model, creative engagement did not directly impact any of the second set of three mediators, thereby demonstrating the

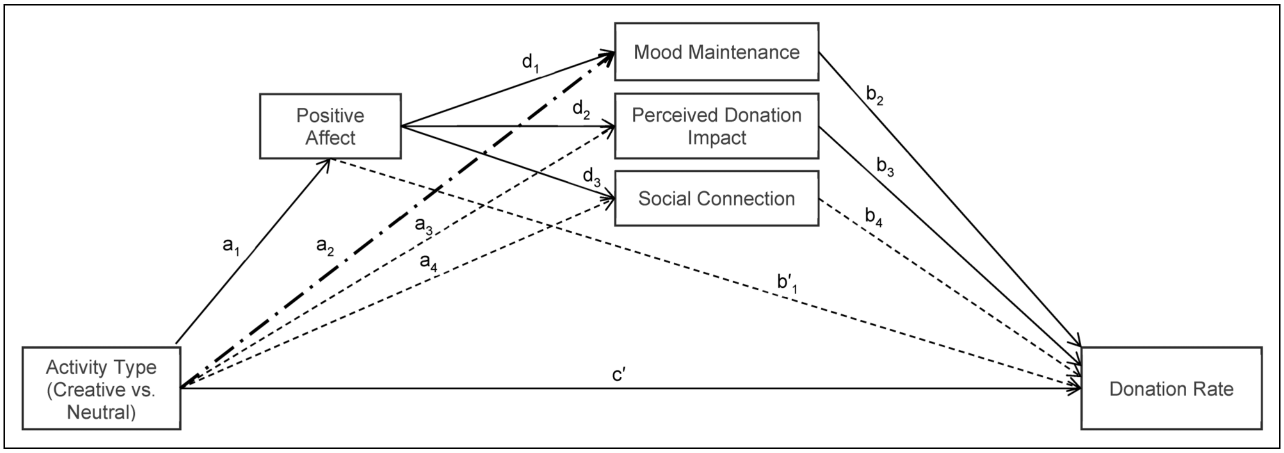

Figure 1. Sequential-Parallel Mediation Model (Study 4).
Notes: Path analysis assessing the effect of creative (vs. noncreative) engagement on donation rate through positive affect, mood maintenance, perceived donation impact and social connection. Solid lines indicate positive statistically significant paths ($p < .05$). Bold loosely dashdotted lines denote negative statistically significant paths. Dashed lines indicate nonstatistically significant paths ($p > .05$).

importance of positive affect in the conceptualization. Positive affect positively influenced all three potential mediators, but only mood maintenance and perceived donation impact significantly impacted donation rate. Thus, the positive affect experienced during a creative activity bolstered the desire for mood maintenance and the perceived donation impact, which in turn enhanced donation behaviors.

A similar analysis was conducted for donation amount. First, a bias-corrected bootstrap confidence interval obtained by resampling the data 10,000 times (with activity type as the independent variable, positive affect as the mediator, and the donation amount as the dependent variable) did not include zero ($\beta = 1.80$, $SE = 1.13$, bias-corrected 95% CI = [.04, 4.44]), indicating a significant indirect (i.e., mediation) effect of positive affect. Next, to examine the pathways through which positive affect impacts donation, we used structural equation modeling to test the hypothesized process model, with donation amount as the dependent variable (for statistics for each path in the model, see Table 1). Ninety-five percent confidence intervals obtained by generating 10,000 bootstrap resamples indicated significant serial indirect effects through positive affect and mood maintenance ($\beta = 1.51$, $SE = .78$, bias-corrected 95% CI = [.40, 3.72], $p = .004$) and positive affect and perceived donation impact ($\beta = 1.60$, $SE = .76$, bias-corrected 95% CI = [.53, 3.65], $p = .001$). However, similar to what we observed for the donation rate, the serial indirect effect of creative engagement through positive affect and social connection on donation amount was not significant ($\beta = .33$, $SE = .81$, bias-corrected 95% CI = [−1.06, 2.26], $p = .58$).

Discussion

The Study 4 results replicated the findings from the previous studies and showed that engaging in a creative (vs. neutral) activity induces positive affect, which in turn enhances donation behaviors. Importantly, this study further examined the underlying process, providing understanding of how positive affect influences donation behavior. We found that the path from positive affect to donation behavior was multiply determined. Indeed, perceived donation impact and mood maintenance were both shown to be drivers of the affect/donation relationship. Interestingly, we did not find evidence for social connection as a mechanism that triggered the identified effects. Thus, it appears that attributions flowing from the positive experience of creative engagement are more at play in defining enhanced donation behavior, and efforts to maintain positivity also spill over into the donation outcomes. Future research should continue to explore these identified mechanisms and discern within which charitable contexts they are most applicable and effective.

General Discussion

The current research examined the relationship between creativity and donation behavior. A pilot study and four subsequent experiments demonstrated that engaging in a creative activity induces a sense of autonomy, which leads to a positive affective state, which in turn results in enhanced donation behaviors (i.e., the likelihood of donation and the monetary amount donated; for a summary of all study results, see Table 2). We further showed that the positive affect experienced by the creator leads to enhanced donation behavior, due to perceptions of increased donation impact and an effort to maintain the resulting positive mood.

Implications for Practice

Our work was motivated by the documented fact that charitable organizations often struggle to find effective ways to engage donors and solicit donations (Nonprofit Finance Fund 2018). Thus, a central contribution of our research is in confirming that engaging potential donors through creativity can meet

Table 1. Sequential-Parallel Mediation Model (Study 4).

Path	Predictor	Outcome	Path Estimates (Standardized)	SE	95% CI
a_1	Activity type	Positive affect	.22	.20	[.08, .35]
a_2	Activity type	Mood maintenance	−.14	.21	[−.27, −. 01]
a_3	Activity type	Perceived donation impact	.09	.23	[−.05, .23]
a_4	Activity type	Social connection	.09	.19	[−.03, .21]
b'_1	Positive affect	Donation rate	−.13	.03	[−.29, .02]
		Donation amount	−.14	1.98	[−.28, .002]
b_2	Mood maintenance	Donation rate	.31	.02	[.14, .46]
		Donation amount	.25	1.32	[.06, .42]
b_3	Perceived donation impact	Donation rate	.37	.02	[.20, .52]
		Donation amount	.32	1.16	[.17, .46]
b_4	Social connection	Donation rate	.04	.02	[−.13, .21]
		Donation amount	.04	1.43	[−.16, .23]
c'	Activity type	Donation rate	.19	.06	[.05, .32]
		Donation amount	.17	3.81	[.04, .29]
d_1	Positive affect	Mood maintenance	.51	.07	[.38, .61]
d_2	Positive affect	Perceived donation impact	.41	.08	[.28, .53]
d_3	Positive affect	Social connection	.63	.07	[.52, .72]

Notes: Path analysis assessing the effect of creative (vs. noncreative) engagement on donation rate/amount through positive affect, mood maintenance, perceived donation impact, and social connection (estimates and 95% CIs for individual paths).

this challenge by increasing engagement and enhancing donation behaviors. Substantively, we can recommend incorporating creative activities into fundraising campaigns and charity events as a viable marketing strategy. Indeed, creative activities can be implemented through social media platforms (as exemplified in our pilot study) or in person during charity events and solicitations (as exemplified in Study 2). Current industry practices suggest that some charities have begun testing this approach (i.e., engaging potential donors through creative activities before soliciting them for donations). For example, Roots and Shoots (a charitable organization that supports environmental, conservation, and humanitarian issues) regularly posts a variety of gamified challenges on its website and invites potential donors to participate. Many of these challenges encourage people to incorporate creativity in defining their solutions (e.g., for a "World Chimpanzee Day Challenge," people were asked to design and submit a creative communication graphic to spread awareness about chimpanzee protection).

To gain additional insights on practitioners' points of view (concerning our proposed strategy), we sent an email to 220 charities nationwide, inviting them to participate in a short survey. The survey asked three questions that measured the usefulness and applicability of this donation strategy. The first question assessed whether the charity had previously used a creative activity as a preface to a donation request. The second question asked whether, if presented with evidence that engaging donors through a creative activity increases monetary donation, they would implement this strategy in their donation campaigns (1 = "not very likely," and 7 = "very likely"). The final question assessed how feasible they thought it would be to implement such a strategy (1 = "not very feasible," and 7 = "very feasible"). We obtained 29 responses from the surveyed national charities (13% response rate). Interestingly, 45% of the charities mentioned that they have previously used a creative activity as a preface to a donation request—showing that our research validates a tactic already in use by some charities today. Most importantly, charities indicated they would definitely be willing to implement this strategy in their donation campaigns ($M = 6.55$, $SD = .69$; $t(28) = 20.04$, $p < .001$, compared with the midpoint) and thought it would be feasible to implement such a strategy ($M = 5.38$, $SD = 1.68$; $t(28) = 4.43$, $p < .001$, compared with the midpoint). Though a small sample, these results are encouraging and affirm that utilizing creative activities in charity campaigns is both highly relevant and feasible in the marketplace.

Theoretical Contributions

The current work also provides several theoretical contributions to the field. First, we advance the marketing and charity literature streams by identifying that positive affect experienced during a creative activity is a key mechanism that bolsters subsequent donation behaviors. Second, we offer a deeper understanding of why engaging in a creative activity leads to higher donation behavior through positive affect. Specifically, we show that creative engagement enhances a sense of autonomy, which in turn induces positive affect, which then positively impacts donation behavior. In addition, the relationship between positive affect and enhanced donation behavior is shown to be multiply determined. We identify two specific mechanisms that link affect and behavior: namely, the positive attributions of the impact of one's donation and the mood maintenance tendency of the participant. Third, we establish that the act of creativity itself (not just being primed with creativity as a construct) is a necessary condition to achieve beneficial donation outcomes. Finally, we confirm that the creative activity

Table 2. Summary of Study Results.

			Donation Amount			Donation Rate		
			Task Engagement			Task Engagement		
Study	Units Donated		Creative	Neutral	None	Creative	Neutral	None
Pilot Study	USD ($)		7.07^a (13.06)	1.10^a (3.26)	—	$34.48\%^a$	$12.20\%^a$	—
Study 1	Number of quarters (maximum 8)		4.50^a (3.19)	2.98^a (3.54)	—	$80.95\%^b$	$55.32\%^b$	—
Study 2	Number of quarters (maximum 8)		$6.10^{a\ b}$ (3.30)	$4.49^{a\ c}$ (3.85)	$4.04^{b\ c}$ (3.97)	$81.03\%^{a\ b}$	$61.82\%^{a\ c}$	$50.88\%^{b\ c}$
Study 3	USD (¢)		41.49^b (41.60)	27.07^b (37.04)		$63.37\%^b$	$45.45\%^b$	
Supplementary study (follow-up to Study 3)	USD ($)	Control	12.52^{ab} (7.58)	8.43^{ab} (7.10)		$87.88\%^{ad}$	$75.41\%^{cd}$	
		Autonomy inhibited	9.60^{ac} (8.30)	11.84^{ac} (7.72)		$70.77\%^{ac}$	$80.33\%^{c}$	
Study 4	USD (¢)		22.34^b (31.81)	11.25^b (24.63)		$47.87\%^b$	$27.08\%^b$	

Notes: Standard deviations are in parentheses. The contrasts are identified with superscript notation: $^a p \leq .05$, $^b p \leq .01$, $^c p > .1$, $^d p \leq .1$.

employed need not relate directly to the organization and/or charitable cause underlying the sought-after donation behavior. This is important both theoretically and practically, as it establishes generalizability in our findings and provides more freedom to charities in defining the type of creativity activity appropriate for their donation campaigns.

More broadly, the current research adds to prior work demonstrating the consequences of engaging in creative thinking tasks. While a significant amount of research has been devoted to studying various factors and cognitive processes that impact creativity (Goldenberg, Mazursky, and Solomon 1999; Mehta and Zhu 2009; Moreau and Dahl 2005), much less attention has been paid to the implications and outcomes of being creative (Gino and Ariely 2012; Vincent 2013). Our research shows that there is value in understanding what implications creativity may have for subsequent consumption behaviors. Building up our understanding of the importance of creativity is especially significant in today's consumption environment, where customers are increasingly provided with opportunities to engage in creative activities, from participating in crowdsourcing platforms (e.g., MyStarbucksIdea.com, ideas.lego.com) to engaging in customization processes (e.g., NikeID, Casetify customized phone cases).

Limitations and Future Research

Limitations inherent to our research approach open up several avenues for additional investigation. First, research should be directed toward developing a better understanding of the generalizability of the effects we identify. Although we demonstrated that a creative activity does not have to be specific to the charity in question to provide a positive outcome, we did not assess a broad range of charities and donation appeals. To this end, we conducted a preliminary study examining the impact of the inherent history of the charity (i.e., whether the charity was well-established; for study details; see Web Appendix G) on donation behavior. Here, we found that creative engagement indeed led to enhanced donation behavior, but only when the charity was newly established. When the charity was well-established, the donation behavior was enhanced irrespective of the type of activity utilized in the appeal. Additional research is needed to better explore this potential boundary condition and, more generally, to define other contextual factors that might moderate the effects we have documented here.

Second, most of the creative activities tested in this research involved artistry and design (e.g., cookie decorating, T-shirt design, coloring). It remains to be seen whether other forms of creativity could produce similar effects. Indeed, we believe that the effects identified in this research are likely to be observed for any enjoyable creative activities that encourage people to explore and think freely. However, we conjecture that the positive effects defined herein may be attenuated if the creative activity is more convergent in nature (e.g., identifying the one right solution). While we did not directly test the effect of a convergent creative activity on donation behavior, prior research has found that engaging in convergent creative tasks may not lead to a positive affective state (Chermahini and Hommel 2012). Future research should explore this possibility and outline the breadth of creative activities that are effective precursors to enhanced donation behaviors.

Another interesting research question arising from our work concerns the identified difference between creative engagement and creative priming (on subsequent behaviors). We found that engaging in creative activities leads to higher donation behavior, but exposure to creative stimuli does not have a parallel effect. Previous research (Gino and Ariely 2012), however, has shown that creative priming can influence cognitive processes. Thus, it is important to further distinguish between creative engagement and exposure to creative materials and understand how they differentially impact subsequent behaviors. While both creative engagement and creative priming may influence cognition, perhaps only creative engagement can induce a positive affective state. Future research could further clarify the differences between these stimuli.

Finally, future research should continue to build understanding as to when creativity leads to positive (vs. negative) outcomes. Indeed, prior research has shown both positive and negative implications for creative thinking. For example, creativity has been shown to help overcome the burden of secrecy (Goncalo, Vincent, and Krause 2015) and to enhance one's tendency to take a target's perspective (Yang and Hung 2021). On the negative side, previous research has found that creativity can lead to dishonesty (e.g., Gino and Ariely 2012) and enhance unhealthy choices (Krause, Vincent, and Goncalo 2019). We find an opportunity for future work in building on these initial studies to better understand where creativity can influence downstream consumption behaviors. Indeed, we hope that future research will expand on our findings and further investigate the outcomes of creativity for individuals, charities, nonprofit organizations, and the broader marketplace at hand.

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Budget Depreciation: When Budgeting Early Increases Spending

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While budgeting in advance is seen as a good practice to control spending, this research shows that budgeting too early for a specific purchase may increase spending. We argue that as the temporal separation between budget setting and actual purchase increases, consumers become more willing to overspend because of what we term “budget depreciation.” Consumers adapt to the reference point set by the budget such that, over time, the budgeted level becomes the status-quo spending. Thus, as more time passes, pain of payment from the budgeted amount decreases, and the willingness-to-spend increases. Across a secondary dataset of real estate purchases, one field study, and three experiments, we find evidence that consumers who set a budget in the distant (vs. near) past are more likely to overspend relative to their budget. The effect emerges for single purchase occasions rather than a category of purchases over multiple occasions. It emerges because of the hypothesized pain-of-payment process (e.g., effect is stronger among tightwads, who feel greater pain from spending; effect is mitigated under budget reassessment, which prevents pain adaptation). Our work contributes to the mental budgeting literature by invoking a role for temporal separation and draws a novel connection to prior work on payment depreciation.

Keywords: mental budgets, budgeting, temporal separation, overspending, pain of payment

Budgeting is often considered as a useful tool to control spending. Many financial counseling institutions and financial literacy programs suggest that the first step to financial wellness is to set up a budget (Nagle 2019). Banks and other personal finance platforms provide services for effective budgeting (Lockert 2019), and in response, the number of consumers adopting budgeting and financial planning apps has more than tripled in the last 5 years (Hwa 2019). When budgeting for a specific upcoming purchase (e.g., purchasing a house), consumers typically do so in advance, and one might assume that budgeting further in advance helps people reduce their spending. This research explores when and why budgeting early might have the opposite effect, and instead lead to higher spending.

We examine how the amount of temporal separation that occurs between the moment that a budget is set and the moment that a purchase is made affects consumer decisions regarding how much money to spend relative to that budget. Although competing predictions can be made, our results suggest that budgeting too early tends to increase consumers' spending relative to their budgets and may result in overspending. We propose that this overspending behavior arises in part because consumers feel less pain

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when spending money for which they have budgeted in the distant past compared to money for which they have budgeted in the near past. Budgeting for a purchase involves deciding to spend money, and this *decision* to spend money on a purchase can produce a hedonic cost, or pain, for the consumer. As time passes after a decision has been made to spend money, consumers begin to adapt to that decision, and the pain associated with spending that money begins to dissipate. We refer to this process of adaptation as "budget depreciation." As a result of this process, those who budget for their purchases in the distant past may be more willing to overspend than those who budget for their purchases in the near past.

This research contributes to several streams of literature. Our findings add to the mental budgeting literature by identifying temporal separation as a factor that influences the success of budgeting in limiting spending behavior, and by elucidating the direction of the effect. Research on mental budgeting has explored factors that impact efficacy in budgeting, such as the malleability of mental accounts (Cheema and Soman 2008) and visual reminders of the budget goal (Soman and Cheema 2011). While a limited literature has begun to study the role of time in the budgeting context (Ülkümen, Thomas, and Morwitz 2008), the effect of temporal separation has not yet been explored. Prior research offers conflicting hypotheses on whether greater temporal separation will increase or decrease spending, yet no work has directly tested these predictions. We extend previous work in budgeting that examined possible pitfalls of budgeting (Cheema and Soman 2006; Kan, Fernbach, and Lynch 2018; Larson and Hamilton 2012) by showing how greater temporal separation in budgeting may backfire. In addition, prior studies in budgeting have primarily examined budgeting for categories of expenses that occur over a duration of time (e.g., dining expenses that occur over the next month; Ülkümen et al. 2008), but the current research focuses on budgeting for a single expense to occur at the end of a duration of time (e.g., a single dinner that occurs at the end of the next month). Furthermore, much of the research on budgeting observes how consumers' budget adherence is affected by changes in budgeted spending (Peetz and Buehler 2009; Ülkümen et al. 2008), but we explore how budget adherence is affected by changes in actual spending.

Second, our research contributes to the literature on pain of payment. While prior research has shown that the pain associated with making a purchase can dissipate as time passes after the purchase point (Gourville and Soman 1998), we contribute the notion that the pain associated with an earmarked-but-still-*upcoming* purchase can also dissipate with time. This adds to an emerging literature proposing that budgeting for purchases can evoke many of the same responses as actual purchases (Webb and Spiller 2014), implying that simply making the decision to spend can also evoke hedonic costs. We draw a novel connection to this prior work on payment depreciation, showing that a similar depreciation can occur with budgeting as well.

In the next section, we review literature on budgeting in general and then discuss the role of time in budgeting more specifically. We discuss how different lines of research can lead to competing predictions regarding the effect of temporal separation, before focusing on the pattern of effects that we empirically observe and a process that may underlie these effects.

THEORETICAL BACKGROUND

Budgeting

Mental budgeting is the act of coding and categorizing resource inflows and outflows into "accounts" (Thaler 1985). Through this cognitive form of bookkeeping, consumers set different mental accounts, earmark accounts, and funds for specific purposes and then track their expenses against their budgets (Heath and Soll 1996).

Funds can be earmarked for categories of multiple purchases (e.g., a $100 budget for dining expenses this week) or for single purchase (e.g., a $100 budget for a single dinner). Much of the prior research in budgeting focuses on budgeting for categories of spending, such as budgeting for weekly expenses (Peetz and Buehler 2009; Ülkümen et al. 2008), travel expenses (Fernbach, Kan, and Lynch 2015), or food and entertainment expenses (Cheema and Soman 2006). In this research, we focus on budgets set for single purchase, and, in line with Larson and Hamilton (2012), we use the term budgeting to refer to earmarking money for these purchases.

Consumers often budget with the aim of controlling their spending and saving money. A significant body of literature has explored the factors that can impact whether budgets are effective at achieving this goal (see Zhang and Sussman 2018 for a review). Budgets are often more effective when they are not too malleable (Cheema and Soman 2006), but also when not too inflexible (Heath and Soll 1996). Sometimes budgets can help people save money (Soman and Cheema 2011) and prioritize their spending (Fernbach et al. 2015), and sometimes earmarking can be unhelpful (Larson and Hamilton 2012; Sussman and O'Brien 2016).

The role of time in budgeting has been explored in various contexts, including the effect of sequence and the effect of temporal frames. Sheehan and Van Ittersum (2018) find that the sequence of purchases during a grocery store trip differs for those who do versus do not budget for their grocery shopping. Carlson et al. (2015) show that, when budget size changes in a descending (vs. ascending) sequence, people tend to prefer less variety.

The effect of different temporal frames in budgeting, such as a weekly budget versus a monthly budget, has also been explored. Longer time frames lead to higher and more accurate budget estimates (Ülkümen et al. 2008), and default units of time also lead to higher budget estimates (e.g., setting a weekly budget when one is accustomed to setting a monthly budget; Min and Ülkümen 2014). People underestimate their spending when budgeting for a general time frame, such as the next week, more than they do when budgeting for a specific event (Peetz and Buehler 2013). The temporal frame can also impact choices; bracketing one's budget more broadly increases willingness to spend (Read, Loewenstein, and Rabin 1999), and longer time windows for future consumption increase preference for vice products over virtuous products (Siddiqui, May, and Monga 2017).

Because mental budgets are set in advance of purchase occasions (Heath and Soll 1996), there is typically some amount of temporal separation between the moment that one sets a budget and the moment that one makes a purchase. This temporal separation can vary greatly, such as when one budgets for a purchase occurring next week, next month, or even next year. However, the role of temporal separation in budgeting has yet to be explored.

The Effect of Temporal Separation on Budget Adherence

There are several possibilities for how the effect of temporal separation might impact downstream budget adherence. As a starting point, one might predict that budget adherence does not change as a function of temporal separation between setting a budget and making a purchase. However, extant research offers evidence suggesting otherwise. For example, prior research in budget estimation finds that consumers experience greater difficulty with forecasting expenses that occur over longer time frames (such as the next month) than shorter time frames (such as the next week; Ülkümen et al., 2008). As a consequence, consumers tend to give higher budget estimates when budgeting further in advance, suggesting that greater temporal separation might result in lower spending relative to their budget.

One important distinction to note is that Ülkümen et al. (2008) focus on budget setting for categories of expenses over a duration of time (e.g., all dining expenses that occur over the next week vs. the next month), whereas the present research focuses on budget setting for a single expense that will take place at the end of the budget period (e.g., a single dining expense that will occur at the end of the next week vs. the next month). When budgeting for dining expenses as a category over a duration of time, consumers need to estimate both how many dining occasions there will be and how much to spend at each occasion. Given that there are more dining occasions over the next month than the next week, consumers experience greater difficulty in estimating a budget for the next month than the next week and adjust their budget estimates upwards accordingly. When budgeting for a single dining occasion, however, consumers only need to consider how much to spend for that single occasion, regardless of whether it occurs next week or next month. This suggests that the difficulty of budget estimation may be similar for single-item budgets, irrespective of how far in advance it occurs. We explored this distinction in a pilot study (details of this study are in web appendix B). Half the participants submitted budget estimates for dining expenses as a category, budgeting for multiple dining expenses that would occur during the next week or the next 2 months. The other half of the participants submitted budget estimates for a single dining expense that would occur at the end of the next week or the next 2 months. Afterwards, all participants rated how difficult it was to estimate the budget. Replicating Ülkümen et al. (2008), we observed that budgeting for multiple purchases over a longer duration of time is more difficult ($M_{1\text{ week}} = 3.27$, $M_{2\text{ months}} = 3.88$; $F(1, 297) = 5.75$, $p = .017$, partial $\eta^2 = .019$) and elicits higher budget estimates on a time adjusted basis ($M_{1\text{ week}} = \$61.69$, $M_{2\text{ months}} = \$217.17$; $F(1, 297) = 18.52$, $p < .001$, partial $\eta^2 = .059$) than budgeting for a shorter duration of time. However, budgeting for a single purchase to occur at the end of a longer time period is just as difficult ($M_{1\text{week}} = 2.93$, $M_{2\text{ months}} = 2.89$; $F(1, 297) = .03$, $p = .861$, partial $\eta^2 < .001$) and elicits similar budget estimates ($M_{1\text{ week}} = \$72.61$, $M_{2\text{ months}} = \$118.82$; $F(1, 297) = 1.58$, $p = .210$, partial $\eta^2 = .005$), as budgeting for a single purchase to occur at the end of a shorter time period. This suggests that a unique pattern of spending may arise when budgeting in advance for a single item versus a category of items.

Another possible pattern of results, and the one that we observe empirically, is that greater temporal separation increases the likelihood for people to spend more relative to their budget. This phenomenon is likely to be multiply determined, though the current research focuses primarily on the pain of payment and budget depreciation, a process that we believe applies best to the current context. In the next section, we review literature on the pain of payment and derive our hypotheses.

Pain of Payment

When consumers make purchases, they may experience a pain of payment, which can be defined as a "psychological burden of payment" (Prelec and Loewenstein 1998) or a "hedonic cost" (Gourville and Soman 1998). Increasing the pain of payment can reduce people's willingness to make a purchase, such as when they have fewer cognitively accessible resources (Morewedge, Holtzman, and Epley 2007), or when using a more painful form of payment (Prelec and Simester 2001; Soman 2001).

The amount of pain that people feel when thinking about a purchase can dissipate over time. Gourville and Soman

(1998, 163) suggest that when a consumer first makes a purchase, for $40 in this example, "she opens a mental account specific to this transaction and records into that account the full perceived value of the payment...However, as the temporal delay between the $40 payment and the pending consumption increases, this person adapts to the payment and gradually incorporates it into her status quo. As such, the potential hedonic impact of that payment decreases." This effect is termed "payment depreciation" and is found to have significant impact on sunk-cost effects; consumers are more likely to forgo the benefits associated with a purchase if the payment occurred further in the distant past.

Analogously, one may predict that consumers experience similar feelings of pain when setting a budget and making the *decision to spend money*. Prelec and Loewenstein (1998, 19–20) suggest that while mental budgets "have traditionally been interpreted as a self-control device...they may, however, also play the complementary role of facilitating mental prepayment." Consistent with this suggestion, Webb and Spiller (2014) find that simply earmarking money can lead to similar consequences as actually spending money, proposing that earmarking increases the feeling of financial constraint. The heightened perception of financial constraint can lead to the consideration of opportunity costs (Spiller 2011) and increased pain of paying (Pomerance, Reinholtz, and Shah 2018).

Connecting these lines of research, we propose that consumers may experience "budget depreciation" much in the same way that they experience "payment depreciation." That is, people can adapt over time to the hedonic impact associated with an upcoming payment, similar to how they can adapt over time to the pain of a payment that has already been made. After consumers set a budget for a specific purchase, the budgeted cost becomes a reference point. As time passes, they gradually incorporate that reference point into their status quo and adapt to the idea of spending that amount of money. This reduces the pain associated with spending the budgeted amount of money. When the moment of purchase finally arrives, consumers experience less pain of payment and thus become more willing to overspend. More formally, we hypothesize:

> **H1:** As the temporal separation between budget setting and actual purchase increases, people become more willing to overspend their budgets.
>
> **H2:** The change in overspending results from increases in actual spending, as opposed to decreases in budgeted spending.
>
> **H3:** The change in overspending occurs through decreased pain of payment.

OVERVIEW OF STUDIES

We explore our hypotheses over a series of six studies. Study 1 investigates hypotheses 1 and 2 in the context of real estate purchases, finding that higher temporal separation between the moment of budget setting and purchase is correlated with higher spending relative to the budget. Study 2 explores the causal effect of temporal separation in a field study, investigating whether university students who are randomly assigned to budget earlier for their class ring purchases spend more than those who are randomly assigned to budget later.

Our next set of studies sought to explore the underlying process (hypothesis 3). If it is true that temporal separation between budget setting and purchase can increase people's spending relative to their budgets by reducing the pain associated with the purchase, then the effect should be stronger under conditions in which people naturally feel a high level of pain of payment, and weaker under conditions in which people naturally feel a low level of pain of payment. To test this, we employ three operationalizations of natural differences in high versus low pain of payment: individual differences (study 3), product-based differences (study 3b), and cost-based differences (study 4). The budget depreciation process also implies that adaptation to the budgeted amount of money is a necessary condition. In study 5, we explore whether inhibiting the ability to adapt to the budgeted cost mitigates the effect. These studies collectively help to provide evidence consistent with the proposed process and address alternative explanations, although we recognize that the effect is likely to be multiply determined.

STUDY 1: INCREASED TEMPORAL SEPARATION IS ASSOCIATED WITH OVERSPENDING FOR REAL ESTATE PURCHASES

The purpose of study 1 was to explore the effect of temporal separation on budget adherence in a real-world context. Buying a house is one of the largest purchases that consumers will ever make in their lives (Thakor 2010), and most consumers will need to set a budget for an expense of this size. Given the significance of home ownership to consumer financial well-being, we selected this domain to begin our examination of the relationship between temporal separation in budgeting and consumers' willingness to overspend. We collected transaction data from a real estate firm. We predicted that real estate buyers will be increasingly likely to spend more than their original budget as they experience greater temporal separation between the time they set a budget for their real estate purchase and the time they make the purchase decision.

Data

Real estate transaction data were collected from the client management software and transaction journals of a local real estate office for the period from January 2018 to September 2019. We collected the following pieces of information for 103 transactions: (1) temporal separation between budget setting and purchase, (2) budgeted spending range, (3) actual spending amount, (4) age of the buyer, and (5) gender (web appendix C table 1 provides descriptive statistics). We did not have access to data on offers that were made prior to purchase, nor were we given data regarding clients who did not make a purchase.

Analysis

The budget depreciation process implies that temporal separation increases overspending and that this occurs via higher actual spending rather than lower budgeted spending. We ran the following regression model for transaction *i*, using a log–log transformation for spending and temporal separation to account for the positively skewed distribution (web appendix C table 3 provides Kolmogorov–Smirnov tests):

$$\ln(\text{Spending}_i) = \beta_0 + \beta_1 \ln(\text{Temporal Separation}_i) + \beta_2 \text{Age}_i + \beta_3 \text{Female}_i + \beta_4 \text{Male}_i + \varepsilon_i$$

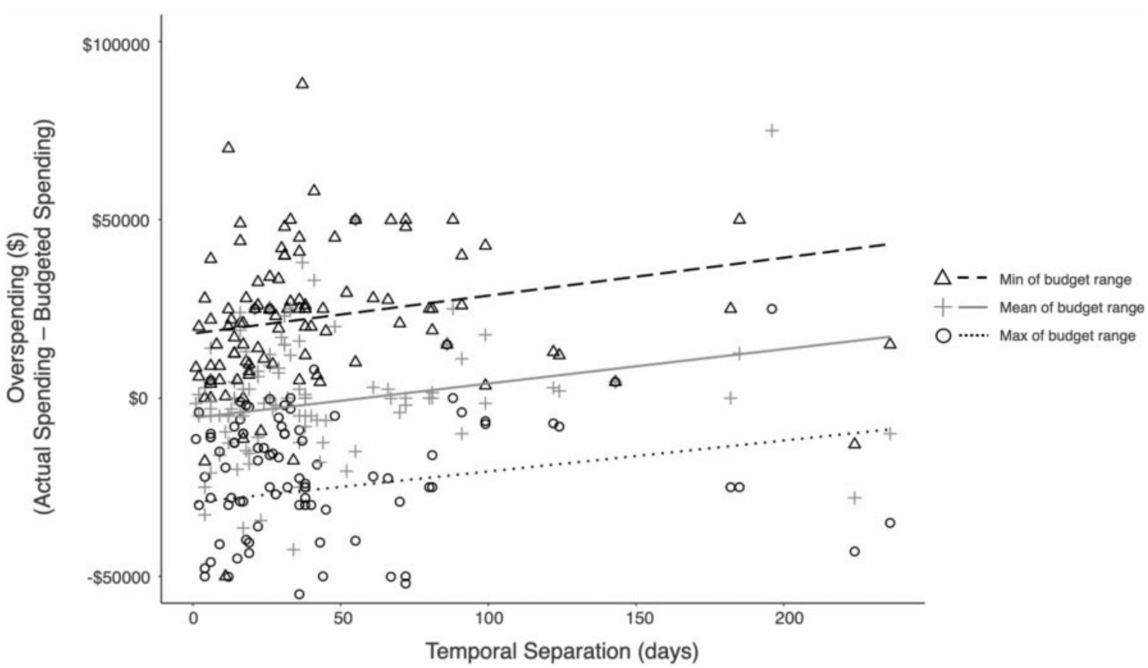
The dependent variable, Spending_i, was either overspending, actual spending, or budgeted spending. Overspending was calculated by taking the difference between ln(actual spending) and ln(budgeted spending). Because budgets were provided in a range, we used three different measures of budgeted spending (minimum, mean, and maximum). $\text{Temporal Separation}_i$ was calculated by counting the number of days between the date when buyers first contacted the real estate office to provide their budget range and the date of their purchase decision. We also included controls for Age_i (to the nearest decade) and gender (dummy variables for three categories: Female_i = single female and Male_i = single male, omitted category is both genders/couples). In web appendix C table 4, we report analyses excluding the control variables; results are directionally consistent.

Results

Overspending. Controlling for age and gender, we observe that as temporal separation increases by 1%, the amount of actual spending relative to budgeted spending increases by 0.016% if using the minimum of the budget range ($t(98) = 1.97$, $p = .052$), by 0.018% if using the mean of the budget range ($t(98) = 2.33$, $p = .022$), and by 0.019% if using the maximum of the budget range ($t(98) = 2.00$, $p = .048$). Figure 1 depicts a scatterplot of overspending in dollars and table 1 provides estimation results.

FIGURE 1

STUDY 1: OVERSPENDING INCREASES WITH TEMPORAL SEPARATION IN BUDGETING



NOTES.—Using real estate transactions, we observe that as temporal separation between the moment of budgeting and purchase increases, the willingness to spend relative to the budget also increases. Although data were analyzed using log–log transformations, they are plotted here in untransformed dollars and days for ease of interpretation.

TABLE 1

STUDY 1: THE EFFECT OF TEMPORAL SEPARATION ON OVERSPENDING, BUDGETED SPENDING, AND ACTUAL SPENDING

	Overspending (actual—budgeted)			Budgeted spending			
Budget range	Minimum	Mean	Maximum	Minimum	Mean	Maximum	Actual spending
Temporal Separation	0.016*	0.018**	0.019**	0.068	0.067	0.066	0.085*
Age	0.000	−0.001	−0.001	0.003	0.003	0.004	0.003
Female	0.015	0.018	0.020	−0.132	−0.136	−0.138	−0.118
Male	−0.017	−0.012	−0.009	−0.717***	−0.722***	−0.725***	−0.734*
Intercept	0.035	−0.026	−0.083*	12.189***	12.250***	12.306***	12.224***

NOTES.—Table provides estimation results for the effect of temporal separation. $^*p < .10$, $^{**}p < .05$, $^{***}p < .01$. Detailed statistics are in web appendix C table 5.

Web appendix C figure 1 provides a scatterplot of overspending as a percentage.

Budgeted Spending. Controlling for age and gender, we find that temporal separation does not significantly predict budgeted spending, regardless of whether we use the minimum, mean, or maximum of the budget range ($ps >$ .12, see table 1). This suggests that the relationship between temporal separation and overspending is not driven by lower budget estimates.

Actual Spending. Controlling for age and gender, we observe that as temporal separation increases by 1%, the amount of actual spending increases by 0.085% ($t(98) = 1.97$, $p = .052$; see table 1). These results suggest that the relationship between temporal separation and overspending may be driven by higher actual spending.

Discussion

Using a secondary dataset of real estate purchases, we observe that as temporal separation between budget setting and purchase date increases, people increasingly spend more money relative to their budgets. Furthermore, we find that more temporal separation is associated with higher actual spending, but not lower budgeted spending, which is consistent with the budget depreciation process.

There are several limitations to this dataset. First, the correlational nature of this data does not allow for causal conclusions. It may be that people who are very interested in real estate are both more likely to take more time before making a purchase decision, and to overspend their budget once they make a decision. To test for causal effects of temporal separation on increased spending, our next study is a field experiment in which we randomly assigned people to experience longer or shorter amounts of temporal separation. Second, this study does not provide conclusive evidence for the budget depreciation process. It may be that temporal separation causes higher spending because the need to close a deal becomes more urgent as time passes, and this urgency increases willingness to pay. We explore evidence for the budget depreciation process in studies 3–5.

STUDY 2: TEMPORAL SEPARATION INCREASES OVERSPENDING FOR A CLASS RING

The purpose of study 2 was to explore the causal effect of temporal separation on budget adherence in a field study using random assignment. We investigate a realistic and relatable context for the student population participating in our study: budgeting for their class ring. We contacted undergraduate students and randomly assigned them to budget for their ring either 10 weeks in advance of their purchase, or 3 weeks in advance of their purchase. Afterwards, we observe how much money they spent on their ring purchase.

The class ring field setting was beneficial for several reasons. First, at the university where this study was conducted, over 90% of the undergraduate students purchase a class ring, suggesting that this would be a relevant expense for many students. Second, the rings are a sizeable expense, suggesting that budgeting for a class ring would be a relevant activity for many students. The rings designed for female students ranged from \$512 to \$859, while male rings ranged from \$1,013 to \$1,892. Because the male rings were twice as expensive as the female rings, we report separate analyses by gender.

Design and Procedure

Participants. Study 2 was conducted during the period between November 2018 and February 2019. As students typically order their rings during their junior year, we sent out a bulk email to junior class students ($N = 10{,}438$) at a US university. This study was a three-phase field experiment. All participants were contacted in phases 1 and 2 and were randomly assigned to set a budget for their ring in phase 1 (from November 5–10, 2018) or phase 2 (from December 17–21, 2018) depending on the temporal separation manipulation. We matched the expense records of our survey participants in phase 3 after the ring order window had closed (February 13, 2019).

Phase 1 Procedure. Among those who received the email, 1,742 participants completed phase 1 (16.7% response rate). In phase 1, participants first provided demographic information, including age and gender. All participants were then asked to report ring-specific details including whether they (1) already owned the ring at the time of taking the survey, (2) were interested in buying the ring, and (3) were eligible to buy the ring during the indicated ring order window. Students who already owned a ring, or were not interested in buying a ring, or were not eligible to purchase a ring during the upcoming order window were removed from our study ($N = 648$), leaving 1,094 participants in our study.

These participants were then randomly assigned to either set a budget 10 weeks prior to purchase (i.e., distant past condition) or 3 weeks prior to purchase (i.e., near past condition). Those in the 3-week condition were reminded to participate in phase 2 and then dismissed.

Those in the 10-week condition were asked to set a budget for their ring purchase. Participants were shown a set of ring options, including two gold options and four diamond options. After selecting their options, they set a budget for their ring purchase by entering the cost of the gold and diamond options into a text box that automatically calculated the total cost back for the participants. They were reminded to participate in phase 2 and then dismissed.

At the university where this study was conducted, the rings designed for female and male students differ in size and price. Students were shown the actual options and prices for their gender. Female rings ranged from $512 to $859, while male rings ranged from $1,013 to $1,892 (see web appendix D figure 1 for stimuli for the female students).

Phase 2 Procedure. Seven hundred eight participants returned for the second phase of the study (64.7% response rate). A binary logistic regression predicting dropout by a 1 *df* treatment effect showed no differential dropout between conditions (Wald $\chi^2(1) = .51$, $p = .48$).

Participants in the 3-week condition were asked to set a budget to purchase their ring using the same budgeting task that those in the 10-week condition did during phase 1. Participants in the 10-week condition provided demographic information and were reminded of how much they had budgeted in phase 1. This reminder was provided to minimize the possible alternative explanation that participants in the 10-week condition simply forgot how much they had budgeted and thus spent more relative to their budgets.

Phase 3 Procedure. During the designated ring order window (January 7 to February 13, 2019), 461 participants chose and paid for their class rings (81.1% female, M_{age} = 20.49). They also had options to join an alumni charity club for $25 and to choose shipping for $20. We obtained individual payment data from the university organization where students placed their ring orders. The number of participants who paid for a class ring did not differ significantly between conditions (Wald $\chi^2(1) = .98$, $p = .32$).

Results

During the period between budget setting and the time when students placed their ring order, the price of the gold options increased. For female rings, prices increased from $512 to $522 for the 10k option and from $617 to $630 for the 14k option. For male rings, prices increased from $1,013 to $1,037 for the 10k option and from $1,373 to $1,405 for the 14k option. We added the increased price into the budget amount in our analyses to reflect this change. For example, if a participant reported budgeting $1,013 for the gold option, we replaced that number with $1,037 to reflect the new increased pricing in our analyses. Because of the large difference in price ranges for the female and male rings, we ran separate analyses by gender. We report descriptive statistics in web appendix D table 2.

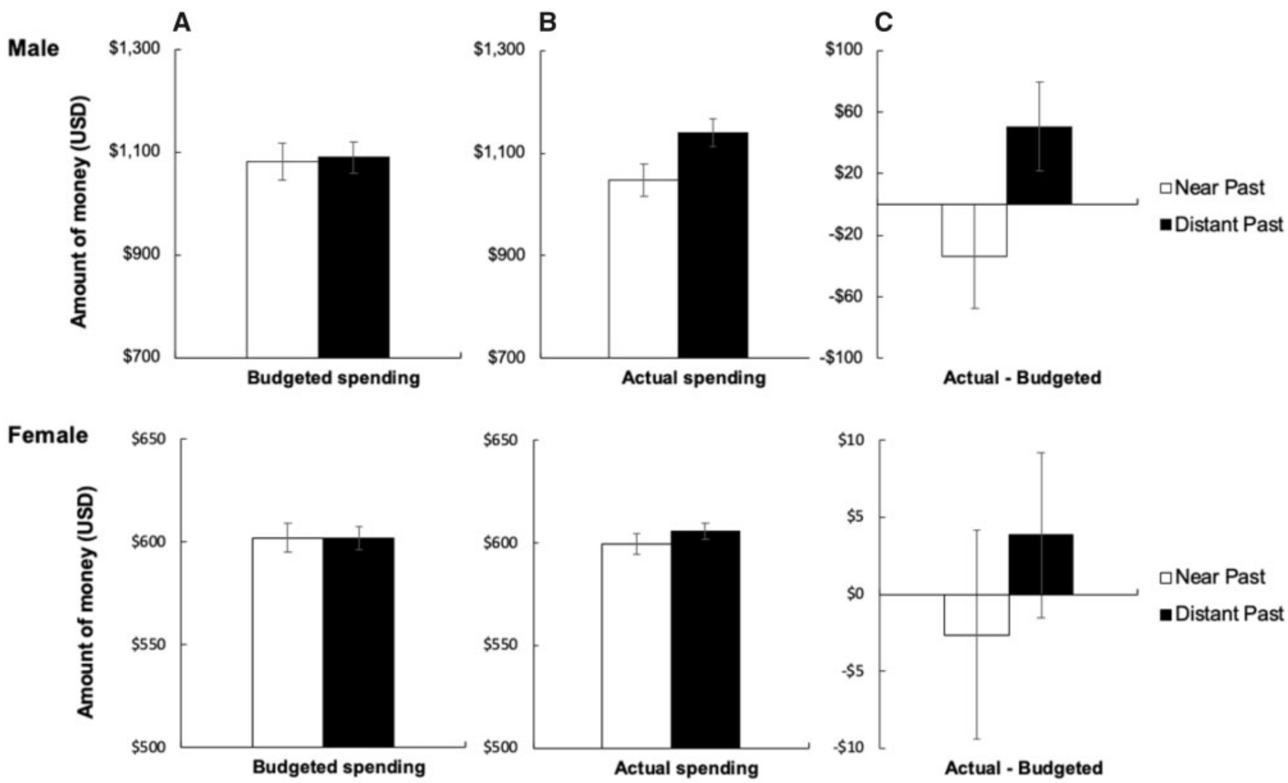
Overspending. We calculated overspending as the amount spent in phase 3 minus the amount budgeted in phase 1 or 2. Male participants who experienced the 10-week (i.e., distant past) temporal separation were more willing to overspend ($M_{10\ weeks}$ = \$60.03, SD = 238.15) than those who experienced the 3-week (i.e., near past) temporal separation ($M_{3\ weeks}$ = −\$33.80, SD = 204.77; $F(1, 85) = 3.87$, $p = .052$, partial η^2 =.044). Female participants in the distant past condition were directionally more willing to overspend than those in the near past condition, but the difference was not statistically significant ($M_{10\ weeks}$ = \$4.35, SD = 50.32 vs. $M_{3\ weeks}$ = −\$2.64, SD = 61.28; $F(1, 372) = 1.47$, $p = .226$, partial $\eta^2 < .001$, see figure 2). Web appendix D table 3 reports the proportion of participants who overspent their budgets by condition.

Budgeted Spending. To explore the possibility that people who started budgeting early overspent because their budgets were lower, we compared the budget amounts by temporal separation condition. The amount budgeted did not differ based on temporal separation for both males ($M_{10\ weeks}$ = \$1,127.31, SD = 187.98 vs. $M_{3\ weeks}$ = \$1,080.78, SD = 124.27; $F(1, 85) = 1.93$, $p = .168$, partial $\eta^2 = .022$) and females ($M_{10\ weeks}$ = \$609.67, SD = 72.35 vs. $M_{3\ weeks}$ = \$602.04, SD = 72.21; $F(1, 372) = 1.03$, $p = .310$, partial $\eta^2 = .003$).

Actual Spending. Next, we compared the actual expense amount between conditions. Male participants who experienced a 10-week separation spent significantly more than those who experienced a 3-week separation ($M_{10\ weeks}$ = \$1,187.33, SD = 271.20 vs. $M_{3\ weeks}$ = \$1,046.98, SD =

FIGURE 2

STUDY 2: BUDGETED SPENDING, ACTUAL SPENDING, AND THEIR DIFFERENCES BY TEMPORAL SEPARATION



NOTES.—Compared to people who were randomly assigned to experience a 3-week separation (i.e., near past) between budgeting and purchasing, people who experience a 10-week separation (i.e., distant past) budgeted for a similar amount of money (A) but spent more money (B). Consequently, those in the distant past condition spent more relative to their budget than those in the near past condition (C).

212.69; $F(1,\ 85) = 7.31$, $p = .008$, partial $\eta^2 = .079$). Similarly, female participants in the distant past condition spent more than those in the near past condition ($M_{10\ \text{weeks}}$ = \$614.02, SD = 78.05 vs. $M_{3\ \text{weeks}}$ = \$599.40, SD = 63.10; $F(1, 372) = 3.87$, $p = .050$, partial $\eta^2 = .010$).

We also compared actual spending within each budgeting condition to those who were not in our study ($N = 6{,}293$). For males, untreated students spent directionally more money ($M_{\text{untreated}}$ = \$1,094.22, SD = 240.52) than near past budgeters ($M_{3\ \text{weeks}}$ = \$1,046.98, SD = 212.69; $F(1, 3051) = 1.94$, $p = .164$, partial $\eta^2 = .001$), and significantly less than distant past budgeters ($M_{10\ \text{weeks}}$ = \$1,187.33, SD = 271.20; $F(1, 3051) = 5.33$, $p = .021$, partial $\eta^2 = .002$). The results for females were directionally similar. Although each pairwise comparison was not statistically significant, untreated students spent directionally more money ($M_{\text{untreated}}$ = \$605.05, SD = 89.14) than near past budgeters ($M_{3\ \text{weeks}}$ = \$599.40, SD = 63.10, $F(1, 3697) = .68$, $p = .411$, partial $\eta^2 < .001$), and directionally less money than distant past budgeters ($M_{10\ \text{weeks}}$ = \$614.02, SD = 78.05, $F(1, 3697) = 2.01$, $p = .156$, partial $\eta^2 = .001$).

Discussion

We observed that male students who were randomly assigned to experience greater temporal separation between budget setting and purchase for a class ring were more willing to overspend their budgets. Consistent with study 1, the difference in overspending was driven by differences in actual spending, and not by differences in budgeted spending. For female students, we also observe that greater temporal separation leads to higher actual spending, but not higher budgeted spending. We find that the effect of temporal separation on the overspending measure is directionally consistent with our hypotheses, although not statistically significant.

In contrast to study 1, study 2 provides causal support for the effect of temporal separation via random assignment. Study 2 also addresses concerns about some plausible alternative explanations. First, budgeting further in advance may lead to overspending because people simply forget about the budgeted amount. To mitigate this concern, we provided a reminder of the budgeted amount. Second, greater temporal separation in budgeting can cause overspending because product prices usually increase over time. In this study however, we were able to exactly account for the size of price inflation in the budget estimates, allowing us to address concerns about price inflation driving the effect. Third, greater temporal separation in budgeting may produce greater variance in budget adherence because budgets set in the distant past are less relevant to current conditions than budgets set more recently. However, this obsolescence would not predict a particular direction of spending, as budgets may be obsolete because they were set too low or too high.

Study 2 also allows for comparison with untreated students. Untreated students spent directionally more than those who budgeted 3 weeks in advance and directionally less than those who budgeted 10 weeks in advance (though not always statistically significant). We surmise there may be several explanations for this result. One possibility is that untreated students engaged in budget setting of their own accord, at a time interval between 3 weeks and 10 weeks prior to purchase. This could cause spending to lie in the middle of the two budgeting conditions. Another possibility is that untreated students did not budget at all. In this case, there may be two competing forces at play. One is that not budgeting at all decreases spending relative to any budgeting because non-budgeters do not have the opportunity to adapt to the upcoming expense and hence feel the highest pain of payment. The other prediction is that not budgeting at all increases spending relative to any budgeting because having no budget allows people to spend without limitation. It may be that both forces are active in this study, leading non-budgeters' spending to be in between that of the distant and near past budgeters.

There are several limitations to note in this study. One limitation is the low response rate; only 16.7% of the people we initially contacted responded to our bulk email, and only 26.5% of those who responded actually completed all phases of the study. We attribute this low response rate to the longitudinal, multi-phase nature of our experiment.

Another important caveat is that the effect of temporal separation on overspending was statistically significant for males, but not for females. We speculate that this may be due to female participants experiencing less pain of payment than male participants. There are two reasons why this might occur. One reason is that the price of the male rings ($1,013–1,892) was approximately twice as high as the price of the female rings ($512–859). Purchasing the male rings may thus elicit greater pain of payment than the female rings. We explore the role of price in budget depreciation in study 4.

A second reason is that there are gender-based differences in the tendency to experience pain of payment. Prior research on tightwads and spendthrifts (Rick, Cryder, and Loewenstein 2008) has shown that females tend to report higher levels of spendthriftiness than males. Given that spendthrifts generally feel less pain of payment, female participants in our study may have experienced less pain of payment than male participants. Because there is less pain to be mitigated, the impact of temporal separation on overspending may have been muted for females as compared to males. Our next study explicitly explores how individual differences in pain of payment moderate the effect of temporal separation.

STUDY 3: TEMPORAL SEPARATION INCREASES OVERSPENDING AMONG TIGHTWADS BUT NOT SPENDTHRIFTS

The goal of study 3 was to provide evidence for the underlying budget depreciation mechanism through mediation and moderation of process. There are chronic differences in the extent to which consumers experience pain of paying; tightwads experience more pain of paying, while spendthrifts experience less (Tightwads-Spendthrifts (TW-ST) scale, Rick et al. 2008). If decreases in pain of paying are truly driving the overspending behavior, then people who naturally experience higher pain of paying (i.e., tightwads) should find that temporal separation has a strong effect on pain and subsequent overspending. In contrast, people who do not typically experience much pain of paying (i.e., spendthrifts) should find that temporal separation does not have a strong effect on pain and, subsequently, will not change their willingness to overspend. Thus, we predict an interaction of temporal separation by TW-ST such that the effect of temporal separation on pain and overspending is stronger for tightwads and weaker for spendthrifts.

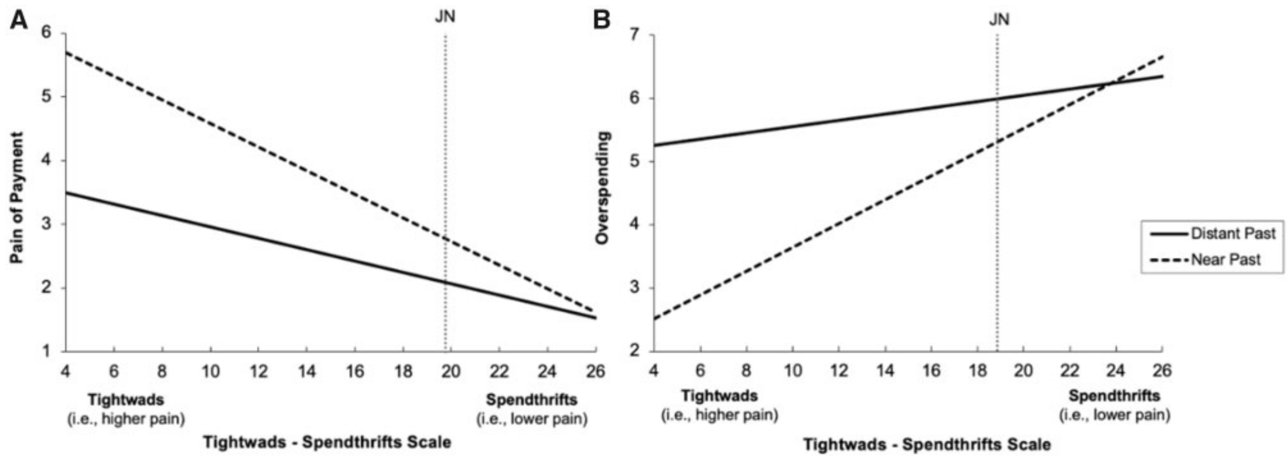
Design and Procedure

We recruited 169 participants from people who came to a university football game (47.6% female, $M_{age} = 39.0$, SD $= 13.6$). No response was removed prior to analysis.

Participants were asked to imagine that they budgeted $300 either 2 months ago (distant past) or 1-week ago (near past) to purchase a tablet PC. Participants then indicated how painful it would be to spend the $300 that were set aside to buy the tablet PC (1 = not painful at all, 7 = extremely painful). Next, they indicated their willingness to purchase a premium version of the tablet PC with additional storage space and longer battery life at $330 (1 = very unlikely, 7 = very likely) as a measure for overspending. Based on our observation in studies 1 and 2 that greater temporal separation generally increases spending, study 3 specifically focuses on overspending as the

FIGURE 3

STUDY 3: INTERACTION BETWEEN TW-ST AND TEMPORAL SEPARATION



NOTES.—Greater temporal separation leads to lower pain of payment (A) and more overspending (B) for tightwads but not for spendthrifts.

dependent variable. Afterwards, we assessed the tendency to experience pain of paying using the TW-ST scale (ranges from 4 to 26) from Rick et al. (2008): 21.3% were tightwads, 56.2% were unconflicted, and 22.5% were spendthrifts. Participants also reported demographic information.

Results

Overspending. We ran a regression with temporal separation (0 = near past or 1 week, 1 = distant past or 2 months), TW-ST score ($M = 15.14$, SD = 4.68), and their interaction term as predictors, and overspending as the dependent variable. We observe a significant interaction between temporal separation and TW-ST score on overspending ($b = -0.14$, SE = 0.06, $t(165) = -2.41$, $p = .017$; figure 3B). A floodlight analysis (Spiller et al. 2013) revealed that for all TW-ST scores below the Johnson–Neyman point of 18.85, greater temporal separation significantly increases willingness to overspend. Thus, the effect of temporal separation on increasing overspending is significant for tightwads (scores of 4–11) and unconflicted consumers (scores of 12–18), but not spendthrifts (scores of 19–26).

Pain of Payment. A regression with temporal separation, TW-ST score, and their interaction term as predictors, and pain of payment as the dependent variable, revealed a marginally significant interaction ($b = 0.10$, SE = 0.05, $t(165) = 1.81$, $p = .072$; figure 3A). A floodlight analysis revealed that the simple effect of temporal separation on pain of payment was significant for all TW-ST scores below the Johnson–Neyman point of 19.74. Thus, the effect of temporal separation on reducing pain of payment is significant for tightwads (scores of 4–11) and unconflicted consumers (scores of 12–18), but not for spendthrifts (scores of 19–26).

Mediation. To further test the role of pain of payment in the relationship between temporal separation and overspending, a moderated mediation analysis was conducted; temporal separation (0 = near past or 1 week, 1 = distant past or 2 months) was the independent variable, mean-centered TW-ST score was the moderator, pain of payment was the mediator, and overspending was the dependent variable. The analysis (model 8; Hayes 2017) suggests moderated mediation ($b = -0.04$, SE = 0.02, 95% CI: [−0.10, −0.0010]; see web appendix E table 2 for full results). Decreased pain of payment mediated the effect of greater temporal separation on increasing overspending for people with TW-ST scores 1 SD below the mean ($b = 0.68$, SE = 0.21, 95% CI: [.33, 1.11]) and at the mean ($b = 0.51$, SE = 0.15, 95% CI: [0.24, 0.82]), but not for people with TW-ST scores 1SD above the mean ($b = 0.30$, SE = 0.16, 95% CI: [−0.02, 0.64]).

Discussion

Study 3 examines individual differences in experiencing pain of payment, represented as tightwads versus spendthrifts, as a boundary condition to the effect of temporal separation on spending decisions. We replicated the effect that, among tightwads and unconflicted consumers, setting a budget in the distant past (i.e., 2 months) compared to the near past (i.e., 1 week) increases willingness to overspend. This effect was mediated by a reduction in the pain associated with spending money. The effect did not occur for spendthrifts, who generally feel little pain upon spending money. Together, these findings lend support for the mediating role of pain of payment on the effect of temporal separation.

These results also help to provide insight on our study 2 finding that the effect of temporal separation on overspending was significant for males but not for females. It is possible that, consistent with prior research (Rick et al. 2008), the female students in study 2 tended more toward spendthriftiness than male students and generally felt less pain associated with spending.

In study 3, we examined how individual differences in pain of payment moderate the effect of temporal separation. There are also product differences that can impact pain of payment. Hedonic products are often more difficult to justify than utilitarian ones (Okada 2005) and elicit more guilt and negative self-attributions (Khan and Dhar 2006). This suggests that the pain associated with hedonic products may be higher than the pain associated with utilitarian products and that the effect of temporal separation may thus be stronger for hedonic than utilitarian products. Study 3b (reported in web appendix F), using a similar experimental paradigm, confirms that consumers are more willing to overspend when budgeting in the near versus distant past for hedonically framed products, but not for utilitarian framed products.

The results from studies 3 and 3b imply that the majority of our participants have been tightwads or unconflicted consumers and that the stimuli used in our other studies are perceived to be hedonic. In two separate surveys conducted with students and MTurk workers, we observe that 90% of the undergraduate students and 85% of the MTurk workers sampled are indeed tightwads or unconflicted (see web appendix E). In a survey with MTurk workers, we find that the stimuli used in other studies are perceived as hedonic in nature (see web appendix F table 2).

Findings in studies 3 and 3b help address several alternative process accounts. One alternative explanation is that temporal separation in budgeting increases spending because greater temporal distance encourages a focus on desirability (i.e., high construal level), which leads to increased willingness to spend extra money for a desirable product (Trope and Liberman 2010). A second explanation is that when people have spent a long time waiting and saving up their money for a purchase, they feel proud and feel that they deserve to reward themselves by purchasing a premium product (Kivetz and Simonson 2002; May and Irmak 2014). A third potential process is that people who have begun budgeting for a product further in the distant past feel more attached to the product, and perhaps even feel that they have owned the product (Shu and Peck 2011) for a longer period of time. This increased perception of ownership over time may increase valuation of the product (Strahilevitz and Loewenstein 1998) and, thus, increase willingness to spend. A fourth alternative suggests consumers infer that purchases that have been budgeted for further in advance are more important and thus are more deserving of being upgraded. Finally, one might also predict that anticipation of the purchase increases over time (Loewenstein 1987; Nowlis, Mandel, and McCabe 2004) and drives those who have experienced greater temporal separation to spend more.

While the effect of temporal separation is likely a multiply determined phenomenon, and each of the aforementioned alternative processes may very well occur in real life, it appears that the budget depreciation process is most consistent with the results observed in this study. Each of the aforementioned alternative explanations would predict that greater temporal separation increases overspending for all participants equally. However, we observed overspending only among tightwads and unconflicted consumers, and not among spendthrifts. Furthermore, the effect of temporal separation is mediated by pain of payment. That we observe overspending for hedonic products but not for utilitarian products in study 3b is also consistent with the budget depreciation account.

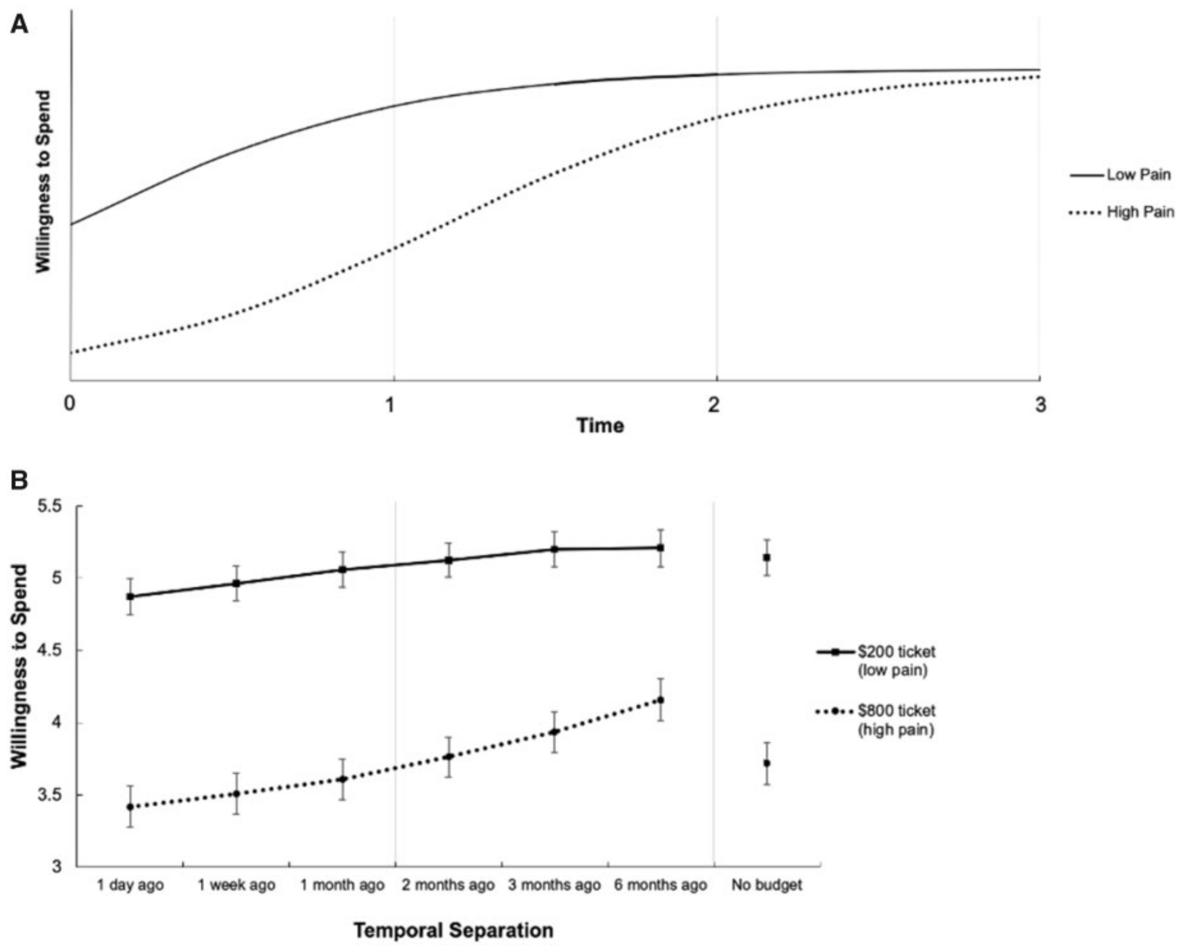
Thus far, we have operationalized the near versus distant past using various time frames: a continuous range from 1 to 236 days (study 1), 3 weeks versus 10 weeks (study 2), and 1 week versus 2 months (pilot study, study 3, study 3b). Given these differences, one might wonder how much time is needed to constitute the near versus distant past. We explore this, and the role of price, in our next study.

STUDY 4: BUDGET DEPRECIATION TAKES LONGER FOR HIGHER PRICE PURCHASES

The budget depreciation process suggests that willingness to overspend increases over time because pain of payment dissipates over time. After enough time has passed, pain of payment should reach a floor level and willingness to spend should reach a ceiling level. We propose that the amount of time this takes depends on the amount of pain that one initially feels. Figure 4A illustrates the shape of the proposed function for a low pain, and a high pain purchase. For the low pain purchase, as time initially passes (from t_0 to t_1), pain of payment decreases and willingness to spend increases. As more time passes (from t_1 to t_2 to t_3), pain reaches a floor level and willingness to spend reaches a ceiling level. For purchases that elicit high pain, the depreciation process is longer; pain decreases, and willingness to spend increases over the span of time from t_0 to t_2. It is not until after t_2 that pain begins to bottom and willingness to spend begins to plateau for the high pain purchase. The amount of temporal separation that results in differential willingness to overspend is thus longer for high pain purchases (t_0 to t_2) than for low pain purchases (t_0 to

FIGURE 4

STUDY 4: THE EFFECT OF TEMPORAL SEPARATION AS A FUNCTION OF PURCHASE PRICE



NOTES.—Willingness to spend initially increases with greater temporal separation, and eventually plateaus. The time it takes for this to occur is longer for high pain expenses than low pain expenses. (A) The proposed shape of the function over time. (B) The data points from study 4.

t_1), resulting in different manifestations of “near” versus “distant” past.

In our prior studies, we measured high and low pain via individual differences (tightwad vs. spendthrift in study 3) and manipulated it via product differences (hedonic vs. utilitariation products in study 3b). Our operationalizations of temporal separation were calibrated to coincide conceptually with t_1 and t_2 in figure 4A, amounts of temporal separation that would elicit an increase in willingness to spend for the high pain situation, but where willingness to spend will have already plateaued for the low pain situation. Pain of payment should also be influenced by the price of a product, in terms of both absolute price, and price relative to one’s reference price. For example, spending $1,000 on a ring feels more painful than spending $500 on a ring. However, spending $100,000 for a house might not feel extremely painful if one expects that houses typically cost at least $100,000.

In this study, we explore the time course of budget depreciation for a high and low pain product. We manipulate pain using a high versus low price and explore how willingness to spend changes over six points in time ranging from 1 day to 6 months. These amounts of temporal separation were chosen to correspond conceptually with t_0 to t_2 in figure 4A, and with the operationalizations of temporal separation used in the prior studies.

Design and Procedure

We recruited 243 participants from Amazon Mechanical Turk (49.0% female, $M_{age} = 39.26$, SD = 12.49) and removed 13 participants who failed the reading check.

TABLE 2

STUDY 4: WILLINGNESS TO SPEND AS A FUNCTION OF TEMPORAL SEPARATION AND PRICE

Temporal separation	1 day	1 week	1 month	2 months	3 months	6 months	No budgeting
\$200 ticket	4.86[a] (1.98)	4.95[b] (1.89)	5.04[b,c] (1.89)	5.12[c] (1.88)	5.19[c] (1.88)	5.20[c] (1.99)	5.13[c] (1.94)
\$800 ticket	3.38[d] (2.23)	3.45[e] (2.18)	3.56[f] (2.18)	3.73[g] (2.18)	3.90[h] (2.19)	4.14[i] (2.28)	3.69[g] (2.23)

NOTES.—Mean willingness to spend by temporal separation and price. Standard deviation is given in parentheses. Means that do not share a common letter are significantly different ($p < .05$).

TABLE 3

STUDY 4: THE EFFECT OF TEMPORAL SEPARATION AS A FUNCTION OF PURCHASE PRICE

Temporal separation		Mean difference in willingness to spend for distant versus near past			
Near past	Distant past	\$200 ticket	\$800 ticket	Interaction F	Interaction p
1 day ago	1 week ago	0.096**	0.070**	0.26	.608
1 week ago	1 month ago	0.091*	0.109***	0.12	.729
1 month ago	2 months ago	0.078	0.174***	1.94	.165
2 months ago	3 months ago	0.065	0.165***	3.59	.059
3 months ago	6 months ago	0.009	0.239***	14.36	<.001

NOTES.—Mean difference in willingness to spend for distant versus near past is calculated as: willingness to spend in distant past minus willingness to spend in near past. Interaction statistics indicate whether this difference differs significantly for the \$200 ticket versus the \$800 ticket. *$p < .10$, **$p < .05$, ***$p < .001$.

This study used a 2 (purchase size: \$200 vs. \$800) × 7 (temporal separation levels: 1 day vs. 1 week vs. 1 month vs. 2 months vs. 3 months vs. 6 months vs. no-budget control) within-subject design. In the six temporal separation scenarios, participants were asked to imagine that they had budgeted \$200 for a ticket to a post-season Major League Baseball (MLB) game or \$800 for a ticket to a World Series MLB game 1 day, 1 week, 1 month, 2 months, 3 months, or 6 months ago. No budget information was provided for the no-budget control. Participants indicated their willingness to upgrade their ticket by adding \$20 for the \$200 purchase or \$80 for the \$800 purchase (1 = very unlikely to upgrade, 7 = very likely to upgrade).

Results

The data were analyzed in a repeated-measures ANOVA with ticket price (\$200 vs. \$800) as one factor, and temporal separation (1 day vs. 1 week vs. 1 month vs. 2 months vs. 3 months vs. 6 months vs. no-budget as control) as another factor. Table 2 reports willingness to spend for each amount of temporal separation separated by price.

The six different amounts of temporal separation in this study were chosen to align conceptually with t_0 to t_2 in figure 4A, and we plot the data from this study below it in figure 4B. We predicted that during the earlier time periods (i.e., t_0 to t_1), increases in temporal separation would result in higher willingness to spend for both the \$200 ticket (i.e., low pain) and the \$800 ticket (i.e., high pain). For the later time periods (i.e., t_1 to t_2), increases in temporal separation would result in higher willingness to spend for the \$800 ticket (i.e., high pain) only, as willingness to spend for the \$200 ticket (i.e., low pain) will have already plateaued. To explore this pattern, we ran a set of planned contrasts comparing willingness to spend in the "near" versus "distant" past for each incremental amount of temporal separation. Table 3 reports the mean difference in willingness to spend for each operationalization of "near" versus "distant" past separately for the \$200 ticket and the \$800 ticket. The interaction statistics indicate whether the difference in willingness to spend between "near" versus "distant" past is significantly different for the \$200 ticket versus the \$800 ticket. For example, the first row represents the difference in willingness to spend when budgeting 1 day ago versus 1 week ago. For the \$200 ticket, willingness to spend is higher in the distant past scenario ($M_{1\ \text{week ago}} = 4.95$, SD $= 1.89$) than in the near past scenario ($M_{1\ \text{day ago}} = 4.86$, SD $= 1.98$; $F(1, 229) = 3.95$, $p = .048$, partial $\eta^2 = .017$). For the \$800 ticket, willingness to spend is also higher in the distant past scenario ($M_{1\ \text{week ago}} = 3.45$, SD $= 2.23$) than in the near past scenario ($M_{1\ \text{day ago}} = 3.38$, SD $= 2.18$; $F(1, 229) = 4.64$, $p = .032$, partial $\eta^2 = .020$). The difference in willingness to spend between the near and distant past scenario does not differ significantly between the \$200 ticket ($M_{\text{difference}} = 0.096$) and the \$800 ticket ($M_{\text{difference}} = 0.070$; $F(1, 229) = 0.26$, $p = .608$, partial $\eta^2 = .001$).

During the earlier time periods (t_0 to t_1 in figure 4A; 1 day ago, 1 week ago, and 1 month ago in figure 4B), people are more willing to spend as temporal separation increases from one time point to the next, for both the \$200 ticket (i.e., low pain) and the \$800 ticket (i.e., high pain). These increases in willingness to spend do not differ significantly between the two ticket prices (interaction $ps > .60$). For the later time periods (t_1 to t_2 in figure 4A; 1 month ago, 2 months ago, 3 months ago, 6 months ago in figure 4B), people are more willing to spend with increasing temporal separation for the \$800 ticket (i.e., high pain), but not for the \$200 ticket (i.e., low pain) as the willingness to spend for the \$200 ticket (i.e., low pain) has already begun to plateau. The interaction of temporal separation by ticket price becomes statistically significant beginning at the 2-month time point (interaction $ps < .06$).

We also compare the effect of temporal separation in budgeting to not budgeting at all (see table 2 for means). For the \$200 ticket (i.e., low pain), people were more willing to spend when not budgeting at all ($M = 5.13$) compared to budgeting 1 day ago ($M = 4.86$) or 1 week ago ($M = 4.95$; $ps < .01$ for both pairwise comparisons) and equally willing to spend compared to all the other time periods ($ps > .30$ for all pairwise comparison). For the \$800 ticket, people were more willing to spend when not budgeting at all ($M = 3.69$) compared to budgeting 1 day ago ($M = 3.38$), 1 week ago ($M = 3.45$), or 1 month ago ($M = 3.56$; $ps < .05$ for all pairwise comparisons), equally willing to spend compared to budgeting 2 months ago ($M = 3.73$, $p = .55$) and less willing to spend compared to budgeting 3 months ago ($M = 3.90$) or 6 months ago ($M = 4.14$, $ps < .05$). Web appendix G table 1 provides further detail on these comparisons.

Discussion

Results from study 4 support the idea that budget depreciation takes longer for higher cost purchases. We observe that for an \$800 purchase (i.e., high pain), willingness to spend increases as temporal separation increases from one time point to the next, starting from 1 day ago to 6 month ago. For a \$200 purchase (i.e., low pain), however, willingness to spend increases from 1 day ago to 1 month ago, but reaches a plateau after that.

This is consistent with the pattern of results observed across our prior studies and helps to explain why, for a given instantiation of "near" versus "distant" past, a high pain purchase might show a difference in willingness to spend, while a low pain purchase might not. It also helps to shed light on our finding in study 2 that the effect of temporal separation on overspending was significant for males but not for females. It may be that budget depreciation takes longer for the higher priced male rings (\$1,013–1,892) and that willingness to overspend for the lower priced female rings (\$512–859) had already begun to plateau. Web appendix G provides further discussion on comparisons of temporal separation lengths across studies.

Study 4 also offers a comparison with not budgeting at all. We observe that willingness to upgrade when not budgeting is directionally higher than budgeting 1 day, 1 week, or 1 month ago, similar to budgeting 2 months ago, and directionally lower than budgeting 3 or 6 months ago. We speculate that, consistent with study 2, this may be a result of two countervailing forces. Not budgeting implies that the budget depreciation process cannot occur, which should decrease spending relative to any budgeting. On the other hand, not budgeting may imply an ability to spend without limitation, which should increase spending relative to any budgeting. The two processes may have combined such that willingness to upgrade for the no-budgeting scenario lies in between the "near" and "distant" past.

One limitation of this study is that, due to the scenario-based nature of this experiment, we are only able to assess people's lay beliefs about how pain of payment and willingness to spend would change, rather than capture people's actual feelings and purchase decisions. While studies 1 and 2 capture changes in actual purchase decisions, they did not assess pain of payment. To overcome this limitation, study 5 adopts an incentive-compatible experimental design to measure actual pain of payment and actual purchases.

While study 4 explored budgeting time frames spanning from 1 day to 6 months, we would expect this general pattern to occur even in very short time periods if the purchase cost is very low. We thus designed study 5 to manipulate temporal separation during a very short time period (1-hour-long laboratory session), using a very low cost purchase (in-laboratory credits for films).

STUDY 5: THE EFFECT OF TEMPORAL SEPARATION IS MITIGATED WHEN PEOPLE REPEATEDLY REASSESS THEIR BUDGETS

The goal of study 5 was to provide additional evidence for the underlying process with a consequential outcome variable, while addressing the limitations associated with scenario studies. Adopting a microcosmic and minimalistic simulation (Hsee et al. 2013; Shah, Mullainathan, and Shafir 2012), we simulate an individual's budgeting and purchasing process within the confines of the laboratory. Participants earn in-laboratory credits, budget for films they watch in the laboratory, and experience either a short or long wait period before making a consequential purchase.

The budget depreciation process implies that the ability to adapt to the budgeted amount of money is a necessary condition and that inhibiting the adaptation process should mitigate the effect of temporal separation on spending. One way to inhibit the adaptation process is to encourage people to repeatedly deliberate on and reconsider their budgeted spending.

In our prior studies, we assumed that the budgeting decision is closed after the budget is set; after people set their budget, they feel that they have made a decision to spend that amount of money. However, people do not always experience choice closure and may not consider the decision phase complete, even after making a choice (Gu, Botti, and Faro 2013, 2018). People may revisit a decision and engage in further comparisons with forgone alternatives (Carmon, Wertenbroch, and Zeelenberg 2003). For those who constantly reevaluate their budget decision, completion of the decision phase is postponed until they stop reevaluating that decision.

In study 5, we randomly assign participants to repeatedly deliberate on their budget after the budget has already been set. This deliberation prolongs the budgeting decision, reducing the amount of temporal separation between the final budget and actual purchase, and suppressing hedonic cost adaptation. If budget depreciation is the underlying process, then those experiencing a long wait who are made to repeatedly deliberate on their budget should behave similarly to those who experience a short wait.

Design and Procedure

A total of 226 undergraduate students participated in this study. Fifteen participants were removed from the study due to a technical glitch causing the laboratory computers to crash, leaving 211 participants for analysis (37.4% female, $M_{age} = 20.80$, SD = 2.27). Participants were tested individually while seated in front of a computer screen wearing a headset (see figure A1 for a diagram of the experiment phases and web appendix H for the experimental design with visuals). Before starting the study, participants were told what to expect in each phase so that they could plan accordingly.

In phase 1 (i.e., earning credits), participants engaged in a credit-earning task. Participants were told they could earn 50, 100, or 150 credits based on the number of e's they could count in an article within 1 minute. In actuality, all participants received 100 credits.

In phase 2 (i.e., budgeting for films), participants set a budget for the number of credits they would like to allocate to film purchases during the experiment. Each film costs 30 credits for a 5 minute viewing. To ensure that participants were aware of the number of budgeted credits, the webpage showed a visual indicating how many credits they had budgeted and how many were left. To create an opportunity cost for their credit usage, participants were told that any credits not spent on films could be used to purchase computer games to play in the fifth phase of the laboratory session. After writing down their film budget, participants rated pain of payment at the moment of budgeting using a one-item measure: "when you think about the credits you have planned to spend on films, how much pain does this make you feel?" (1 = not painful at all, 7 = very painful; adapted from Morewedge et al. 2007). Pain of payment toward the budgeted money before experiencing temporal separation did not differ significantly ($M_{20\ \text{minutes}} = 2.06$, SD = 1.27 vs. $M_{5\ \text{minutes}} = 1.95$, SD = 1.33, $t(209) = -0.58$, $p = .562$).

Phase 3 (i.e., wait time period) manipulated temporal separation and budget deliberation. Participants were randomly assigned to one of the 2 (temporal separation: 20 minutes vs. 5 minutes) × 2 (budget deliberation vs. no-budget deliberation) experimental conditions. All participants were given crossword puzzles to complete on paper, while the information screen for the films was left open on the computer screen in front of them. This was designed to simulate what happens in life after a budget decision—a person can move on (by playing crossword puzzles), or they can continue to look up product information and deliberate on their decision.

To manipulate deliberation during the wait period, half of the participants were asked to reassess their budget five times during the wait period. Those waiting for 20 minutes reevaluated their budget every 4 minutes, while those waiting for 5 minutes reevaluated their budget every 1 minute. Thus, the final budget decision was made at the same time, regardless of temporal separation condition. After the final budget decision, participants reported on pain of payment.

In phase 4, participants used their credits to purchase and watch films. In phase 5, participants used their remaining credits to purchase and play games.

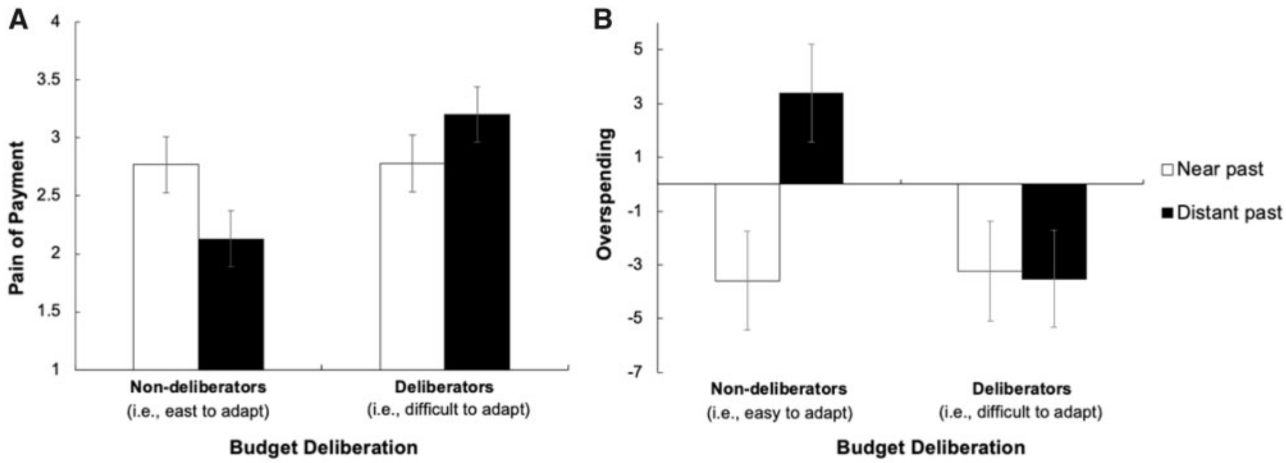
Results

Overspending. We calculated the simple difference between the final budget and the actual spending on film purchases as a measure for overspending. A two-way between-subjects ANOVA revealed a significant interaction between temporal separation and budget deliberation on willingness to overspend ($F(1, 207) = 3.94$, $p = .048$, partial $\eta^2 = .019$; figure 5B). For people who did not deliberate on their film budget during the temporal separation, greater temporal separation increased overspending ($M_{20\ \text{minutes} \times \text{non-deliberators}} = 3.40$, SD = 11.26 vs. $M_{5\ \text{minutes} \times \text{non-deliberators}} = -3.58$, SD = 9.63, $F(1, 207) = 7.25$, $p = .008$, partial $\eta^2 = .034$). However, for people who did deliberate and reassess their film budget during the temporal separation, temporal separation did not have a significant effect on overspending ($M_{20\ \text{minutes} \times \text{deliberators}} = -3.52$, SD = 13.48 vs. $M_{5\ \text{minutes} \times \text{deliberators}} = -3.24$, SD = 17.60, $F(1, 207) = .018$, $p = .893$, partial $\eta^2 < .001$). Proportions of participants spending over, on, and under budget are in web appendix H table 3.

Pain of Payment. A two-way between-subjects ANOVA revealed a significant interaction between temporal separation and budget deliberation on pain of payment ($F(1, 207) = 4.84$, $p = .029$, partial $\eta^2 = .023$; figure 5A).

FIGURE 5

STUDY 5: INTERACTION BETWEEN DELIBERATION AND TEMPORAL SEPARATION



NOTES.—Greater temporal separation leads to lower pain of payment (panel A) and higher overspending (panel B) only for those who do not deliberate on their budgets.

For people who did not deliberate on their film budget during the temporal separation, greater temporal separation marginally decreased pain of payment ($M_{20 \text{ minutes} \times \text{non-deliberators}} = 2.13$, SD = 1.44 vs. $M_{5 \text{ minutes} \times \text{non-deliberators}} = 2.77$, SD = 1.76, $F(1, 207) = 3.54$, $p = .061$, partial $\eta^2 = .017$). However, for people who deliberated on their film budget during the temporal separation, temporal separation did not have a significant effect on pain of payment ($M_{20 \text{ minutes} \times \text{deliberators}} = 3.20$, SD = 1.74 vs. $M_{5 \text{ minutes} \times \text{deliberators}} = 2.78$, SD = 2.02, $F(1, 207) = 1.50$, $p = .221$, partial $\eta_2 = .007$).

Mediation. To further test the role of pain of payment in the relationship between temporal separation and overspending, a moderated mediation analysis was conducted; temporal separation (near past or 5 minute gap = 0, distant past or 20 minute gap = 1) was the independent variable, budget deliberation (non-deliberators = 0, deliberators = 1) was the moderator, pain of payment was the mediator, and overspending was the dependent variable. The analysis (model 8; Hayes 2017) suggests moderated mediation ($b = -0.97$, SE = 0.71, 90% CI: [−2.24, −0.01], see web appendix H table 4 for full results). Greater temporal separation marginally increased willingness to overspend through lower pain of paying for people who were non-deliberators ($b_{\text{non-deliberators}} = 0.58$, SE = 0.46, 90% CI: [0.01, 1.43]), but not for people who were deliberators ($b_{\text{deliberators}} = -0.38$, SE = 0.42, 90% CI: [−1.14, 0.18]).

Budgeted Spending. We also compared the budgeted spending between conditions. A two-way between-subjects ANOVA did not find a significant interaction between temporal separation and budget deliberation conditions ($F(1, 207) = 2.41$, $p = .122$, partial $\eta^2 = .012$), nor were there any significant main effects of temporal separation ($F(1, 207) = 0.65$, $p = .422$, partial $\eta^2 = .003$) or budget deliberation ($F(1, 207) = 1.24$, $p = .268$, partial $\eta^2 = .006$; see web appendix H table 2 for additional details).

Actual Spending. Next, we compared the actual spending between conditions. A two-way between-subjects ANOVA found a marginally significant main effect of temporal separation such that, collapsing across deliberation conditions, greater temporal separation increased actual spending ($M_{20 \text{ minutes}} = 52.43$, SD = 20.23 vs. $M_{5 \text{ minutes}} = 46.44$, SD = 26.40, $F(1, 207) = 3.40$, $p = .066$, partial $\eta^2 = .016$). Unexpectedly, this main effect was not qualified by a significant interaction between temporal separation and budget deliberation conditions ($F(1, 207) = .20$, $p = .653$, partial $\eta^2 = .001$), suggesting that the effect of temporal separation on actual spending was similar across deliberation conditions. There was no main effect of deliberation condition ($p = .911$).

Discussion

Consistent with hypotheses 1 and 3, this study finds that those who experience greater temporal separation spend more relative to their budgets and that pain of payment mediates this effect, albeit at a 90% CI. For consumers who deliberate on and reassess their budget, pain of payment remains high over time and consumers are unwilling to overspend.

We had predicted that the effect of temporal separation on overspending would be driven by changes in actual spending and not by changes in budgeted spending (hypothesis 2). While the observed results are directionally consistent with our prediction for the non-deliberators, they are inconsistent with our prediction for the deliberators. For deliberators, we hypothesized that temporal separation would have no effect on budgeted or actual spending, but we instead observe that greater temporal separation leads to a marginal increase in actual spending. To explore why this result may have occurred, we further analyzed the budgeted spending data for deliberators and find that greater temporal separation lead to a marginal increase in budgeted spending as well ($M_{20\ \text{minutes}\times\text{deliberators}} = 56.85$, SD = 22.13 vs. $M_{5\ \text{minutes}\times\text{deliberators}} = 49.12$, SD = 28.28; $p = .098$). In hindsight, we suspect that for deliberators, the increase in both budgeted and actual spending for the distant past condition may have been a result of an experimental artifact. It is possible that participants who anticipated being asked to reconsider their budget over 20 minutes felt a stronger need to justify their decisions than those who anticipated being asked to reconsider their budget over 5 minutes. This may have increased the desire to add slack to the budget, leading to higher budget estimates. It may also have increased the desire to appear consistent with the prior budget decision, leading to higher actual spending.

One may also wonder whether deliberators budgeted more in the distant past condition than the near past condition because of increased difficulty in estimation. In the pilot study, we found that when people set budgets for multiple expenses to occur over a duration of time, those who do so for the distant future set higher budgets than those who do so for the near future. Although participants in this study did indeed set a budget for multiple expenses (multiple films and multiple games), the consumption of these purchases occurred within a single consumption period for both the near and distant time conditions. As such, we do not believe that this difference was due to increased difficulty in estimation.

GENERAL DISCUSSION

Across a secondary dataset of real estate purchases, a field study, and three experiments, we explore the effect of temporal separation between the moment of budgeting setting and the moment of purchase. Contrary to popular belief that setting a budget far ahead of a purchase is most helpful, our findings reveal that when single-item budgets are set aside far in advance, consumers are more willing to overspend their budgets when it comes time to make the purchase.

Our first study explores this effect with a secondary dataset of consumer home purchases and finds that consumers spend more relative to their budgets as more time passes since they set those budgets. The difference in overspending across time is driven by differences in actual spending, and not by differences in budgeted spending.

Study 2 builds on the correlational evidence provided in study 1 by offering causal support in a field study setting. Students who were randomly assigned to set their class ring budget in the distant past budget a similar amount as those who set their class ring budget in the near past, but end up spending more. When analyzing the difference between actual and budgeted spending, we observe that male students are significantly more likely to overspend as temporal separation increases. Unexpectedly, this difference, while directional, is not statistically significant for female students. We speculate that this may result from males experiencing higher pain of payment than females because the price of the rings is higher for males than for females and because males tend to be higher in tightwaddism than females (Rick et al. 2008).

Our next studies provide evidence for the budget depreciation process. We demonstrate that the effect of temporal separation is most pronounced when people naturally experience high pain of payment. Study 3 shows the effect of temporal separation holds for tightwads (i.e., consumers who usually feel greater pain of paying) but not for spendthrifts (i.e., consumers who usually feel lower pain of paying) and is mediated by pain of payment. Study 3b (web appendix F) further shows that the effect of temporal separation holds for hedonic products (i.e., products that typically evoke greater pain of payment) but not for utilitarian products (i.e., products that typically evoke lower pain of payment). Study 4 explores the role of price in influencing what constitutes the "near" versus "distant" past. We propose that willingness to spend increases with time as people incorporate the budgeted purchase into their status quo and begins to plateau after enough time has passed. Results from study 4 suggest that the budget depreciation process takes longer for higher price purchases.

Study 5 provides further process evidence by manipulating the ability to adapt over time to the hedonic cost associated with payment. Using an experimental paradigm with consequential choices, we show that the effect of temporal separation on overspending is mitigated for those who repeatedly deliberate on their budgets and that this pattern of effects is mediated by pain of paying. We note a caveat in interpreting this result, the potential of an experimental artifact for those who were made to repeatedly deliberate on their budgets.

Future Directions

Comparisons to Not Budgeting At All. In study 2, untreated students spent directionally more than the near past budgeters and directionally less than the distant past budgeters. In study 4, non-budgeters were more likely to upgrade their ticket purchase than budgeters in the near past but less likely to upgrade their tickets than budgeters in the distant past. We have speculated that there are two competing forces that drive spending in the non-budgeting conditions. Not budgeting may mean that one has not had any time at all to adapt to the upcoming expense, and hence experiences the highest pain of payment. This would lead to the lowest amount of spending. On the other hand, when not setting any budget at all, people might infer that they do not need to limit their spending, leading non-budgeters to spend the highest amount of money. The results we observe suggest a mix of these two forces. In future research, it would be interesting to explore when and why each is most dominant.

Multiply Determined Process. Throughout this article, we observe and provide evidence that greater temporal separation increases spending relative to the budget through decreased pain of payment. However, we recognize that this pattern of overspending is likely driven by multiple factors in real life, such as (1) memory decay, (2) price inflation, (3) focus on product desirability, (4) licensing effects, (5) perceived product ownership, (6) perceived importance, (7) increased anticipation, and (8) increased knowledge about the purchase. Although we observe evidence consistent with the pain of payment explanation, it would be worthwhile for future research to determine which other explanations are prevalent.

Relatedly, with the exception of study 1, we generally sought to manipulate and randomly assign the length of temporal separation between budgeting and spending to isolate the effect of temporal separation. In reality, people may endogenously select the length of temporal separation according to factors that increase the willingness to overspend. For example, consumers who have a strong preference for a product may be both more likely to start budgeting earlier for that product and to overspend their budget for that product. Future research could explore how consumers choose when to begin budgeting for an upcoming purchase.

Post-Purchase Emotions. Another interesting avenue would be to explore the affective consequences of overspending for those who budgeted further in advance. Researchers have documented post-purchase emotions such as satisfaction (Mano and Oliver 1993) and regret (Zeelenberg et al. 1998). How does temporal separation alter the type of emotions that consumers feel after overspending? One prediction might be that consumers are more satisfied with their purchases because the temporal separation they experience prior to the purchase completely removes the negative emotion attached to overspending. Exploring the impact of temporal separation on post-purchase affective consequences can contribute to our understanding of the different stages in the consumer decision process.

Alternate Patterns of Spending. In addition, future research could explore the situations under which greater temporal separation might lead to underspending. While we observe overspending with greater temporal separation, there is also reason to predict that people overestimate budgets in the distant future, leading to underspending. What factors cause one pattern of effects over the other? One might predict that underspending is more common for budgets set with explicit savings goals in mind.

Theoretical Implications

This research complements several streams of literature. First, our findings add to the mental budgeting literature by introducing the notion of temporal separation in budgeting and its impact on effective budgeting. Existing literature has examined different factors related to time that influence budget adherence, such as the temporal framing of budgets (Ülkümen et al. 2008), and general versus specific time frames (Peetz and Buehler 2013). The current research identifies temporal separation as another important factor in budgeting that influences how much people spend relative to their budgets and elucidates the direction of the effect. Furthermore, while most prior research focuses on budgeting for multiple expenses over a duration of time, we focus on budgeting for a single expense. We contrast single expense budgeting with multiple expense budgeting; while budgeting for multiple expenses over a duration of time is more difficult for longer than shorter durations (consistent with Ülkümen et al. 2008), budgeting for a single expense to occur at the end of a time period is just as difficult regardless of when it occurs. This helps to reconcile why budget discrepancies are driven through changes in budget estimates for multiple expenses but driven through changes in spending for single expenses.

We also contribute to research on pain of payment. Gourville and Soman (1998) find that greater temporal separation between payment and consumption reduces the pain associated with the payment and that this in turn reduces the sunk-cost impact of the payment on consumption behavior. Connecting the literature on payment depreciation with mental budgeting, we propose and find that the hedonic cost associated with an upcoming budgeted payment can recede with time, much like the hedonic cost associated with payments that have already been made.

This connection also offers some insights on sunk costs. Sunk costs are non-recoverable expenditures, and the sunk-cost effect refers to the tendency for people to irrationally consider sunk costs when making related future spending decisions (Arkes and Blumer 1985; Thaler 1980). Results from Gourville and Soman (1998) and from this research both suggest that greater temporal separation increases the extent to which prior spending decisions feel more like sunk costs, costs that should not be considered when making future spending decisions. In the case of payment depreciation, treating prior non-recoverable expenses as sunk can be considered helpful, in that it increases rational decision-making. But in the current research, treating a prior budget decision as "sunk" can be considered unhelpful because these budget decisions are not actually non-recoverable expenditures, and treating it as such leads to increased spending.

In addition, this research contributes broadly to prior work on the effect of temporal separation. Prior research has investigated the role of temporal separation between payment and consumption on sunk-cost effects (Gourville and Soman 1998; Soster, Monga, and Bearden 2010), between choice and consumption on enjoyment (Nowlis et al. 2004), and between choice and consumption on product performance (Monga and Houston 2006). The current research adds to this body of work, investigating the role of temporal separation between budgeting and payment on pain of payment and overspending.

Practical Implications

In our studies, we observe that consumers are willing to spend about 5–10% more than the budgeted amount when they experience greater temporal separation. This effect might not seem substantial at first glance, but it is worth noting that consumers budget for many different items over a year, and the aggregate impact of temporal separation on overspending for all these different items can be quite substantial. Furthermore, overspending on a single large purchase like a house can have a significant impact on a consumers' overall wealth.

This research can provide actionable insights for businesses. For example, a financial advisor might recommend that a client not budget further in advance than necessary, or that a client reconsider the budget shortly before spending. Hotels and rental car agencies can strategically allocate their resources to selling upgrades to consumers who made their reservations further in advance, as these customers may be more willing to pay for upgrades. Firms that are launching a new product might consider releasing the price of the product well in advance of its release to encourage consumers to start budgeting early, allowing the budget depreciation process to unfold while waiting for the product release.

Consumers themselves can also take advantage of these findings to manage their spending, and their emotional responses to spending. The spendthrift who is planning to buy a house might do well to reconsider the budgeted amount of spending from time to time. The tightwad who knows that an expensive family vacation is coming up could begin mentally budgeting for that vacation far in advance so that it feels less painful when the time to spend finally arrives.

Conclusion

Consumers are frequently told to set budgets in advance, but budget depreciation suggests that budgeting too far in advance can be detrimental. The pain associated with spending dissipates over time and can lead to an increased willingness to spend.

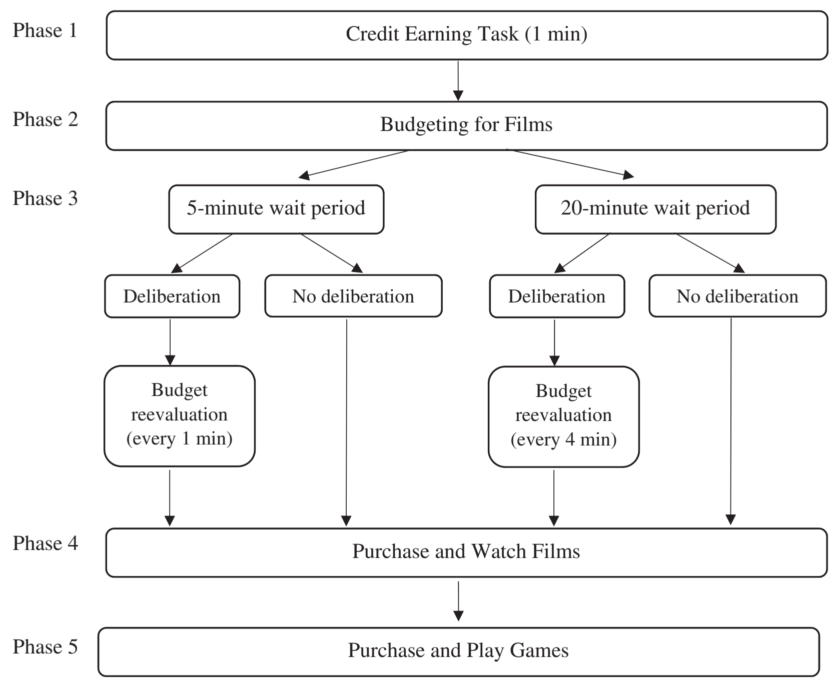
DATA COLLECTION INFORMATION

The data for study 1 were collected in fall 2019 from a local real estate office in College Station, TX, by the first author under the supervision of the second author. The data for the pilot study, web appendix study 3b, and study 4 were collected from MTurk during fall 2019 by the first author under the supervision of the second author. The data for study 2 were collected at Texas A&M University between fall 2018 and spring 2019 by the first author under the supervision of the second author. The data for study 3 was collected on the Texas A&M University campus prior to football games by the first author and a research assistant in fall 2018. The data for study 5 were collected by research assistants at the Conant Behavioral Research Lab, Mays Business School, in spring 2018. Both authors analyzed the data for all studies.

APPENDIX A

FIGURE A1

STUDY 5: MULTI-PHASE EXPERIMENT FLOW



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A new perspective on sales outcome controls: an inside sales perspective

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Abstract

Purpose – Previous sales control research has limited the definition of outcome controls exclusively to sales outcomes in an outside sales context. In addition to sales outcome controls, inside sales managers use phone operational outcomes to influence inside sales agent performance, supporting the need to expand the broader definition of outcome controls. Hence, the purpose of this paper is to explore the need to bifurcate outcome controls into two distinct variables: sales and phone operational controls. Researchers know little about the application of sales outcome controls beyond sales-only outcomes, which, in turn, limits the definition of outcome controls.

Design/methodology/approach – Through the utilization of survey, secondary operational data and sales manager's feedback, this paper demonstrates that the definition of outcome controls needs to be divided into two distinct areas, sales and phone operational controls for inside sales agents, which, in turn, acts collectively to impact an inside sales agent's job performance and satisfaction.

Findings – This research demonstrates that inside sales managers depend on both sales and phone operational outcome controls to drive sales agent performance, varying in degrees by industry. Even as inside sales managers focus on creating an employee-centric autonomous motivational work culture, the overarching controlling factors associated with phone operational outcomes dampen an inside sales agent's performance and job satisfaction.

Research limitations/implications – To the best of the authors' knowledge, as the first sales control research to examine an inside sales context, this study provides support to further study sales controls in an inside sales context. This research can be enhanced by examining business-to-consumer inside sales environments, behavior controls, greater sample size and additional work outcomes such as turnover and tenure.

Practical implications – The findings have important implications because they can help practitioners understand the effect that both sales and phone operational outcomes have on sales agent performance. It also illuminates the need for inside sales managers to be less controlling in their focus on phone operational outcomes, as such a practice has a negative influence on key sales agent job outcomes.

Originality/value – To the best of the authors' knowledge, this study is the first to triangulate multiple data sources to illustrate the need to evaluate both sales and phone operational outcomes as broader components of sales outcome controls. The study of sales controls in a different sales context suggests that sales management controls may differ by sales context, opening the door to extend the vast sales control literature beyond its current context of outside sales.

Keywords Performance measurement, Sales, Sales management, Control systems, Job satisfaction, Sales performance, Personal selling, Outcome controls, Inside sales, Sales management culture, Autonomous motivation, Operational outcome controls

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1. Introduction

As the introduction of activity and capability controls by Challagalla and Shervani (1996), sales control research has consistently measured outcome sales controls using sales revenue as the sole construct, failing to account for a sales agent's overall performance, which includes operational and sales outcomes. To date, sales control research has defined outcome controls in terms of increased revenue, meeting quota, the number of items sold, etc (i.e. Miao and Evans, 2012, 2013, 2014; Madhani, 2015; Katsikeas *et al.*, 2018). For the most part, sales control scales originated with Anderson and Oliver (1987), Jaworski (1988) or scholars who similarly defined sales outcomes in terms associated with sales revenue. As sales approaches and contexts have evolved, now 43.5% of non-retail salespeople in the UnS are inside sales professionals (Krogue, 2017) and accounting for the highest growing B2B sales context segment (Cotler *et al.*, 2018), it creates the opportunity to extend sales control research to inside sales, where there is a balanced measure of an inside sales agent's sales and phone operational outcomes (Valle *et al.*, 2017) as overall outcome controls.

Inside sales control research remains sparse. Using an inside sales context, this research takes a step forward by introducing the need to evaluate the two critical components of an inside sales agent's performance, sales and phone operational outcomes. Inside sales agents' workplaces frequently feature cubicles or open layouts similar to call centers, where inside sales agents handle inbound or outbound calls via various means of communication, including phone, VoIP solutions, video calls and emails. According to Gessner and Scott (2009), the primary difference between inside sales agents and call center service agents is their need to generate revenue. Thus, inside sales agents have phone operational controls that require monitoring. Inside sales agents face the ongoing challenge of achieving a balance between inside sales performance aimed at reaching sales goals (an inside sales metric) and phone operational adherence (e.g. limiting sales call time to 10 min) (Koehl *et al.*, 2016), creating the underlying message to sell, but within the structure of phone operational outcomes, as increased call time negatively affects staffing and operational expenses. Hence the need to include phone operational activities as part of outcome controls. This area, to date, has not been incorporated into sales control research.

Therefore, inside sales center managers need to use a range of metrics to monitor and control inside sales agent outcomes in two categories: sales performance and phone operational controls (Aksin *et al.*, 2007). These metrics assess different tasks that an inside sales agent must balance in the pursuit of revenue growth for the organization (Zoltners *et al.*, 2013). An inside sales agent's phone operational duties are often controlled through simplification of tasks, job division and the pressure of call time, which limits autonomy, leading to daily job pressure and stress (Zito *et al.*, 2018). Controlled motivation, which involves doing something to obtain a reward or avoid punishment, was found to limit a host of work outcomes, including sales performance (Kuvaas *et al.*, 2016). Conversely, the power of autonomous motivation, a sense of free choice, experienced by inside sales agents were found to have a positive effect on sales performance (Grant *et al.*, 2011). Similar findings in the service call center literature, where phone operational requirements are similarly significant, support the importance of autonomous motivation by showcasing agents who have greater control of their time, have ongoing learning opportunities and management support to maximize commitment/relatedness to their job (Aksin *et al.*, 2007; Kemp *et al.*, 2013). This study draws on outside sales models that previously examined the relationships among outcome sales control, autonomous motivation and overall job performance (Miao *et al.*, 2007; Miao and Evans, 2014; Mallin and Pullins, 2009) to examine the effect of sales and phone operational controls on inside sales agent performance and job satisfaction through the influence of autonomous motivation. Moreover, we consider how the various sales and phone operational outcomes unique to inside sales might affect these relationships.

Figure 1 presents a model that combines sales-monitoring outcome sales controls with the influence of autonomous motivation and adds the moderating effect of an inside sales agent's phone operational adherence requirements on both job performance and satisfaction. Central to this model is the assumption, based on self-determination theory, that when agents experience a greater sense of autonomy, relatedness and competence, they will be more autonomously motivated to perform revenue-generating sales activities and contribute positively to job performance and satisfaction (Gagné and Deci, 2005). Salesmanship requires higher-level cognitive skills that thrive when agents are autonomously motivated (Cerasoli *et al.*, 2014). In contrast, the repetitive nature of an inside sales center's operational constraints and adherence imposed on agents tends to restrict or limit the autonomous motivational effect of self-determination on job performance and satisfaction. Therefore, the balance "between flexibility and standardization and between constraining and enabling job design" (Houlihan, 2004, p. 341) is mediated by the ability of management to create an autonomous motivation culture. On the other hand, the restrictive oversight associated with phone operational adherence tends to suppress the autonomous motivation benefits, hence functioning as a moderator in the model.

This model contributes to sales literature in several ways. First, to our knowledge, this is the first study to examine sales controls in the context of inside sales. Second, the model proposes the mediating benefit of autonomous motivation for inside sales agents' job performance and satisfaction. Third, similar to Challagalla and Shervani's (1996) dissection of behavioral controls, we lay the groundwork for outcome controls to be divided into two distinct, independent categories for inside sales: sales revenue-generating outcomes and phone operational outcomes.

2. Literature review

2.1 Hybrid control systems

B2B inside sales agents are subject to hybrid control systems (Sleep *et al.*, 2020). The notion of hybrid control systems historically references the balance between behavioral and outcome sales controls (Onyemah and Anderson, 2009). From an inside sales perspective,

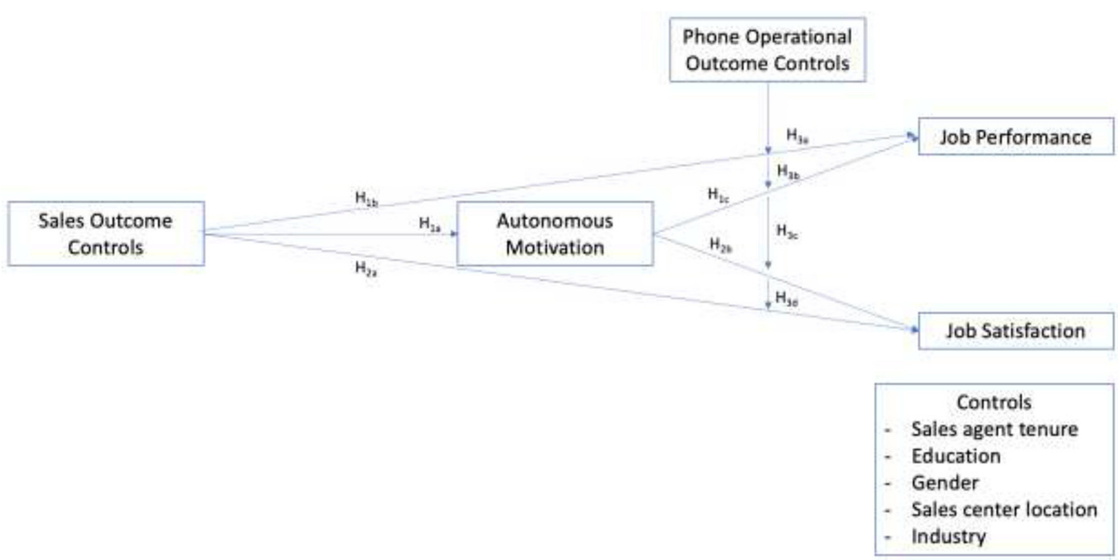

Figure 1. Structural model – sales outcome control, autonomous motivation and the moderating influence of phone operational outcome controls

hybrid controls can also apply to dual outcome controls, which include both sales and phone operational outcomes. Valle and Ruz (2015) support the notion that inside sales agent performance outcomes include both phone operational and sales outcomes. Similarly, Koehl *et al.* (2016) state the challenge of inside sales agents to limit phone average handle time (phone operational outcome) with sales outcomes. Therefore, inside sales agents' phone operational activities are of great importance to an inside sales manager as those results can affect staffing, sales planning and training (Haliva, 2015; Aparicio, 2016), creating the need to focus on both phones operational and sales outcome controls.

In the sales literature, scholars have defined sales outcome controls to include the generation of sales units, market share, sales revenue, profitability and new accounts (Zallocco *et al.*, 2009). Thus, the focus and application of sales outcome controls remain limited to the delivery of sales results (Mallin and Pullins, 2009; Panagopoulos and Dimitriadis, 2009; Miao and Evans, 2014; Katsikeas *et al.*, 2018) rather than related to any operational outcomes. The rationale for this consistent research application lies in the fact that researchers have mostly examined sales controls in an outside sales context, not considering the different responsibilities and accountabilities of an inside sales agent (Sleep *et al.*, 2020). Therefore, inside sales agents are evaluated on their sales outcomes, as well as their phone operational outcomes. An inside sales agent could exceed sales, for example, but receive a negative evaluation for not meeting phone operational outcomes and vice versa. This gap in the sales control literature is addressed in the current study by extending outcome controls beyond those associated with revenue generation.

Consistent with our model, scholars have examined sales outcome controls as antecedents to autonomous motivation (Mallin and Pullins, 2009; Miao *et al.*, 2007; Miao and Evans, 2013) to predict job satisfaction (Miao and Evans, 2012; Challagalla and Shervani, 1996) and sales performance (Oliver and Anderson, 1994; Cravens *et al.*, 2004; Chen *et al.*, 2015). However, in an inside sales organization, sales and phone operational results have substantial oversight (Sleep *et al.*, 2020) and are tracked, measured and reported daily. An inside sales agent's sales and phone operational results are often shared and posted for everyone in the inside call center to see. The transparency of sharing sales and phone operational results increases the agent's awareness of their performance outcomes. The oversight of sales results for inside sales centers is more robust, timely and visible.

2.2 Inside sales telephone operational outcome controls

As most sales research has centered on outside sales, where following phone operational standards are not closely monitored, measured or generally part of outcome measures, there has not been a need to understand the relationship between job performance and phone operational adherence in a sales context. Therefore, we must borrow from call center literature to gain a better understanding of an inside sales agent's "phone" requirements. From a call center perspective, research has examined relationships between phone operational outcomes and employee satisfaction (Zapf *et al.*, 1999), cost reduction (Gessner and Scott, 2009), employee turnover (Wegge *et al.*, 2006) and enhanced production (Holman *et al.*, 2009). The call center literature has also been tapped to better understand inside sales agents' operational tasks, given the dearth of relevant research in this area with respect to inside sales (Sleep *et al.*, 2020).

Unlike outside sales agents, inside sales agents must comply with several phone operational requirements. Feinberg *et al.* (2000) provide an excellent summary of phone operational requirements imposed on inside agents (Table 1).

The presence of a large number of phone operational controls forces inside sales leaders to scrutinize an inside sales agent's time by monitoring myriad phone operational reports.

When individuals feel that their behavior is monitored and controlled with reward and punishment mechanisms, it creates a sense of controlled motivation (Grant *et al.*, 2011). Drawing on self-determination theory (SDT), a sense of controlled motivation results when people feel pressured, compelled or are required in some way, either overtly by concrete rewards or punishments associated with regulated measures (Moller and Deci, 2014). Hence, because phone activities attract considerable oversight from inside sales managers, it is reasonable to expect that inside sales agents will have a sense of controlled motivation related to phone operational outcomes. According to Deci *et al.* (2017), the suppressing influence of controlled motivation should moderate the effect of autonomous motivation on job performance and satisfaction (Deci *et al.*, 2017). This study specifically explores the hypothesized moderating effect of phone operational outcomes on the relationship between autonomous motivation, satisfaction and job performance. Hypothesis development begins with establishing the relationships between sales outcome controls and both sales performance and job satisfaction as partially mediated by autonomous motivation. It then proceeds to an examination of how these relationships may be moderated by the imposition of operational controls.

3. Hypotheses development

3.1 Sales outcome controls, autonomous motivation, sales performance

Sales outcome controls positively affect both job satisfaction and performance and this relationship is partially mediated by autonomous motivation (Figure 1). We begin by examining autonomous motivation's partial mediation of sales control on sales performance. Demonstrating a partial mediating effect of autonomous motivation assumes the existence of direct effects of both sales outcome control and autonomous motivation on sales performance, as well as a direct effect of sales outcome control on autonomous motivation. Theory and prior research support the existence of direct effects of outcome control on both performance and autonomous motivation. SDT provides a strong theoretical base for examining the role of both outcome sales controls and autonomous motivation for predicting workplace outcomes. The theory suggests that, when individuals identify with the significance and meaning of their work, the result will be heightened degrees of work motivation and performance.

How sales outcome controls affect sales performance is well documented in the outside sales literature. The inside sales literature similarly supports this relationship, but the relationship is more complex as a result of management's simultaneous imposition of operational controls on agents.

Average speed to answer	Time it takes to answer an incoming sales call
First call settlement/sale	Percentage of callers who have satisfactory resolution on the first call
Abandon rate	The percentage of callers who hang up or disconnect prior to answer
Average talk time	Total time caller was connected to a telephone service representative
Adherence	Total time agents are in their seats as scheduled
Average work time after the call	Time needed to finish paperwork, do research after the call itself has been completed
Time before abandoning	Average time caller held on before giving up in the queue
Inbound/outbound calls	Measure of call productivity during shift
Compliance	Time agents are logged into the phone system
Service levels	Calls answered in less than x seconds divided by the number of total calls

Table 1. Major metrics (operational outcomes) monitored in call centers

Outcome sales controls also directly affect autonomous motivation and, indirectly, sales performance. A sales outcome-based approach to managing the selling effort is a decentralized liberal management style, where salespeople are responsible for their own activities and performance, enhancing their autonomy to improve sales (Darmon and Martin, 2011). The rationale underlying the ability of sales outcome controls to enhance autonomous motivation is that sales outcome controls generally entail little monitoring. Management's role is "hands-off," allowing the correlation between compensation and sales results to serve as an evaluation system (Benet-Zepf *et al.*, 2018).

Autonomous motivation directly affects sales performance. Following Cerasoli *et al.* (2014), we argue that when managers create an autonomous motivation climate, it provides inside sales agents a work environment that maximizes individual autonomy and feelings of competence and the agents' focus shifts to job enjoyment rather than simply outcomes. Inside sales agents with a greater sense of autonomous motivation are likely engaged in activities with a full sense of willingness and choice because of their involvement and participation in the decision-making process. Thus, a highly supportive and involved environment perceived by inside sales agents will increase autonomous motivation, which leads to increased work outcomes.

In addition to managerial actions, the structural components of an inside sales organization can contribute to a climate of autonomous motivation. Inside sales centers benefit from an expanded portfolio of selling technologies that include CRM tools, social selling tools, conversation intelligence and contact analytics (West, 2020). The combination of these technological solutions provides inside sales agents real-time feedback on their sales outcomes. For instance, when a sale is finalized, a sales tracking leaderboard is automatically updated, allowing everyone in the inside sales center to be aware of all sales outcomes. Conversation intelligence software records and scores all inside sales conversations, then provide feedback and coaching. Customer conversation data allows an inside sales agent the opportunity to make real-time changes to any part of their sales process to maximize sales outcomes. An inside sales agent's ability to determine the best way to use the available data to optimize sales outcomes contributes directly to their ability to act of their own volition, which enhances autonomous motivation (Gillet *et al.*, 2013). The collection of information from various phone operational outcomes equips an inside sales agent with the knowledge to autonomously update their sales approach in real-time. The ability to take the necessary action to reach desired sales outcomes maximizes the inside sales agent's sense of self-regulation, which enhances autonomous motivation and, ultimately, sales performance (Grant *et al.*, 2011).

Based on the above logic grounded in the tenets of SDT, we suggest the following hypotheses for the direct and mediated effects of sales outcome controls on job performance:

H1a. The application of sales outcome controls positively influences an inside sales agent's sales autonomous motivation.

H1b. The application of sales outcome controls positively influences an inside sales agent's sales performance.

H1c. The relationship between sales outcome controls and job performance will be positively mediated by autonomous motivation.

3.2 Sales outcome controls and job satisfaction

Autonomous motivation not only plays a significant role in successful performance outcomes but also results in improved job satisfaction (Richer *et al.*, 2002; Otis and Pelletier, 2005;

Hon, 2012). We argue that sales outcome controls will have negative direct and positive indirect (mediated) effects on job satisfaction. Prior sales research suggests that outcome controls offer greater clarity for goal attainment resulting from the agent's ability to determine whether goals were met. Such clarity should increase the likelihood of job satisfaction (Carbonell and Rodriguez-Escudero, 2013; Challagalla and Shervani, 1996). This notion is also supported within the inside sales context (Boyle, 1996). However, as stated earlier, SDT indicates that when individuals feel their behavior is regulated by rewards (sales incentives) or punishments, it enhances a sense of pressure, which contributes to additional depletion of psychological resources (Grant *et al.*, 2011). Sales professionals experience a sense of pressure to reach sales outcomes, further enhancing negative feelings and increasing stress. The stress and emotional dissonance associated with focusing on sales outcomes may also undermine a sales agent's ability to focus on self and professional enhancement. Thus, combining these effects, we can predict that a sales agent's focus on sales outcomes limits the sales agent's potential to enhance training, development and job connectedness that are associated with job satisfaction.

Justification for the anticipated mediating effects of autonomous motivation, based on expectations from SDT, duplicate the justification for autonomous motivation partially mediating the effect of sales controls on performance. The ability of outcome sales controls to directly affect autonomous motivation was established in the previous section. In turn, autonomous motivation directly affects job satisfaction. When managers create a climate of autonomous motivation, inside sales agents are more likely to sense feelings of autonomy, competence and job enjoyment. Inside sales managers who create an environment conducive to autonomous motivation are likely to instill inside sales agents with a sense of freedom from extrinsic pressure. Agents are more willing to fully endorse their own behavior (Moller and Deci, 2014). A greater sense of autonomous motivation creates a sense of involvement in the selling decision process. It begets the perception of choice and a concomitant willingness to engage and achieve objectives. Thus, a highly supportive and involved environment perceived by inside sales agents will increase autonomous motivation, which leads to an increased sense of job satisfaction.

The proposed direct and indirect effects of sales outcome controls on job satisfaction are captured in the following hypotheses:

H2a. The application of sales outcome controls negatively influences an inside sales agent's job satisfaction.

H2b. The relationship between sales outcome controls and job satisfaction is positively mediated by autonomous motivation.

3.3 Moderating effect of phone operational outcome controls

Inside sales agents' job responsibilities are increasing, which include prospecting, customer interactions and the need to gather and disseminate customer information (Sleep *et al.*, 2020). Many of these duties are managed via the use of phone operational outcome controls such as those summarized in Table 1. With the advancement of technology, companies can track and monitor inside salesforce phone operational activities more closely. Operational controls placed on inside sales agents often constrain calls and talk time, which limits their latitude for deciding how to accomplish sales goals (Sleep *et al.*, 2020). Being controlled involves acting with a sense of pressure, which leads to emotional exhaustion. A controlled work environment has been associated with lower levels of well-being and higher levels of stress at work. Previous research has correlated the constraints of controlled motivation as predictors to poor job performance and job satisfaction (Deci *et al.*, 2017). Specifically, in the current study, the constraints imposed by phone operational controls likely eclipse and negatively influence the effectiveness (direct effects) of sales outcome controls on both sales performance and job satisfaction.

Moreover, the application of operational controls yields a sense of greater micromanagement and oversight that can have a negative impact on agents' perceptions of autonomy. The net result is that a sales management focus on phone operational outcomes can be a serious deterrent to an inside sales agent's ability to internalize any sense of autonomous motivation. Extant research suggests phone operational outcome controls require a great deal of oversight and are perceived as restrictive by inside sales agents. Operational outcome controls create a sense of controlled motivation that threatens any positive effects of autonomous motivation the inside sales agent may feel. The tension between controlled and autonomous motivation likely creates approach-avoidance behavior, which detracts from any positive performance and satisfaction implications associated with only autonomous motivation (Grant *et al.*, 2011).

In the current study, we expect the imposition of phone operational controls will overshadow any benefits associated with sales managers creating a work environment or culture, conducive to autonomous motivation. We argue that a focus on phone operational outcomes creates an atmosphere of controlled motivation that leads to an increase in agents' sense of pressure and forced obligation. Phone operational outcome controls, therefore, can short-circuit an inside sales agent's efforts and have negative effects on sales performance and work engagement. The increased pressure of phone operational outcomes related to operational controls such as job timing, continuous contact and repetitive tasks create negative emotions and stressful experiences that have a greater negative effect on work outcomes than any benefits accruing from autonomous motivation.

Furthermore, because inside sales managers focus on maximizing operational effectiveness and cost-control, agents are pressured to maximize the number of inbound and outbound calls completed. Consequently, a micromanagement style predominates in most inside sales departments (Sleep *et al.*, 2020). In other words, the predisposition toward meeting operational outcomes acts as the dominant focus for inside sales managers, creating a level of oversight and control that weakens any relationship between an inside sales agent's autonomous motivation, satisfaction and performance. Based on the above summary, we expect phone operational outcome controls to negatively moderate the impact of sales outcome controls and autonomous motivation on both job performance and satisfaction. hence, we posit:

H3a. Inside sales agents, operational outcome controls negatively moderate the relationship between sales outcome controls and job performance. Specifically, the existence of operational outcome controls weakens the relationship between sales outcome controls and job performance.

H3b. Inside sales agents, operational outcome controls negatively moderate the relationship between autonomous motivation and job performance. Specifically, the existence of operational outcome controls weakens the relationship between autonomous motivation and job performance.

H3c. Inside sales agents, operational outcome controls negatively moderate the relationship between autonomous motivation and job satisfaction. Specifically, the existence of operational outcome controls weakens the relationship between autonomous motivation and job satisfaction.

H3d. Inside sales agents, operational outcome controls negatively moderate the relationship between sales outcome controls and job satisfaction. Specifically, the existence of operational outcome controls weakens the relationship between sales outcome controls and job satisfaction.

4. Method

4.1 Sample and data collection

The American Association of Inside Sales Professionals (AA-ISP) is a nationally recognized organization specializing in inside sales strategy, techniques and tactics. As a national organization, AA-ISP provides sampling representation throughout the USA. With the assistance of the AA-ISP, this survey was shared via email with its entire membership, as it includes both business-to-consumer (B2C) and business-to-business (B2B) inside sales agents.

A two-wave email effort resulted in a total of 451 completed surveys. AA-ISP members serve as an ideal sample frame as they are involved in day-to-day inside sales functions. We administered the survey through Qualtrics, an online survey tool. All incomplete results, as well as those answered in less than 60 s, were removed (Umbach, 2004). Of the remaining 327 surveys, 19 came from B2C or B2B managers or directors and 127 from B2C sales agents. This left a total of 184 applicable B2B inside sales agent surveys. As this study concentrates on B2B inside sales agents, a total sample of 184 surveys was used for this research. Comparisons of early and late responses across study variables were made using t-tests, which resulted in a non-significant difference of ($p > 0.05$), suggesting nonresponse bias is likely not a critical concern (Armstrong and Overton, 1977). Our data collection allowed us to control for sales agent tenure, location, experience, gender and educational level.

We draw on SDT (Ryan and Deci, 2000) to measure autonomous motivation. Autonomous motivation is present when an individual's psychological needs for autonomy, relatedness and competence are satisfied (Gagné and Forest, 2008). Our autonomy scales originated from Wang and Netemeyer (2002), who measured a sales agent's desire for autonomy. Consistent with SDT, their scales focused on understanding a sales agent's perspective of experiencing behaviors as an extension of self. In their two studies, Wang and Netemeyer's (2002) autonomy scales had an alpha greater than 0.70 and AVE of 0.50, which is deemed acceptable by Hair *et al.* (2011).

Furthermore, we used Williams and Deci's (1996) competence scale. According to SDT, competence is assumed to be one of three fundamental psychological needs, as it facilitates an individual's goal attainment and provides them with a sense of need satisfaction by engaging in an activity at which they feel effective. The α measure of internal consistency for the perceived competence items in the Williams and Deci (1996) study was above 0.80, serving as an excellent source for our scale. For relatedness, we used Ryan and Deci's (2000) necessary psychological needs scale, which is widely used by scholars.

Finally, we used Miao and Evans' (2014) scales for sales outcome control (α = 0.93; AVE 0.74), job performance (α = 0.84; AVE 0.61) and job satisfaction (α = 0.92; AVE 0.76). Specifically, for operational outcome controls, we updated their scale to focus on operational controls rather than sales controls, as it aligned with prior sales control methodology. Table 2 provides a summary of the scales used in this study.

Table 3 illustrates the sample demographics. Although the numbers suggest the presence of gender inequity, they match industry data (Skok, 2015). In short, the diversity of

Construct/items	Outer weight	AVE
Sales outcome controls (five-point, strongly agree – strongly disagree; source: Miao and Evans (2014)		
My manager tells me about the expected level of achievement on sales volume or market share targets	0.407	0.8
My manager monitors my performance on achieving sales volume or market share targets	0.406	0.879
I receive frequent feedback on whether I am meeting expected achievement on sales volume or market share targets	0.127	0.742
My manager ensures that I am aware of the extent to which I attain sales volume or market share targets	0.233	0.824
I would be recognized by my manager if I perform well on sales volume or market share targets	0.051	0.606
Autonomous motivation (five-point, strongly agree – strongly disagree; source: autonomy – Wang and Netemeyer (2002); competence – Williams and Deci (1996) and relatedness – Ryan and Deci (2000)		
I feel confident in my ability to learn my job	0.147	0.435
I am able to meet the challenges of performing well in my sales job	0.124	0.798
I am able to achieve my sales goals	0.131	0.837
I have the ability to attend and complete sales training as needed	0.136	0.839
I have all the knowledge I need to succeed at my job	0.113	0.62
My immediate sales leader cares about me	0.113	0.76
People at work I interact with on a daily basis tend to take my feelings into consideration	0.056	0.51
There are many work associates I am close to	0.085	0.62
My co-workers and supervisors are generally friendly toward me	0.114	0.792
The corporation and I share similar values	0.098	0.718
I have significant autonomy in determining how I do my job	0.077	0.593
I can decide on my own how to go about doing my work	0.053	0.406
I have considerable opportunity for independence and freedom in how I do my job	0.048	0.175
This job allows me to use my personal initiative or judgment in carrying out the work	0.058	0.472
I have the freedom to come and go as I please	0.092	0.583
Phone operational outcome controls (five-point, strongly agree – strongly disagree; source: Miao and Evans (2014)		
My manager tells me about the expected level of achievement on-call metric standards	0.21	0.857
My manager monitors my performance on achieving phone compliance	0.206	0.832
I receive frequent feedback on whether I am meeting expected achievement on better abandonment rates	0.171	0.778
My manager ensures that I am aware of the extent to which I attain a high volume of outbound calls	0.319	0.857
I would be recognized by my manager if I perform well on exceeding the inbound call available time	0.27	0.901
Job performance (five-point, strongly agree – strongly disagree; source: Miao and Evans (2014)		
Generating a high level of dollar sales and phone adherence	0.266	32.3
Generating sales of new products	0.224	46.7
Exceeding sales and phone requirement targets	0.249	29
Exceeding cross-sell opportunities with proper phone utilization	0.205	39.6
Maximizing all sales incentives	0.225	51.1
Job satisfaction (five-point, strongly agree – strongly disagree; source: Miao and Evans (2014)		
My job is satisfying	0.25	0.858
My job is exciting	0.192	0.86
I am really doing something worthwhile in my job	0.198	0.857
The work I do gives me a sense of accomplishment	0.231	0.83
I plan to be at my current employer a year from now	0.253	0.875

Table 2. Original measurement model w/outer weights and AVE

Gender	
M	63%
F	37%
Education	
>bachelor	86%
<bachelor	14%
Industry	
Software	26%
Telecommunication	24%
Financial services	22%
Other	28%
Tenure	
3–6 months	11%
7–12 months	16%
1–2 years	36%
3–5 years	24%
5 years	14%

Table 3. Sample demographics

our sample incorporates several industries and reflects the gender makeup of inside sales agents.

4.2 Structural model estimation

The hypothesized structural model in Figure 1 was estimated using the partial least squares (PLS) latent path model available in the SmartPLS software. PLS is appropriate in the current study because of the relatively small available sample (184 respondents). A significant strength of PLS-based SEM is its non-parametric-based estimation procedure, which works well with small samples and avoids some of the restrictive assumptions by covariance-based models (CB-SEM) (Hair *et al.*, 2012). Compared with CB-SEM approaches, PLS avoids two distinct issues that are related to testing models similar to the model in the current study: inadmissible solutions and factor indeterminacy (Fornell and Bookstein, 1982). Moreover, researchers have increasingly applied PLS-SEM to studies in marketing and other business disciplines (Henseler *et al.*, 2009). That Guenzi *et al.* (2014) used PLS because of a small sample size further supports the use of PLS-SEM in sales-related investigations.

5. Analysis and results

In accordance with recommendations from Hair *et al.* (2011), PLS follows a two-step process that first assesses the measurement model followed by the structural model. These analyzes were supplemented with computations of Chronbach's alpha (Chronbach, 1951), average variance extracted (AVE) and construct reliability (CR) (Fornell and Larcker, 1981). We established convergent validity by examining the magnitude of factor loadings and average variance extracted. Specifically, we evaluated PLS against the following three criteria: composite reliability, convergent and discriminant validity of the constructs, each indicator's weight and predictive relevance of the model.

5.1 Measurement model estimation

Reliability and validity of the measurement model were verified using two criteria: Cronbach's α and AVE. In our initial model, the convergent validity of our constructs, except for autonomous motivation, exceeded the AVE of 0.50 (Ringle *et al.*, 2015). We removed three scale items that were below the 0.50 AVE threshold: Job relatedness questions one and two and job autonomy questions one. Although the AVE of one job-relatedness scale item remains slightly below 0.50 after the update, we included the scale, as it was previously supported within the applicable theory (Ryan and Deci, 2000). Additionally, Cronbach's α and composite reliability are above the 0.70 threshold (Hair *et al.*, 2012).

We describe the properties of the updated measurement model in Table 4. All items loaded meaningfully in their conforming construct (lowest t-values is 6.9), showcasing proper convergent validity. All indicator loadings for each construct are higher than the minimum acceptable value of 0.7 (Hair *et al.*, 2011) suggesting that this measurement had sufficient convergent validity. Discriminant validity was established by comparing the square root of AVE with the correlation among the latent constructs (Hair *et al.*, 2011). Values of AVE for each construct are greater than each latent construct's highest squared correlation with any other construct (Table 5). Finally, variance inflation factors (VIFs) for all independent variables range from 1.0 to 2.81, indicating no multicollinearity as the results are much less than 10 (Myers, 1990).

5.2 Estimating the structural model

Following recommendations by Hair *et al.* (2011), the structural model was estimated via PLS using its two-stage bootstrapping process. Five thousand bootstrapping samples were used. Bootstrapping has become the preferred method for establishing the significance of indirect (mediated) effects in both regression and SEM for smaller sample sizes, typically below 400. Using PLS, the primary criteria used to evaluate the structural model are the magnitudes of the path estimates and the proportion of variance explained in the endogenous variables (R^2) (Hair *et al.*, 2011).

The structural model was estimated with and without control variables. No control variables achieved significance. Figure 2 and Table 6 summarize the estimation results. As indicated above, there is a strong correlation between sales outcome controls and autonomous motivation (β = 0.46, t = 7.8), which provided support for *H1a*. Surprisingly, no correlation was found between sales outcome controls and job performance (β = −0.02, t = 0.21), hence not supporting *H1b*. Even though we expected a significant correlation between sales outcome controls and job performance, which is supported in prior sales research, an inside sales agent's job evaluation includes much more than sales results. Therefore, this finding highlights our overall perspective that inside sales performance must be viewed in a broader perspective that includes both sales and phone operational outcomes. Supporting hypothesis *H1c*, the indirect or mediating effect of autonomous motivation was highly significant (β = 0.59, t = 10.6) and suggests complete mediation, as direct effects of outcome sales control failed to emerge as significant (Gaskin, 2017). This portion of the model also explains substantial proportions of variance in the two endogenous constructs. An R^2 of 77% for job performance was attained.

As expected, sales outcome controls exhibited a negative direct effect on job satisfaction (β = −0.22, t = 2.0), supporting *H2a*. The path from autonomous motivation to job satisfaction was significant (β = 0.60, t = 10.9). We used variance accounted for (VAF) as suggested by Hair *et al.* (2014) to determine the mediating effect size. The VAF outcome of 25% (= −0.07/−0.29) falls between 20% and 80%, confirming partial mediation (Hair *et al.*, 2014), as well as confirming our assertion that when a manager creates autonomous motivation, it positively mediates the negative influence of sales outcome controls, supporting *H2b*.

Construct/items	t statistic	β	AVE	Cronbach's alpha	CR
Sales outcome controls (five-point, strongly agree – strongly disagree; source: Miao and Evans (2014)			0.594	0.854	0.878
My manager tells me about the expected level of achievement on sales volume or market share targets	18.629	0.807			
My manager monitors my performance on achieving sales volume or market share targets	7.698	0.883			
I receive frequent feedback on whether I am meeting expected achievement on sales volume or market share targets	12.257	0.725			
My manager ensures that I am aware of the extent to which I attain sales volume or market share targets	7.366	0.816			
I would be recognized by my manager if I perform well on sales volume or market share targets	19.435	0.59			
Autonomous motivation (five-point, strongly agree – strongly disagree; source: autonomy – Wang and Netemeyer (2002); competence – Williams and Deci (1996); relatedness – Ryan and Deci (2000)			0.515	0.910	0.925
I can decide on my own how to go about doing my work	20.048	0.833			
I have considerable opportunity for independence and freedom in how I do my job	28.872	0.855			
This job allows me to use my personal initiative or judgment in carrying out the work	34.38	0.86			
I have the freedom to come and go as I please	8.583	0.662			
I feel confident in my ability to learn my job	22.273	0.73			
I am able to meet the challenges of performing well in my sales job	7.328	0.51			
I am able to achieve my sales goals	11.425	0.617			
I have the ability to attend and complete sales training as needed	25.4	0.767			
I have all the knowledge I need to succeed at my job	16.278	0.686			
My immediate sales leader cares about me	10.2	0.557			
My co-workers and supervisors are generally friendly toward me	6.985	0.494			
The corporation and I share similar values	9.802	0.571			
Phone operational outcome controls (five-point, strongly agree – strongly disagree; source: Miao and Evans (2014)			0.716	0.902	0.926
My manager tells me about the expected level of achievement on-call metric standards	22.493	0.857			
My manager monitors my performance on achieving phone compliance	18.622	0.832			
I receive frequent feedback on whether I am meeting expected achievement on better abandonment rates	24.649	0.778			
My manager ensures that I am aware of the extent to which I attain a high volume of outbound calls	45.823	0.857			
I would be recognized by my manager if I perform well on exceeding the inbound call available time	20.058	0.901			
Job performance (five-point, strongly agree – strongly disagree; source: Miao and Evans (2014)			0.733	0.909	0.932
Generating a high level of dollar sales and phone adherence	51.654	0.857			
Generating sales of new products	36.32	0.86			
Exceeding sales and phone requirement targets	32.772	0.857			
Exceeding cross-sell opportunities with proper phone utilization	22.889	0.831			
Maximizing all sales incentives	47.846	0.876			
Job satisfaction (five-point, strongly agree – strongly disagree; source: Miao and Evans (2014)			0.791	0.934	0.950
My job is satisfying	35.251	0.917			
My job is exciting	37.173	0.85			
I am really doing something worthwhile in my job	67.237	0.882			
The work I do gives me a sense of accomplishment	38.89	0.92			
I plan to be at my current employer a year from now	26.208	0.874			

Table 4. Updated measurement model and properties

As hypothesized in *H3b* and *H3c*, phone operational outcome controls moderated the indirect effects of autonomous motivation on both job performance ($\beta = -0.22$, $t = 9.3$) and job satisfaction ($\beta = -0.16$, $t = 5.8$). Figures 3 and 4 plot the moderating effects. At higher levels of phone operational control, the relationships between autonomous motivation and both job performance and job satisfaction are substantially weakened. These moderating effects clearly illustrate that, when managers focus on phone operational outcomes, the net result may be a reduction or overshadowing of any benefit gained through autonomous motivation. Any sense of autonomous motivation is crowded out as a result of the increased controlled motivation.

On the other hand, we did not receive support for either *H3a* ($\beta = 0.04$, $t = 0.58$) or *H3d* ($\beta = 0.05$, $t = 0.29$). It appears that as sales outcome controls do not influence job performance and negatively influence job satisfaction, they dampen any potential phone control outcome moderating factor.

To validate our assumption that the lack of correlation between sales outcome controls and sales performance is due to the heavy influence of phone operational outcomes on an inside sales agent's job performance, we analyzed the model using phone operational outcome controls as an independent variable rather than a moderator (Figure 5). SmartPLS 3 analysis depicted a significant direct correlation between phone operational outcome controls and sales performance ($\beta = 0.23$, $t = 4.1$). This finding supports our assertion that

Table 5.
Discriminant validity

Constructs	Job performance	Job satisfaction	Phone operational outcomes controls	Autonomous motivation	Sales outcomes controls
Job performance	0.856				
Job satisfaction	0.744	0.889			
Phone operational outcomes controls	−0.223	−0.222	0.846		
Autonomous motivation	0.679	0.516	0.154	0.695	
Sales outcomes controls	0.221	−0.087	0.187	0.406	0.776

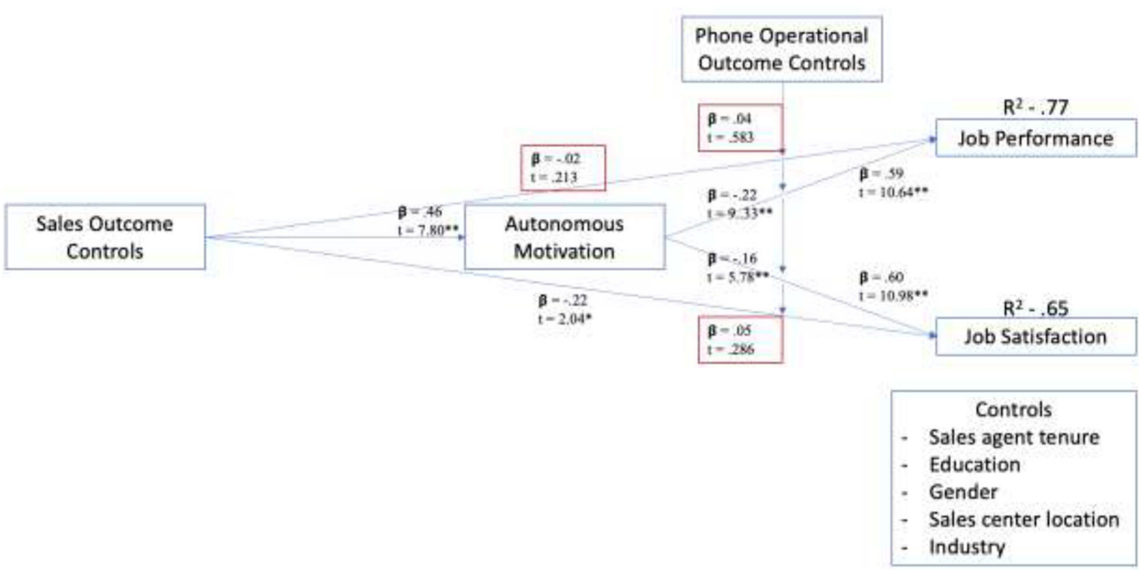

Figure 2.
Structural model – *t*-value and beta results

Construct relationships	β	Model estimation t-value	p
SOC → JP	−0.02	0.21	0.663
SOC → AM	0.46	7.8	0.001
SOC → JS	−0.22	2.04	0.042
AM → JP	0.59	10.64	0.001
AM → JS	0.6	10.98	0.001
Moderator effect			
AM × POC → JP	−0.22	9.33	0.001
AM × POC → JS	−0.16	5.78	0.001
SOC × POC → JP	0.04	0.58	0.663
SOC × POC → JS	0.05	0.286	0.798

Notes: SOC = sales outcome controls, AM = autonomous motivation, POC = phone operational outcome controls, JP = job performance and JS = job satisfaction

Table 6.
Model estimation

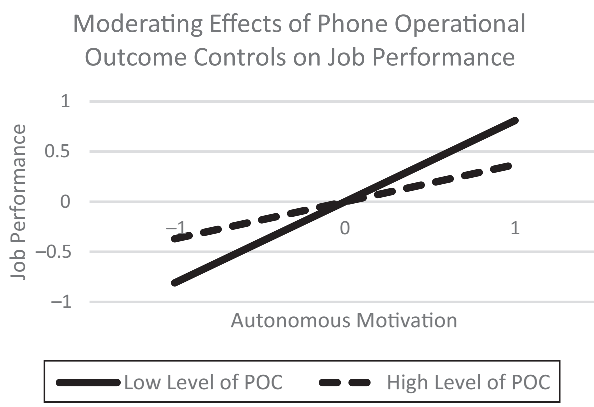

Figure 3.
Moderating effects of phone operational outcome controls on job performance

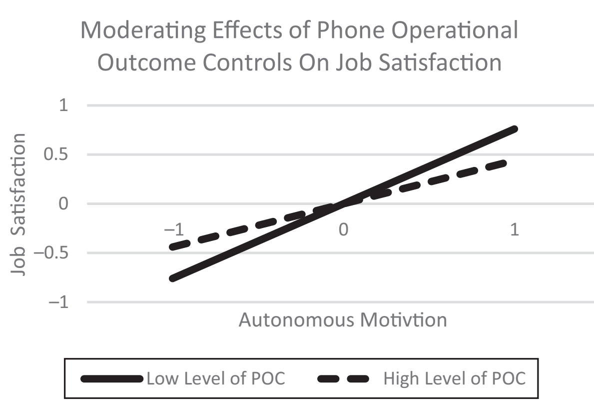

Figure 4.
Moderating effects of phone operational outcome controls on job satisfaction

the lack of a direct relationship between sales outcome controls and job performance (Figure 2) is explained by the high degree of phone operational adherence attached to the inside sales job that affects overall job performance. Our findings suggest the lack of consistency in the correlation between sales outcome controls and sales performance is due to not including operational outcome controls that may be part of a sales agent's job responsibilities.

5.3 Common method and non-response bias assessment

As survey data can be predisposed to biases, Harman's one-factor test was used to screen for common method bias (Randall *et al.*, 2011). Harman's one-factor test revealed that when all items were run in single-factor analysis, the un-rotated solution did not result in a single factor, nor did any single factor account for most of the variation (Podsakoff and Organ, 1986).

Inherent non-response bias was estimated using procedures suggested by Sax *et al.* (2003), in which late respondents are treated as non-respondents because they are initially unwilling to participate. When initial responses are not meaningfully distinctive from late respondents, researchers determine that non-response bias is not present. We clustered respondents into two groups during the data collection period: the first 90% to respond and the last 10% to respond. Responses on scale items provided by subjects in the two groups were compared with independent sample t-tests (Armstrong and Overton, 1977). Results show no substantial variance between the groups, supporting the contention that non-response bias was not an issue.

5.4 Secondary supporting data

A separate supporting study was conducted to further support and lend credibility to the survey results reported above. We partnered with a Fortune 100 financial services corporation that provided us with sales and operational data of 169 B2B commercial sales agents for 2015 and 2016. Our purpose was to examine the phone operational outcome construct in greater detail by evaluating the tactical phone operational activities inside sales managers use to evaluate inside sales agents' phone operational outcomes. We focused on inbound calls, average handle time and logged-in time to represent phone operational outcomes. These metrics are supported in the literature where they have been used as components of phone operational outcomes (Valle and Ruz, 2015; Koehl *et al.*, 2016; Valle *et al.*, 2017). Moreover, these are actual metrics inside sales managers use to gauge inside sales agents' phone operational outcomes (Fulham, 2016).

Therefore, our independent variables included net sales, inbound call metrics, average handle time and phone logged time. We were given the employees' job performance ratings and their job satisfaction results, the latter stemming from the company's annual Gallup job satisfaction survey, which served as our dependent variables, similar to our survey study.

We excluded any agent who had been with the company for less than six months after training. This approach allowed us to take into consideration the agents' time selling on the

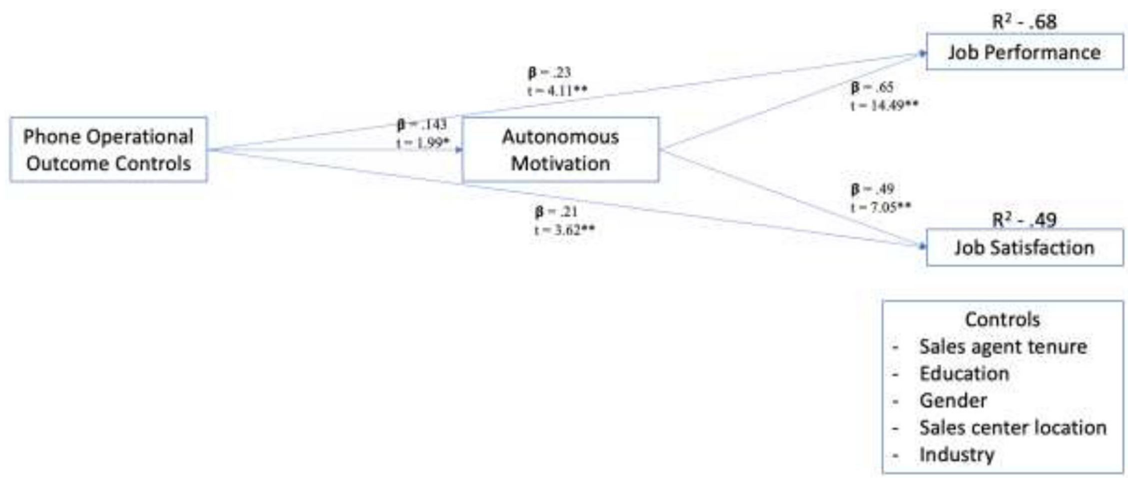

Figure 5.
Direct influence of phone operational outcome controls

sales floor, which included 89% of the respondents with more than six months' experience, bringing our sample to 166 B2B inside sales agents. Table 7 depicts the findings of the PLS regression analysis on these data. Results show the relationships between the sales and phone operational outcome metrics to inside sales agents' overall sales performance and job satisfaction. In all cases, the results are significant. Net sales had the largest impact on job performance ratings; almost three times that of the remaining metrics. However, job satisfaction appears more evenly predicted by all the metrics used.

These results lend further support to the fundamental theme of this study, which is that due to the differing context of inside sales, outcome controls must capture both sales and operational outcomes. There exists a need to expand measures to include both sales outcomes and phone operational outcomes.

5.5 Inside sales leader feedback

In our attempt to increase the generalization of our findings beyond the financial services industry, we used LinkedIn to gather inside sales leaders' feedback on the percentage of outcome controls used for sales and phone operational outcomes. Following Gelinas *et al.* (2017), we posted requests in three inside sales LinkedIn groups for data on the percentage of sales and phone operational outcomes that made up an inside sales agent's overall performance evaluation. We posted two additional follow-up requests encouraging responses from leader members from the LinkedIn groups. We received 23 email responses from inside sales leaders at varying levels. We removed eight B2C inside sales leaders from the response group because this study focuses on B2B sales. Table 8 summarizes the responders' information.

In addition to providing the response to our original question, the respondents included in their response the rationale for their approach. The feedback from one sales manager is typical of comments made by nearly every respondent in the sample: "Our performance metrics are a mix of phone activities (dialing the phone, talk time) and sales revenue goals."

Inside sales departments focus on phone operational metrics as a means to fill the top of the sales funnel. However, as inside sales become more complex, phone operational metrics grow in importance. A statement made by a sales director in a software firm emphasized that the quality of the discovery call warrants including phone operations as part of the outcome controls imposed on inside sales agents: "Research calls, when agents are on the phone gathering information about a prospect, creating 'good, detailed conversations' represents 8.3% of their total phone operational outcome."

As the summary depicts, the percent of sales performance on sales and phone operational outcomes varies by industry. However, a common thread is that, regardless of industry, inside sales agent performance includes both sales and phone operational outcomes. Of particular interest, the percent of job performance based on sales outcomes is similar to the secondary data sales outcome.

	Job performance		Job satisfaction	
Sales and phone operational outcomes	β	p-value	β	p-value
Net sales	0.631	0.000	0.237	0.023
Inbound calls	0.168	0.031	0.162	0.047
Average handle time	0.125	0.049	0.118	0.027
Logged in time	0.114	0.052	0.115	0.041

Table 7. Supporting operational data

Leadership level	Industry	Outcome controls Sales outcomes (%)	Phone outcomes (%)
Director inside sales	Commercial rental equipment	50	50
VP inside sales	Sales engagement software	80	20
VP inside sales	Education software	80	20
Manager inside sales	SQL software	60	40
AVP inside sales	Financial – investments	70	30
Manager inside sales	Electrical distributor	70	30
Manager inside sales	Commercial airline	75	25
VP inside sales	Financial – insurance	60	40
Manager inside sales	Real estate software	75	25
Manager inside sales	Industrial supplier	70	30
Manager inside sales	Event management	65	35
Sr. manager inside sales	Manufacturing	70	30
VP inside sales	Cloud software	75	25
VP inside sales	Computer chips and hardware	80	20
Director inside sales	Entertainment	80	20

Table 8.
Inside sales leader's feedback

6. Discussion of research findings

Our research triangulates three methodologies to provide support for the need to expand sales performance beyond sales outcomes and to include the company's applicable phone/operational outcomes. Past research on sales control (i.e. Challagalla and Shervani, 1996; Miao and Evans, 2013; Zallocco *et al.*, 2009) has solely focused on outside sales, which, perhaps, has limited the research on the subject. Our literature review revealed that this is the first study to examine sales controls in an inside sales context. Our survey results (Figure 2) illustrate that the sales context is significant because inside sales agent performance is influenced by both sales and phone operational outcomes.

The additional analysis, summarized in Figure 5, which explores the direct influence of operational outcome controls on sales performance along with the secondary data collected from industry (Table 7), further validates the need to bifurcate inside sales agents' outcome controls into sales and phone operational components.

This research takes a significant step forward by examining sales controls in an inside sales context, to our knowledge, the first research of its kind. By extending sales control research to an alternate sales context, we introduce the need to consider additional outcomes, not limited to revenue, as part of sales outcome controls. In an inside sales environment where every conversation is tracked, recorded and measured, it is logical to include phone operational results as part of an inside sales agents' overall control outcome portfolio. By introducing operational outcome control variables, we account for the entirety of a sales agent's performance evaluation and provide a comprehensive outcome evaluation. This perspective is critical to understanding the evolving role of a sales agent, where technology makes it easier for sales managers to track their employees, regardless of context (Sleep *et al.*, 2020).

In this research, we did not include outside sales agents' non-selling outcome controls. Therefore, it may be useful for future research to study and broaden the definition of outcome controls to a broader perspective beyond simply sales revenue. For instance, United Rentals, with new technology, is able to fully track all the details of an outside sales agent's daily responsibilities. Based on this data, United Rentals has expanded the agent's performance evaluation to include customer interaction and appointment outcomes as part of their job outcome controls.

In addition to broadening the application of sales outcome controls to inside sales, this research contributes to the sales literature by providing greater insights into the influence of autonomous and controlled motivation on sales job performance and satisfaction. Our study takes an initial step to evaluate the conflicting challenge inside sales managers face between creating an autonomous motivational environment and, at the same time, managing through controlled motivation to make certain inside sales agents meet both sales and phone operational objectives. While previous research has focused on the individual influence of autonomous motivation on sales controls (Miao and Evans, 2014), our study examines the influence of autonomous and controlled motivation simultaneously, which illustrates the realistic challenges sales managers face in using multiple approaches to motivate inside sales agent outcomes (Darmon and Martin, 2011). Due to the amount of available data, inside sales managers face an interesting quandary: Do they drive performance by "pushing" the numbers or do they create a climate in which inside sales agents have the autonomy to influence and shape their sales efforts? Both approaches differentially influence the nature and use of outcome controls.

Our findings indicate that inside sales managers, who focus on creating autonomous motivation, positively influence the application of sales outcome controls to job performance and satisfaction. A leadership approach centered on maximizing an inside sales agent's autonomy, competence and relatedness increase the likelihood of better sales outcomes (Kuvaas *et al.*, 2016), which we see play out in our research. On the other hand, regardless of the level of autonomous motivation that is present, once the inside sales manager's management approach shifts to one of controlled motivation by focusing on phone operational outcomes, it buffers any of the autonomous motivational benefits. Hence, a sales manager's leadership approach has an effect on the overall success of all outcome controls that may be used. This perspective represents another important area that future research can explore. For example, what is the optimal balance between autonomous and controlled motivation to benefit sales outcome controls? While implementing one form of motivational approach, a sales manager needs to understand the use of alternate forms and how they can conflict with (or enhance) one another.

7. Managerial implications

This study offers several actionable implications for inside sales practitioners. First, growing evidence indicates that, in many organizations, inside sales are overtaking outside sales as the preferred sales method. Many organizations manage inside sales departments like service call centers (Jansen and Callaghan, 2014), focusing on the financial benefits of housing sales agents in a large call center environment, rather than managing inside sales agents as a hybrid between operational efficiency and achieving sales goals. Skok (2015) suggests that the average tenure of inside sales agents is only 2.5 years. For most companies, the cost of replacing sales staff is overwhelming. Inside sales leaders should, therefore, consider creating a positive organizational culture that is based on autonomous motivation. For starters, practitioners should consider an approach taken by Nationwide Insurance, who created the "agent experience," which includes a process from the time a new agent receives the job offer through the first year of employment. Making the "agent experience" a success requires leaders to engage with agents at the time of the offer and to continue the conversation throughout the onboarding process, during training and while entering the sales force. By proactively engaging a new sales agent, the sales leader can build a connection that creates an in-depth relationship between supervisor and agent. As part of the "agent experience," the company should focus on providing calculated initial training and developing an ongoing program that increases the agent's competence during the first year of employment. Finally, companies must find ways to give the inside sales agent autonomy over their time. One of the most significant challenges in an inside sales center is employee time restriction (Aksin *et al.*, 2007). For example, ABF Freight allows inside sales agents to have full autonomy over their time. The company's perspective is that inside sales agents are merely outside agents who work inside, thereby allowing inside sales agents to dictate their time, approach, selling style and daily activities.

Second, focusing on autonomous motivation leads to higher sales performance and job satisfaction. Therefore, sales leaders have an excellent opportunity to focus on coaching agents to become part of the decision-making process. Coaching can take the form of a manager offering side-by-side advice to the sales agent while they are on a sales call. Synchronous coaching covers two essential topics. First, it demonstrates to the agent that the manager is interested in their feedback (autonomy) and wants the agent to grow their sales or product knowledge (competence). Second, the relatedness and connection between the manager and inside sales agent demonstrate a manager's care for the new agent, building on the relationship created during the hiring process. Similarly, weekly or monthly feedback on results should focus on "how" the agent is performing, rather than on "what" the agent is achieving. The discussion will need to cover metrics, but this should not be the primary focus. Instead, the agent and manager should discuss how the agent is doing, additional tasking and how the agent can further succeed while concentrating on the agent's activities and capabilities.

Third, there is the challenge of creating a balance between sales outcomes and phone operational outcomes such as answering multiple calls and monitoring the length of calls. On the surface, problems associated with creating this balance may seem insurmountable; however, with some creativity, the skilled manager can overcome this hurdle. For example, a manager can institute a policy that when an inside sales agent reaches a sales goal (sales outcome), the agent can continue to be on the phone (pursue an operational outcome) or can opt to take training, provide coaching, etc. There is also the added "reward" that, based on performance, the agent can choose his or her schedule. Finally, operational requirements can be shared with inside sales staff, allowing the inside sales group to help provide a solution. Even though some practitioners may scoff at the implications, these options all have the potential to improve inside sales agent job performance and satisfaction.

8. Limitations

Although this study provides significant insights, it is not without limitations. First, even though our survey included inside sales agents from multiple industries, a larger sample could help to generalize the findings. Second, while this study appears to be the first to examine the effects of sales controls on both sales performance and job satisfaction, the effects on agent turnover were not examined. In an industry with 34% attrition (Skok, 2015), the value of studying the downstream impact of sales and operational outcomes is extremely valuable. As sales researchers, we often stop at the results level, failing to consider if better job performance or satisfaction encourages inside salespeople to stay with a corporation.

Third, the study focused on B2B inside sales agents and did not include B2C inside sales agents. Generally, B2B inside sales agents is involved with business owners who require a higher level of sophistication and product knowledge (competence) that is critical for autonomous motivation. Moreover, Jansen and Callaghan (2014) indicated that B2B inside sales agents tend to have more autonomy and thus are likely to possess a greater sense of autonomous motivation than B2C inside sales agents. B2C inside sales agents operating in inbound call centers are more restricted in call arrival patterns and have several operational outcomes that limit their schedule flexibility. B2C agents, as a result, are more constrained by behavioral controls and likely experience higher levels of controlled motivation. Additional research can further probe the effects of sales and operational controls and any mediating effects of autonomous motivation, on job performance and satisfaction.

Fourth, this study was grounded in self-determination theory. While SDT was validated in outside sales research (Chen *et al.*, 2015; Hohenberg and Homburg, 2016), this is the first study to examine inside sales incorporating variables and predictions based on SDT. While alternate motivational theories may provide new perspectives, due to the monitoring, evaluation and oversight of inside call centers, the SDT components of autonomy, competence and relatedness fit inside sales centers' operational models exceedingly well, as its application creates autonomous motivation in an arena that is known for limitations rather than motivations.

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Flipping the script: Consumers' propensity for self-medication

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ABSTRACT
The U.S. health-care debate has focused on several macro-level factors to accomplish cost-containment, universal accessibility, and high-quality delivery in the marketplace. The present research empirically explores the drivers of consumer's propensity to self-medicate. The findings suggest that consumers' need for control is an important determinant of their propensity to self-medicate. Specifically, health locus of control factors are significant predictors of differences between Baby Boomers and Gen Ys in their propensity to self-medicate. Findings also suggest the importance of the role of a 'powerful other' such as a health-care provider in deterring consumer from self-medication.

Americans have mixed feelings about the general value of medications and therapies. A study by Pew Research found that more than half of U.S. consumers believe that medical treatments cause as many problems as they resolve (Milanez & Strauss, 2018). The same study points out that nearly 70% of American consumers believe that there is too much dependence on prescription medicines, and that the side effects are worse than the cure (Milanez & Strauss, 2018). Consumers, regardless of their incomes, assert that quality health care is unaffordable. There is also a mistrust of the health-care industry and government's role in enhancing consumers' well-being (Armstrong et al., 2006; Kher, 2002; Khullar, 2018). However, these attitudes have not curbed consumer spending on health care.

American consumers spent approximately 3.65 USD trillion or 11,212 USD per capita on health care in 2018 (Sherman, 2019). This is expected to grow at an average rate of 5.5% per year, toppling 6.0 trillion by year 2027 (CMS, 2018). Cast against the backdrop of a global pandemic, consumers are increasingly challenged to make difficult decisions about their health care and wellness spending, health-care providers, and medications.

Health-care spending in the U.S. is considered one of the highest in the world, and larger than the GDP of countries such as Brazil, Canada, and Mexico (Burrill & Beaudoin, 2019; Sherman, 2019). The U.S. health-care industry is also among the most convoluted channel for health-care delivery in the world. There are a multitude of stakeholders, including but not limited to public policy-makers, third-party payers, health-care providers, manufacturers, pharmacy benefit managers (PBMs), retailers, and patients. In U.S. health-care channels, consumers (patients) have the least amount of power and the most amount of dependency. The U.S. health-care agenda is among the most highly debated political issues, drawing widespread media attention and public scrutiny due to escalating costs (Lovelace, 2019).

Some advocate for higher consumer involvement in their own health care as a solution (Bennadi, 2013; Herzlinger, 2002; Noone & Blanchette, 2018; Rahtz & Szykman, 2008; Schultz, 2002; Woodward, 2012). From the patients' perspective, there is an increase in consumers' willingness to take care of themselves and maintain self-confidence in their own health-care decisions, reducing dependency on physicians (Betts et al., 2020). As a result, consumer involvement vis-à-vis self-medication and over-the-counter drug usage is rising at the highest rate in U.S. history (Lovelace, 2019; NBH, n.d.; Rajamma & Pelton, 2009, 2010).

Given its nascent nature in and potential importance for reducing health-care costs, this study focuses on consumers' propensity to self-medicate. The present research explores key consumer-centric attitudinal (i.e., locus of control and self-efficacy) and demographic (Millennials versus Baby Boomers) antecedents. Self-medication in this study is defined as consumer-initiated use of prescription and non-prescription drugs without physician consultations (Bennadi, 2013; Herxheimer, 1999).

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The significance of this study is highlighted by a fundamental shift in American consumers' reliance on self-directed health-care maintenance and treatments. It coincides with consumers' increased public scrutiny of health-care institutions, practitioners, and third-party payer systems. This *do-it-yourself* approach has permeated the public debate on health-care coverage and cost-containment. In fact, consumer empowerment in health-care decision-making has been the focus of public policymakers, especially in the election cycle (Lovelace & Turner, 2019). So, it is no surprise that there is increased research attention afforded to consumers' self-reliance in health care (Berkowitz & Schewe, 2011; Chambers et al., 1997; Sloand & Vessey, 2001; Winkelstein et al., 2000). The aging U.S. population coupled with health-care challenges has generated much research attention, as well (Hamm et al., 2017; Rahtz et al., 2004; Rahtz & Szykman, 2008).

Self-medication is pervasive globally, especially in developing countries where health affordability and access are limited (Bennadi, 2013; Chang & Trivedi, 2003). The World Health Organization reports that the self-prescription of pharmaceuticals far exceeds that of non-prescription or over-the-counter (OTC) drugs. This may be attributed to the increase in the direct-to-consumer advertisements for prescription and non-prescription medicines (Anonymous, 1997; Mackey et al., 2015); increases in prescription and medical care costs (Shoor & Lorig, 2002); lack of access to qualified health-care providers; and constraints imposed by limited or no health-care insurance coverage (Chang & Trivedi, 2003). While some research attention has been given to the social and economic correlates of self-medication, there is a paucity of research attention afforded to the drivers of consumers' attitudes toward self-medication. The present research aims to address this research gap.

Literature review

Self-medication is defined as the use of non-prescription or prescription drugs without the advice or supervision of a medical practitioner (Bennadi, 2013; Herxheimer, 1999). The impetus for self-medication can come from recommendations made by family, friends, neighbors, pharmacists or even from the social media. The fatalities and complications associated with consumers' self-treatment using non-pharmaceuticals (e.g., chloroquine phosphate during the Covid-19 crisis) stand in testament to how self-medication can be promulgated by speculations on social media platforms or "endorsements" by public figures.

Consumers may resort to self-medication when professional care is too expensive or unavailable. Under such conditions, consumers balance associated risks such as incorrect self-diagnosis, incorrect dosages, side-effects, and harmful drug interactions against the benefits of lower costs, increased access, and enhanced convenience of non-conventional treatment procurement (Bennadi, 2013; Chang & Trivedi, 2003; Ruiz, 2010; Mahapatra, 2017; Noone & Blanchette, 2018). Government directives for self-medications presume that the patient is adequately informed about the benefits and harms associated with products or treatments (Bergmann, 2003). These presumptions are not always apposite. Chang and Trivedi (2003) found a negative correlation between the use of self-medication, income level, and the extent of insurance coverage available to the consumer. Taking these assertions together, it seems that self-medication means taking control of one's health care anchored well-being.

The ways in which consumer control drives behaviors have received extensive research attention (Ajzen, 2002; Rajamma & Pelton, 2009, 2010; Venkatesh, 2000). Social cognitive theory (Bandura, 1986) suggests that the notion of self-control is part of a consumer's self-regulation which acts as an internal control mechanism.[1] This research focuses on the notion of control as the focal driver of the consumer's desire to self-control well-being through self-medication.

Perceived control

Perceived control is defined as the "expectation of having the power to participate in making decisions in order to obtain desirable consequences and a sense of personal competence in a given situation" (Rodin, 1990, p. 4). Perception of control or the need for control is the basic motivation that drives consumers' intention to behave, actual behaviors, and emotions (Ajzen, 2002; Consiglio et al., 2018; Levav & Zhu, 2009; Nysveen et al., 2005; Skinner, 1996; Venkatesh, 2000). The need for control is considered "an intrinsic necessity of life itself" (Adler, 1930) and people continuously strive to control and master the environment they are in (Cohen & Hansel, 1959; Langer, 1983; Lefcourt, 1973).

Seligman (1975) explains that a person perceives control over a situation when they perceive a link between their action and the outcomes. However, the perception of control is often considered to be more important than

[1]We did not use the self-medication hypothesis (Khantzian, 1997) as we are not dealing with substance abuse (e.g., alcohol, drugs). Further, psychological distress is described as one of the determining factors of such behaviors, which is not investigated in the present study.

actual outcome of behavior (Langer, 1983). So, when a person achieves his/her desired outcome, it signifies control over the situation and vice versa (Higginson et al., 2011; Langer, 1983). One of the necessary conditions for the perception or illusion of control to exist in a situation is that the person should be aware of the many alternative solutions available to them (Langer, 1983). However, sometimes things may be beyond a person's control.

Researchers have pointed out that when people perceive a loss of control over an event that threatens their freedom to choose among alternatives, they strive to regain control or power over the situation (e.g., Higginson et al., 2011; Landau et al., 2015; Langer, 1983). Psychological reactance is an example of this phenomenon. In addition, in the short run, perception of loss of control results in anxiety and stress. In the event of chronic or prolonged feeling of uncontrollability, people just give up and become passive (Langer, 1983). However, according to researchers (e.g., de Quadros-wander et al., 2013; Lachman et al., 2009; Langer, 1983), we can increase the well-being of these folks by reinstating the illusion of control.

In this study, health locus of control (internal, powerful others and chance) and self-efficacy are conceived as underlying consumers' need for control (Bandura, 1977, 1986; Rajamma & Pelton, 2009, 2010; Wallston et al., 1978). This is particularly relevant for the health-care market because most patients do not feel that they have control over their health-care choices. This could be related to access to or cost of health care. Self-medication may be an attempt to gain some control of this crucial aspect of one's life.

Health Locus of Control (HLC)

Health locus of control refers to specific beliefs of controllability of health-related situations, and it has been widely researched as a predictor of health-related behavior (e.g., Cheng et al., 2016; Marton et al., 2020; Norman et al., 1997; Seeman & Seeman, 1983; Steptoe & Wardle, 2001; Strickland, 1978; Wallston et al., 1992). Relying on the conceptualization of Health Locus of Control (HLC) by Wallston et al. (1978), we focus on Internal HLC, Powerful others HLC and Chance HLC as three dimensions of health locus of control. Internal HLC (IHLC) taps into the person's belief that he/she has complete control over his/her health and one's own action dictates one's health (Wallston et al., 1978). Researchers argue that people with high internal health locus of control tend to react more positively to an environment that offers them choice and freedom (Musich et al., 2020; Reich et al., 1997; Schneider et al., 2006). It can be argued that self-medication seems to offer the consumer the freedom of choice and decision-making. Thus, we hypothesize that:

H_1: Propensity to self-medicate will be positively associated with internal health locus of control (IHLC).

Conversely, powerful others health locus of control (PHLC) is external, and the person believes that the control of his/her health rest on a *powerful other* such as a health-care provider (Wallston et al., 1978). Previous studies have been inconclusive regarding the relationship between powerful others HLC and health-related behaviors. Results vary across a spectrum from a negative relationship (e.g., Norman et al., 1997) to no relationship (e.g., Grotz et al., 2011; Pourhoseinzadeh et al., 2017; Tapler, 1996; Wallston et al., 1992) or even a positive (Çepni & Kitis, 2017; Kim & Min Baek, 2019) association between powerful others HLC and health-related behavior. Bailis et al. (2010) found that PHLC increased initially and then declined as people grew older. We conceptualize self-medication as an activity stemming from the desire for one's control over her/his health. Based on the findings to date, we hypothesize that there will be a negative relationship between PHLC and the propensity to self-medicate:

H_2: Propensity to self-medicate is negatively associated with powerful others health locus of control (PHLC).

The focus of the third dimension – chance health locus of control (CHLC) – is again on external control. Reich et al. (1997) argue that people with external locus of control tend to respond positively in situations which do not place the burden of choice upon them. In the case of CHLC, the belief is that health-related events results by chance or luck (Wallston et al., 1978). The relationship between CHLC and health behavior has been inconclusive. Some researchers have found a negative relationship between CHLC and health-related behaviors (e.g., Çepni & Kitis, 2017; Cheng et al., 2016; Grotz et al., 2011; Steptoe & Wardle, 2001; Wallston et al., 1978); whereas, others report an absence of any relationship (e.g., Wallston et al., 1992). Relationship between CHLC and age have also been found to follow an inverted U pattern (Bailis et al., 2010). More recently, Musich et al. (2020) suggest that people with chance LOC are "less likely to utilize preventive service and to opt-out of procedures with significant cost sharing" (p. 279). They also found that income played a major role – inpatient admission rates and medicine and drug expenditure was lower for internal LOC than chance LOC (p. 278). We argue that a person who feels that his health-related well-being is purely due to chance may not be willing to take the risk of self-medication. On the other hand, a consumer may feel that health-related events are going to happen anyway (fatalistic) or purely by chance, so I have nothing to lose by self-medication. Thus, while we suggest that chance locus of control may be associated with propensity to self-medicate, we are unable to hypothesize a direction of the association.

H_3: Propensity to self-medicate will be associated with chance health locus of control (CHLC).

Self-efficacy

Self-efficacy (SE) refers to the belief that one is capable of undertaking the tasks required to fulfill a certain objective (Bandura, 1977, 1986). In short, self-efficacy in a way is the belief about the control over the situation or ability to cope with a situation. Self-efficacy beliefs have long been associated with health-related behaviors (Breland et al., 2020; Sheeran et al., 2016; Tapler, 1996), and consumer choice behavior (Bandura, 1977; Cervone, 2000; Litt, 1988; Reed et al., 2012; Touré-Tillery & Kouchaki, in press). Researchers note that a person's self-efficacy will determine the amount of effort that he/she will expend even in the face of adversities and risk (Bandura, 1977, 1986). This makes it an important predictor in the case of self-medication, especially since self-medication has its inherent risks, and a person who is self-medicating is willingly taking a risk and dealing with the associated uncertainty. Thus, we hypothesize:

H_4: Propensity to self-medicate will be positively associated with consumer's self-efficacy.

Baby Boomers and Millennials have set many practitioners and academicians to think in terms of generational marketing. As the consumption trend-setters, Baby Boomers are widely viewed as vanguards for self-medication. An increasing number of Baby Boomers are resorting to self-medication and self-diagnosis, and the reasons include the convenience of not having to consult a physician and taking control over their own medical care (Kher, 2002).

Generational Differences and Self-Medication

Baby Boomers (born between 1946 and 1964) and Millennials (born between 1977 and 1994) have been identified as starkly different in their choices, values, consumption patterns, and attitudes toward life (Gilbert, 2011; Welanetz & Maloney, 2002/2003). They are the two largest generations in U.S. history, and their spending power makes it difficult to ignore them (Beauchamp & Barnes, 2015). Research has explored the generational differences in the context of self-medication (Arandjelovic, 2002; Jacob, 2002; Wellner, 1999). However, the findings are inconclusive. For example, researchers (e.g., Arandjelovic, 2002; Generation Prescription, 2018) found that Baby Boomers are more likely to self-medicate, whereas Wellner (1999) found Millennials to be more prone to self-medicate. This view has also been alluded to in several recent trade and academic publications, which suggests that millennials and Baby Boomers tend to differ in how they manage crisis and despair (Ducharme, 2019), their use of alternate medications "(Generation Prescription, 2018; Per et al., 2019), and healthy or unhealthy lifestyle (Shen, 2019). Further, De las Cuevas et al. (2014) points out that adherence to prescribed treatment increases with age.

Several studies have found that self-medication is prevalent and increasing among Millennial adolescents (Bush & Rabin, 1976, 1996; Dengler & Roberts, 1996; Lee et al., 2017; Rass, 2017; Rudolf et al., 1993; Sloand et al., 1997; Sloand & Vessey, 2001; Tse et al., 1989). Chambers et al. (1997) report that about 75% of their adolescent respondents self-medicated without their parents' knowledge. However, some of the self-medication among the Millennials takes place with the permission of their parents, and these include headaches, sore throats, fever, upper respiratory infections, and rashes (Sloand & Vessey, 2001).

Millennials are more uniqueness-oriented, individualistic, self-assured, and realistic than the Baby Boomer generation (Gilbert, 2011; Jacob, 2002; Welanetz & Maloney, 2002/2003). Jacob (2002) noted that Millennials believe in taking charge of their health and taking an active role in the choice and implementation of their health-care treatments. On the other hand, Baby Boomers lean toward more rule-conformance and idealism than Millennials (Welanetz & Maloney, 2002/2003). A few studies have explored the generational differences in the context of self-medication; however, the findings are inconclusive (e.g., Arandjelovic, 2002; Wellner, 1999; Jacob, 2002; Generation Prescription, 2018).

Millennials are less prone to chronic conditions and other severe medical conditions that require prescription medications. Their medication regimens might be limited to minor ailments and enhancing quality of life (e.g., contraceptives, acne medications, body and stamina building drugs) which can more easily be self-prescribed than more complex medications for conditions such as diabetes mellitus or high blood pressure that occurs with advanced age. However, being a digital savvy generation, it has been found that GenYers increasingly get illegal pharmaceutical products from online options (Reddy, 2018). In comparison, Baby Boomers require more drugs and spend more on drugs. However, as they play by rules, conventions, and idealism (LaSalle, 2003), Baby Boomers are less likely to self-medicate. The counter-argument is that Baby Boomers are increasingly spending on wellness and lifestyle enhancement drugs and because of the stigma associated with such intimate and personal products, Baby Boomers are less likely to consult a doctor for the purchase of such drugs (unless other medical conditions preclude that). However, since our focus is on the relative differences in propensity to self-medicate between two generations, we hypothesized that:

H_5: Propensity to self-medicate will be higher among Millennials than Baby Boomers.

Research on the relationship between age and locus of control is somewhat ambiguous (Gatz & Karel, 1993). Some researchers have pointed out that internal health locus of control increases until middle age and decreases thereafter (Ryckman & Malikiosi, 1975). On the other hand, external locus of control, i.e., powerful others health locus of control and chance health locus of control, seem to increase with age (Grotz et al., 2011; Lachman, 1986; Sargent-Cox & Anstey, 2014). However, others have pointed out that even though the reliance on external factors increases with increase in age, there will be no decrease in internal health locus of control with advancing age (Aldwin & Gilmer, 2003; Gatz & Karel, 1993; Lachman, 1986). On the contrary, Bailis et al. (2010) argue that IHLC declines as people get older whereas PHLC and CHLC increases until middle age and declines thereafter (an inverted U shape). We argue that as people age, they become less sure about their own ability to control their destiny, and even become somewhat unsure if others such as doctors really know what they are doing. In fact, they may start believing in 'life happens,' i.e., somethings are out of control of humans. We believe that this would result in generational differences moderating the relationship between propensity to self-medicate and different control dimensions as follows:

H_6: The positive relationship between propensity to self-medicate and internal health locus of control (IHLC) will be stronger among Millennials than Baby Boomers.

H_7: The negative relationship between propensity to self-medicate and powerful others health locus of control (PHLC) will be stronger among Millennials than Baby Boomers.

H_8: The relationship between propensity to self-medicate and chance health locus of control (CHLC) will be stronger among Millennials than Baby Boomers.

Previous studies find a negative relationship between self-efficacy (computer self-efficacy) and age (Reed et al., 2005). Bandura (1994) also alludes to this, although he argues that the relationship is largely dependent on the socio-economic and educational backgrounds of the individual. On the other hand, Marquie and Huet (2000) did not find any differences between the young and the old in terms of their general self-efficacy. However, it is to be noted that previous studies have mostly used an older sample (i.e., senior citizens). Considering the risk inculcated in the self-medication decision, this research is grounded in Reed et al. (2005) and Bandura (1994), speculating that Millennials' greater self-efficacy differentiates them from Baby Boomers in their propensity to self-medicate, which in turn will lead to greater levels of self-medication among Millennials.

H_9: The positive relationship between propensity to self-medicate and self-efficacy (SE) will be stronger among Millennials than Baby Boomers.

Control variables

Gender, education, income, and insurance coverage are control variables in this study. Gender is a key determinant of health-care choices and behaviors (Green & Pope, 1999). Women have been found to be more health-conscious, are more involved in health-related behaviors (i.e., physician consultations), seek more medical services, seek more information about their ailment-(s), take vitamins regularly, engage in regular exercise, and diet more than their male counterparts (Arandjelovic, 2002; Conner & Norman, 1996; Green & Pope, 1999; Stelmach et al., 2004). Corollary to the finding that women seek more health-care services is the argument that they are less likely to self-medicate. However, Bush and Rabin (1976) found that women, both young and old, self-medicate more than men. They attribute this to the increased use of pain relievers among women than men. This result is supported by Dengler and Roberts (1996).

Income, education, and availability of health insurance are seminal socio-demographic variables in the context of health-care behavior (cf. Barnes et al., 2004). The concern with health care of the low income, less-educated consumers is often attributed to their lack of access to health care and insurance. Low-income consumers are less likely to have adequate health insurance coverage and are more resource-challenged. Accordingly, they might choose self-medication rather than spending limited funds on visiting a medical practitioner (Pagan et al., 2006). The role of educational status in determining the propensity to self-medicate is also intuitive. Consumers with higher educational status have been found to self-medicate more than consumers with lower levels of education (Ahmed & Sulaiman, 2016; Chang et al., 2017; Grigoryan et al., 2006). More educated consumers have the cognitive capacity to access and process information available through ads as well as the Internet.

Research methodology

An online consumer panel was used as sampling frame for this study and an online survey was mailed (through the independent research firm managing the panel) to a randomly chosen set of 2000 respondents. Our goal was to collect responses from 350 Baby Boomers and 350 Millennials. Care was also taken to ensure a balanced representation of respondents from all the four regions of the U.S in the final sample. The final sample for this study consisted of 350 Baby Boomers and 350 Millennials resulting in a sample size of 700 respondents. The sample size was determined by the guideline given by Hair et al. (1998, p. 98) that the sample size should be approximately five times the number of items in the questionnaire. Since the questionnaire has 71 items measuring independent variables, 350 per generation can be considered as a reasonable sample size for each subgroup. The demographic distribution of the sample is shown in Table 1.

Consumer panel data have been used by many researchers to conduct segmentation studies to understand purchase behavior (e.g., Frank & Strain, 1972; Parfitt & Collins, 1968) and to understand the purchase behavior involving pharmaceutical products (e.g., Bowman et al., 2004). Panels provide access to a well-defined population of interest. This is especially important in collecting generational data. The criterion for inclusion in this study was only the respondent's date of birth. The data were first checked for normality, linearity, independence of error terms, and homoscedasticity. Further, we also checked to ensure the absence of outlier or other influential observations (Cook's D = 0.929; leverage value = 0.526).

Table 1. Respondent profile.

Characteristics	Frequency	Percentage
Gender		
Male	291	41.6
Female	409	58.4
Regional Representation		
North-East	209	29.9
South	198	28.3
Mid-West	141	20.1
West	148	21.1
Others	4	.6
Employment Status		
Unemployed	238	34
Part-time	127	18.1
Full time	312	44.6
Summers only	23	3.3
Marital Status		
Never Married	259	37.1
Married	333	47.6
Divorced	107	15.3

N = 700

Scale items for measuring the focal constructs (IHLC, PHLC, CHLC, and SE) were adapted from existing psychology and social science literature. The scale items measuring health locus of control were borrowed from Wallston et al. (1978), and self-efficacy from Schwarzer and Jerusalem (1995). Scale items for measuring propensity to self-medicate (PSM) was developed for this study.

Confirmatory factor analysis (CFA) was used to check for the reliability and validity of the scale items (Anderson & Gerbing, 1988). The fit indices for the measurement model of final retained items indicate that the model has reasonably good fit (CFI = 0.94, IFI = 0.94, NFI = 0.93, NNFI = 0.93, GFI = 0.91, AGFI = 0.88, RMSEA = 0.07). The resulting scales (see Table 2) were also found to have acceptable levels of reliability ($\alpha > 0.66$ and CR > 0.66) as per Nunnally (1978) and Robinson et al. (1991). The correlations estimates (see Table 3) between the two constructs (ϕ) were lower than the square roots of AVEs for each scale (Fornell & Larcker, 1981). Further, item-total correlations (not shown due to space constraint) were examined and in general the inter-item correlations within a construct were greater than across construct correlations (Churchill, 1979), and all the correlations exceeded the recommended level of 0.40 (Jayanti & Burns, 1998). Together, these suggest acceptable levels of convergent and discriminant validity.

Although not hypothesized, we used ANOVA to establish that a difference exists between Baby Boomers and Millennials with respect to their propensity to self-medicate and its antecedents (Table 4). The results indicate that there is a significant difference between the two generations. While millennials score higher, compared to baby-boomers (n.d.), on internal health locus of control (IHLC) and propensity to self-medicate (PSM), they also feel that listening to powerful others (PHLC) is better for them. Baby boomers on the other hand score higher, compared to millennials, on self-efficacy, and surprisingly on chance health locus of control (CHLC) too. Such differences that we found between the two generations is consistent with findings and assertions

Table 2. Measures and their reliabilities (CFA results).

Construct Names and Scale items		λ	AVE	CR	Alpha
Chance-HLC (CHLC)					
C2	No matter what I do, I am likely to get sick	0.67			
C3	Luck is a big part in determining how soon I will recover from illness	0.83			
C4	My good health is largely a matter of good fortune	0.68			
C5	No matter what I do, if I am going to get sick, I will get sick	0.70	0.52	0.81	0.81
Individual-HLC (IHLC)					
I3	If I take the right actions, I can stay healthy	0.72			
I4	If I take care of myself, I can avoid illness	0.78	0.56	0.72	0.72
Powerful Others-HLC (PHLC)					
P3	Following doctor's orders is the best way for me to stay healthy	0.95			
P4	Health professionals keep me healthy	0.48			
P5	The type of care I receive from other people is what is responsible for how well I recover from illness	0.38	0.43	0.66	0.66
Self-Efficacy (SE)					
G4	If someone opposes me, I have the means and ways to get what I want	0.70			
G5	It is easy for me to stick to my aims and accomplish my goals	0.75			
G6	I can handle unforeseen situations due to my resourcefulness	0.81			
G10	I am confident that I could deal efficiently with unexpected events	0.65	0.53	0.82	0.82
Propensity to Self-Medicate (PSM)					
S1	I often self-treat an illness without the advice from a health care professional	0.60			
S4	Asking a health care practitioner for advice is unnecessary when choosing a treatment protocol for a non-serious ailment	0.70			
S5	I would recommend self-treatment to others	0.83	0.51	0.76	0.75

Chi-Square = 404.38, *p*-value = 0.00; RMSEA = 0.069; CFI = 0.94, IFI = 0.94, NFI = 0.92, NNFI = 0.92, GFI = 0.93, AGFI = 0.90.

Table 3. Inter-construct correlation (ϕ Matrix) using CFA.

	CHLC	IHLC	PHLC	SE	SM	AVE	CR	Alpha
CHLC	**0.722**					0.523	0.811	0.807
IHLC	−0.180	**0.751**				0.563	0.721	0.723
PHLC	−0.450	0.350	**0.653**			0.426	0.657	0.663
SE	0.500	0.260	−0.210	**0.730**		0.533	0.819	0.816
PSM	0.060	0.050	0.060	0.100	**0.716**	0.513	0.755	0.748

The diagonal elements are Square Roots of AVE.

Table 4. Generational difference in focal constructs associated with propensity to self-medicate.

		Baby Boomer	Millennials	Levene's Stats	Sig.	F or BF Stats	Sig.
IHLC	Mean	3.86	4.33	2.23	0.14	50.99	0.00
	SD	0.93	0.82				
PHLC	Mean	2.92	3.67	0.65	0.42	135.20	0.00
	SD	0.85	0.85				
CHLC	Mean	4.30	3.11	7.29	0.01	374.73	0.00
	SD	0.75	0.86				
SE	Mean	4.68	4.01	6.80	0.01	139.81	0.00
	SD	0.76	0.74				
PSM	Mean	3.05	3.33	0.09	0.76	11.30	0.00
	SD	1.09	1.10				

made in the health-care literature (cf. Musich et al., 2020; Schneider et al., 2018).

Hierarchical regression analyses (four regression models) were used to test the hypothesized relationships (Table 5), all with propensity of self-medicate (PSM) as dependent variable. The first model (M1) included only the control variables – gender, education, income, and insurance status as independent variables. The second model (M2) also included the three 'locus of control' constructs (IHLC, PHLC, and CHLC) and self-efficacy (SE). The third model (M3) added dummy-coded generation (GEN) variable to the variables used in M2. Finally, in the fourth model, the interaction between the moderator (GEN) and the five focal constructs are added to M3. The results are presented in Table 5.

The results for Model 4 provide support for H3, H4, H5, H6, and H7, but not for H1, H2, H8, and H9. These indicate that the propensity to self-medicate is positively associated with chance locus of control (CHLC – H3) and self-efficacy (SE – H4). Further, Millennials are more likely to engage in self-medication (H5). In addition, if Millennials feel more strongly about their own ability to control their health-related well-being (IHLC), they are more likely to engage in self-medication (H6). Finally, if Millennials feel that powerful others control their health-related well-being (PHLC), they are less likely to engage in self-medication (H7). Possible implications and explanations of these results are discussed in the next section.

Discussion

The Covid-19 pandemic exposes the strained health-care resources, limited diagnostic testing, and fractured prescription drug supply chain in the U.S (Blackburn, 2020; Lakavage, 2020; Roehr, 2020). This has reignited a fierce debate regarding consumers' access to and affordability of health-care treatments. To the extent that consumers may take greater control of their own health-care treatments, there has never been a more defining moment to investigate consumers' propensity to self-medicate. In fact, there exists anecdotal evidence that more U.S. consumers are opting for "at-home" remedies and solutions in lieu of visits to doctors, pharmacies and hospitals (Callaghan et al., 2020; Lagasse, 2020; Molento, 2020). The attitudinal and generational antecedents of consumers' propensity to self-medicate is particularly germane. The current research suggests that consumers may be willing to "flip the script" relative to control of and dependency on formalized health-care channels. The results reflect that consumers are willing to take control from traditional stewards in the health-care channel.

Specifically, the results indicate that consumers are more likely to engage in self-medication if they have

Table 5. Hierarchical regression analysis: dependent variable is propensity to self-medicate (PSM).

	Model 1			Model 2			Model 3			Model 4			Collinearity Stats	
	Std β	t-stats	Sig.	Std β	t-stats	Sig.	Std β	t-stats	Sig.	Std β	t-stats	Sig.	Tolerance	VIF
(Constant)		28.70	0.00		28.77	0.00		29.42	0.00		28.01	0.00		
Gender-dummy	−0.09	−2.34	**0.02**	−0.09	−2.28	0.02	−0.09	−2.37	0.02	−0.06	−1.75	0.08	0.95	1.05
Edu-dummy	0.16	4.27	**0.00**	0.16	4.29	**0.00**	0.12	3.20	**0.00**	0.11	3.09	**0.00**	0.88	1.13
Income-dummy	0.01	0.22	0.83	−0.01	−0.32	0.75	0.00	0.10	0.92	0.01	0.31	0.76	0.91	1.10
Insurance-dummy	−0.16	−4.22	**0.00**	−0.17	−4.36	**0.00**	−0.15	−4.08	**0.00**	−0.10	−2.76	**0.01**	0.90	1.11
IHLC (H1: +ve)				−0.01	−0.16	0.87	−0.06	−1.50	0.13	0.02	0.57	0.57	0.64	1.56
PHLC (H2: -ve)				0.07	1.75	0.08	0.00	0.10	0.92	−0.06	−1.52	0.13	0.66	1.51
CHLC (H3: ±ve)				0.06	1.44	0.15	0.17	3.63	**0.00**	0.30	6.34	**0.00**	0.51	1.96
SE (H4: +ve)				0.09	2.15	**0.03**	0.17	3.85	**0.00**	0.10	2.16	**0.03**	0.57	1.77
GEN-dummy (H5: +ve)							0.28	5.53	**0.00**	0.34	6.67	**0.00**	0.44	2.28
GEN x IHLC (H6: +ve)										0.30	7.18	**0.00**	0.67	1.50
GEN x PHLC (H7: -ve)										−0.19	−5.10	**0.00**	0.80	1.25
GEN x CHLC (H8: ±ve)										−0.04	−0.94	0.35	0.79	1.27
GEN x SE (H9: +ve)										0.05	1.19	0.24	0.68	1.46
R	0.24			0.27			0.34			0.46				
R-Square	0.06			0.08			0.11			0.21				
F-Change	10.66			3.25			30.58			20.47				
Sig. of F Change	0.00			0.01			0.00			0.00				

Model 1 assessed with only control variables; Model 2 assessed Model 1 plus main effects; Model 3 assessed Model 2 plus dummy coded generation (Baby Boomers and Millennials); and Finally Model 4 assessed Model 3 plus the interaction effects between focal constructs and generation.

high self-efficacy. Yet, it is particularly interesting that propensity to self-medicate is also positively associated with the belief that their health-related well-being is a matter of luck (CHLC). We did not find any significant main effect for internal and powerful others' health locus of control. One possible explanation could be that health-care and especially self-medication is thought off as a serious issue, sometimes, even with unintended consequences. Further, consumers may have insufficient information about who actually controls health-care decisions. Health-care providers are constrained by third-party payers and large pharmaceutical companies. Similarly, institutional providers often seek to mitigate liability. Billing codes, biological and chemical drug efficacy, and biomedical language are intimidating to the lay consumer. Further, in light of more than one-half century of political rhetoric and failed health-care reforms, confidence in public policy solutions may be waning (McCarthy, 2019; Millenson, 2018; Kirzinger et al., 2019; Reforming America's, 2019). Thus, it is not surprising that chance locus of control (CHLC) is also strongly associated with self-medication propensity, along with self-efficacy.

The results of interaction affect suggest that millennials have a greater propensity to self-medicate, especially when they feel more in control of their own health care (IHLC). However, when Millennials feel that powerful others (e.g., doctors) control their health-related well-being (PHLC), they are less likely to self-medicate. Such findings suggest that enabling factors (i.e., medical information, treatment options) may mitigate Millennials' sense of powerlessness and encourage self-medication. While this may be a cost-reduction mechanism, it can also result in unintended consequences. The surge in drug addiction and dangerous self-medication behaviors is well documented (Alcohol and Drug Misuse, 2019; Thompson, 2019). Further, millennials are more techno-savvy and tend to rely more on the amount of explicit knowledge available on the Internet. It might make them more confident in their own ability to control their health-related well-being, as well as instill in them a realization that powerful others such as doctors may know more than them, and hence are in a better position to offer help.

Further, while the main effect of CHLC and SE on propensity to self-medicate are positive and significant, generational difference does not moderate these moderated relationships. Possible explanation could be the technology-enabled information overload: there exists conflicting medical information about diagnostics, treatments, and health-care providers on the Internet. This may equally confuse both the Baby Boomers and Millennials. Even the feeling of self-efficacy might be rather fleeting among millennials. Similar confusing results have also been found by Schneider et al. (2018) toward psychological online intervention. Too much information incongruity may also augment consumers' inability to assess information veracity (i.e., alcohol is unhealthy, but wine is healthy, but only red wine; some fats are good for you, others are bad for you).

In summary, the generational divide between Millennials and Baby Boomers are profound in health-care attitudes, and behaviors. While aging Baby Boomers may have a much larger spend on health-care treatments than Millennials, these results suggest that health-care marketers (as well as public policymakers, and insurers) must consider the attitudinal factors underlying Millennials' disposition to wrangle back control in health-care delivery.

Implications

The U.S. health-care public policy debate has principally focused on facets that may accomplish cost-containment, universal accessibility, and high-quality delivery in the marketplace. The presidential debates reinforced the relevance and timeliness of sweeping health-care reforms. Yet, relatively little attention has been given to individual factors and generational difference as managerial mechanisms for achieving these lofty objectives. Toward this goal, the present research empirically explores the impact of consumers' attitudes and their generational differences on their willingness to self-medicate. An overarching issue is whether self-medication is an appropriate consumer-initiated behavior for ameliorating health-care maintenance and treatments. In fact, responsible self-medication has long been considered an important contributor to the well-being of Americans and the U.S. health-care system (Noone & Blanchette, 2018). The economic impact of self-medication is self-evident: it has generated cost savings of more than 102 USD billion annually in the U.S. (Self-Care: Better Daily, 2018).

Our results show that at least 43.8% of the respondents self-medicated frequently. However, self-medication alone is no panacea for cost-containment, universal accessibility, and high-quality delivery. The self-reliance trend may be a coping strategy for consumers to deal with the failures of the U.S. health-care system. The popular and trade literatures are replete with examples of self-medication failures – cases that have resulted in serious outcomes, even death. Self-medication can be potentially harmful to the patient if it is not done carefully. As Kher (2002) report, even though the consumers are aware of the associated risks, they do not seem to care. In light of consumers' willingness to engage in this risk-laden activity, pharmaceutical marketers, health-care providers, and public policymakers need to effectively communicate and educate self-reliant health-care consumers.

The identification of self-reliant consumers is only a first step in the marketing communications process. Thus, it is important to understand the individual level attitudinal and demographic characteristics of these self-reliant health-care consumers. In this study, we focus on the two largest generations in the history of the U.S. Relying on this study, health-care marketers can tap into generational differences to target specific market segments engaged in self-medication. For example, both internal and powerful others health locus of control play a prominent role in determining the propensity to self-medicate in the case of Millennials. This is quite intuitive as on the one hand Millennials are at a stage in life when they believe that everything is in their control and fulfilling their desire to control everything. They may also feel somewhat angered that powerful others such as doctors and others in the health-care system control their well-being. This could enhance their self-medication behaviors.

Perhaps it is time that health-care industry actually gives their consumers, especially the younger ones more control over their health care by educating them with the right kind of information. It also provides normative insights for health-care practitioners. Physicians and other health-care providers should discuss the potential dangers of self-medication with the Millennials patients during routine visits. At the retail level, pharmaceutical marketers should educate consumers about the potential hazards of self-prescribing medications without physician consultation. In the case of OTC medications, pharmaceutical marketers should warn consumers about the harmful interaction effects.

Based on our research, insurance coverage is a significant predictor of one's propensity to self-medicate. There are nearly 32.8 million uninsured (Health Insurance 2020) and even more under-insured American consumers (Collins et al., 2020). Since self-medication is a potentially harmful and fatal health-care behavior, public policymakers need to view reforms in the extant health-care third-party payer system. Considering that the government is a principal third-party provider (i.e., Medicare and Medicaid) and that Baby Boomers' golden years may put greater burdens on the U.S. health-care system, there will likely be initiatives to balance consumer empowerment with private and public sector initiatives to ensure greater breadth of coverage for Americans.

As indicate by our research, more educated consumers have a greater propensity to self-medicate. The educated consumers may be overlooking the dangers of self-medication and using it as a cost containment strategy. This means that they might be looking at alternate sources of medication, such as illegal Internet pharmacies. So far, the efforts to warn the general public of the dangers of buying from illegal online pharmacies has been limited to occasional press releases by the Food and Drugs Administration or an occasional news item in a television channel. This needs to change. Focused and clearly orchestrated efforts need to take place from the part of public interest groups to address this issue.

Addressing this would in part take care of self-medication problems, especially among Baby Boomers.

Perhaps, the most important contribution of the present study is the adaptation of social psychology theory to consumers' propensity to engage in risk-laden health-care behaviors. The consumers' need for control provides a seminal advancement toward understanding the social psychological components of self-reliant consumers' propensity to self-medicate.

Limitations and future research

One limitation is that the independent variables included in this research were conceptually inter-related – the notion of control. For example, self-efficacy and internal locus of control may be very similar in consumer's mind. The information load with often conflicting information on internet may be a powerful environmental factor affecting several independent variables used in this study. Future studies should take this limitation into account and include information overload as a variable. Future studies should also include other generation-specific variables.

This study offers many avenues of research that can be explored by future researchers. It would be interesting to study the same model through an experimental design to explore the role of control in this context. It would be interesting to see if the external environment would have an impact on the propensity to self-medicate? Is the constant exposure to direct-to-consumer (hereafter, DTC) advertising giving consumers a false impression of quality and/or safety of engaging in self-medication? Another area of research is the difference in factors determining the propensity to self-medicate in a country where DTC advertisements are prohibited by law, but the legal difficulties involved in procuring medications are much lower.

As self-reliance becomes a prevalent coping strategy for U.S. consumers, more research is needed to understand the consumers who self-medicate. Future research should build on this social psychological framework to investigate consumers' health-care experiences, information sourcing, and psychographics as they relate to self-directed health-care maintenance and treatments. Also, specific self-medication behaviors may provide descriptive insights into the actual approaches to self-medication employed by consumers. Finally, greater attention needs to be given to DTC marketing communications – *from media to message* – as it relates to consumer-initiated medications.

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Exploring the role of decision-making factors in international student marketing engagement

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Exploring the role of decision-making factors in international student marketing engagement

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ABSTRACT

This study applies the pre-purchase decision-making model for services to higher education context in order to understand international students' post-acquisition marketing engagement. The research categorizes three types of decision-making factors (i.e. internal, external, and risk) and two types of customer marketing engagement (CME) (i.e. in-role and extra-role). Data from 174 U.S. schools with international student engagement shows that student's internal factor has significantly relationship with all five dimensions of CME (i.e. interactive, affective, calculative, persuasive, and benevolent). The difficulty of the program has least influences, but all three types of decision making factors affect persuasive engagement. Student satisfaction moderates the relationship between in-role and extra-role CME. Theoretical, empirical, and managerial contribution are discussed subsequently.

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1. Introduction

Internationalization is seen as an instrumental factor shaping and changing the higher education sector (Altbach & Knight, 2007). The increasing mobility of college students in the global higher education service marketplace and their potential subsequent financial contributions have prompted universities in both developed countries (i.e. US, UK, Australia, and New Zealand) and developing countries (i.e. China, Taiwan, Malaysia) to proactively search for comparatively creative and advantageous ways to promote their education programs overseas and attract international students (Bianchi, 2013; Gai, Xu, & Pelton, 2016; Ibrahim, Kelly, Adams, & Glazebrook, 2013; Shahijan, Rezaei, & Guptan, 2018). The US continues to be the top host for international students worldwide. Foreign students contribute $42.4 billion per year to the US economy through tuition, room, board, and other expenses (Institute of International Education, 2017). Due to changing US immigration and foreign policies, however; there has been a drop in international student enrollment in the recent years, despite the continued outreach and recruitment efforts of US higher education institutions (Institute of International Education, 2017). In

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2017, US institutions experience a second consecutive decline in international students enrolled as first-time undergraduates, approximately 129,600 students. Together, international students constitute to over one million or 5.5 percent of total US higher education enrollment (IIE, 2018). Although the US is experiencing a percentage decrease in first-time international student enrollment, the same number worldwide is climbing (IIE, 2018). Perhaps, international students might select at other countries for their oversea studies. For this reason, US universities have an urgent need to critically review their current marketing and recruitment efforts in order to attract these valuable sources of income with an ever-unchanging limited pool of resources.

An empirical look at international students' decision-making factors would benefit higher education institutions' investment in selective marketing and recruitment strategies while counter the potential negative consequences of foreign policy changes. This study attempts to offer insights into international students' university selection during the decision-making process. The relationship between consumer decision-making factors in the pre-acquisition stage and customer marketing engagement (CME) in the post-acquisition stage has not been investigated explicitly in the extant literature. The implicit assumption in CME literature is that the motivational drivers of this value co-creation process begin with consumer satisfaction/dissatisfaction with the exchange (Eisingerich, Auh, & Merlo, 2014; Van Doorn et al., 2010; Yi & Gong, 2013). However, the entire customer experience and manifested engagements begin with a pre-purchase stage of the customer journey (Lemon & Verhoef, 2016). Scholars of CME literature have identified the need for further investigation into what and how of the antecedents of CME exerting their influences (Van Doorn et al., 2010). Responding to the call for deeper understanding of antecedents of CME and their specific impacts on CME, this research proposes that consumers co-creating values with the firm through post-purchase engagement do not begin at the consummation of the exchange, but are rooted back in the decision-making factors of the pre-purchase stage; and their level of CME is moderated by post-acquisition consumer satisfaction. The results of the study provide practical implications for host universities, who want to implement international student marketing and recruitment strategies.

We hope to make several key contributions to existing higher education and service marketing literature. First, the findings further evaluate the potential influence of international students' decision-making factors on their engagement with higher education service providers. Since engagement strategies intend to build and maintain relationships with existing and potential customers (Vivek, Beatty, & Morgan, 2012), it is important to look at the antecedents of customer engagement in order to better facilitate the process, develop appropriate platforms, and encourage customers to co-create values from the pre-consumption decision-making stage. Second, the study explores the potential antecedents of international students' intention to give back to foreign alma mater, an important but neglected issue in higher education literature. Third, this is the first study empirically investigate international student engagement with the host universities using cross sectional data from a broad pool of US universities. Finally, we delineate the theoretical, managerial, and public policy implications for marketing and recruiting foreign students. We will start with discussing the literature review, develop hypotheses, explain research design, and report the results. Finally, we conclude with a discussion on contributions to educational service and general limitations of this study.

2. Background

Researchers have examined various relevant factors that might influence educational service experiences of international students in order to gain insights into their perception of educational service quality and subsequent satisfaction and loyalty. For example, Patterson, Romm, and Hill (1998) confirmed the importance of knowledgeable faculty and quality educational offerings, while Bianchi (2013) mentioned the perceived helpfulness of supporting staff. Other studies also investigated the relevance of service augmenters such as financial aid, student housing, quality of life on campus (Paswan & Ganesh, 2009), cross cultural interaction comfort (Paswan & Ganesh, 2005), as well as their overall social, emotional, professional, and physical experiences with the universities (Shahijan et al., 2018).

However, the extant literature focuses on the institutional factors and student service consumption experiences. Few studies have looked at the decision-making factors of international students before their service consumption (Gai et al., 2016; Gray, Shyan Fam, & Llanes, 2003), how these factors might influence their satisfaction with the foreign universities, and subsequent CME. This study investigates key decision factors to study in foreign universities of international students, and how these factors might influence their post-consumption CME. Specifically, the research identifies five pre-purchase decision factors based on previously published works (Paswan & Ganesh, 2005, 2009; Paswan, Spears, & Ganesh, 2007), including program evaluation, external recommendation, the perceived value of a foreign degree, employment potential, and the desire to study oversea. Additionally, post-consumption CME includes three dimensions (conative, affective, and cognitive engagements) as well as two levels of intensity (in-role and extra-role). Examples of CME are international students' likelihood to give back by either donating money or getting involved in international student initiatives of host universities.

2.1. Pre-purchase decision-making factors

Traditional marketing thoughts agree that consumer pre-purchase decision-making model includes various external, internal, and risk factors. These factors reflect the constrained or un-constrained environments facing the consumers in the need-recognition and search stages of decision-making process, which translate into diverse expectations of service offerings. The level of constraints and desires lead to specific purchase decisions and divergence in post-acquisition satisfaction (Kurtz & Clow, 1998; Rickwood & White, 2009). We relied on these studies to capture the pre-consumption factors influencing international students' endogenous experiences with the service providing universities. For these students, external factors include the difficulty, expensiveness, and time requirements to complete a study program, the influence from family members, friends, faculty, or advisors, as well as the perceived value of the degree (Gai et al., 2016; Paswan & Ganesh, 2005; Paswan & Ganesh, 2009). On the other hand, their desire to study in the US is viewed as an intrinsic influential factor. Employment opportunity during and after graduation introduces uncertainty on the outcomes of foreign studies, and is considered a risk factor (Paswan & Ganesh, 2005, 2009; Paswan et al., 2007).

2.2. Service evaluation

Service evaluation of a university is conceptualized as the overall attitude students have toward the institution. The outcomes of service evaluation can be satisfaction, dissatisfaction, or something in between. One of the more dominant characteristics of services marketing is the inseparability between service providers and consumers (Paswan & Ganesh, 2009). In this environment, consumer's evaluation of service or level of satisfaction with the service provider is determined by the consumer's initial expectations (pre-purchase expectations) about the service and the discrepancies between expectations and service performance (Churchill Jr & Surprenant, 1982). In this study, student's overall satisfaction is conceptualized and measured as a cumulative assessment depicting the actual overall experiences relative to expectations.

Past empirical studies have found that satisfied student is more likely to engage in positive word-of-mouth and collaboration with the university post-graduation (Alves & Raposo, 2009; Elsharnouby, 2016). The more an international student is satisfied with the university, the more that student is likely to exhibit affective responses (Berman, 2005). And the likelihood a student recommending a university to friends or relatives is positively influenced by the extent of interaction between students and university faculty/staff (Browne, Kaldenberg, Browne, & Brown, 1998).

Customer satisfaction literature also categorizes two types of discretionary consumer behaviors that activate consumer's involvement with the marketing function of service providers (Eisingerich et al., 2014; Jaakkola & Alexander, 2014; Yi & Gong, 2013). In-role behaviors are necessary for the continuation of the service offering, while extra-role behaviors are voluntarily performed by the consumers using their own resources and support the marketing function of the service offering (Eisingerich et al., 2014; Jaakkola & Alexander, 2014; Yi & Gong, 2013). The in-role behaviors in the higher education context include interacting with faculty, staff, and other students following their directions and advice, providing feedback, as well as being affectively and cognitively engaged with the university. The extra-role behaviors, on the other hand, are more proactive, involved, and responsible behaviors such as sharing positive experiences with other prospective students, recommending their university to others, and donating to the university (Yi & Gong, 2013). This type of active participations entail customers' willingness to employ their own time and resources for the success of the university. We propose that extra-role behaviors are driven by international student's level of satisfaction with the university and participation in in-role behaviors.

2.3. Post-acquisition customer marketing engagement

Theoretically, customer marketing engagement (CME) is a lexicon of service-dominant logic, since both CME and S–D logic focus on the co-creation of values between customers and providers (Brodie, Hollebeek, Jurić, & Ilić, 2011; Hollebeek, Srivastava, & Chen, 2016; Vargo & Lusch, 2004). Vivek et al. (2012) defined CME as the degree of consumer involvement in a firm's marketing activities. Integrating CME and S–D literature, Hollebeek et al. (2016) developed service-dominant logic-informed framework describing how consumers use their operant and operand resources (Vargo & Lusch, 2004) to co-create marketing values for a firm. From the S–D logic-informed perspective, customers' operant resources include cognitive, emotional, and behavioral resources; and operand resources encompass physical or monetary resources (Hollebeek et al., 2016; Vargo & Lusch, 2004).

The review of the literature suggests that CME has three dimensions: affective, cognitive, and conative (Brodie et al., 2011; Hollebeek et al., 2016; Mollen & Wilson, 2010; Vivek et al., 2012), and two types of resources required to execute CME: operant and operand (Hollebeek et al., 2016; Vargo & Lusch, 2004). Additionally, the emerging literature on CME has discussed two levels of CME: in-role and extra-role (Dessart, Veloutsou, & Morgan-Thomas, 2015; Jaakkola & Alexander, 2014; Yi & Gong, 2013). In a study of customer engagement with brands, Dessart et al. (2015) found that brands with higher prestige and perceived value foster stronger brand commitment and engagement. This finding implies that the characteristics of brands, programs, and or universities influence the level of CMEs. One can argue that the prestige and perceived value of the study programs could lead to a higher level of engagement among international students, such as proactive interactions with other students on and off-campus, by promoting their own knowledge and experience (Dessart et al., 2015). Jaakkola and Alexander (2014) further argued how customer engagement is associated with voluntary extra-role behaviors such as benevolent activities, word-of-mouth recommendation, involvement in product development, inducement of concrete actions of other stakeholders, and other contributing behaviors. Others alluded to two types of customer value co-creation behaviors: customer participation and customer citizenship (Yi & Gong, 2013). Empirical evidence showed that different value co-creation behaviors produce distinctive outcomes (Eisingerich et al., 2014; Yi & Gong, 2013). Extra-role customer citizenship behavior creates extraordinary value to the firm whereas in-role customer participation behavior is necessary for successful value co-creation.

In short, the in-role and extra-role CMEs refer to the intensity of the engagement; whereas, the affective, cognitive, and conative components of CME define the type of engagement, and the individual operant and operand resources denote the usage of knowledge, skills, material resources, and equipment, respectively. Drawing upon these discussions, we propose that in higher education service context with respect to international students, CME has two levels: extra-role and in-role. The extra-role includes only the conative dimension, requiring the use of operant and operand resources, whereas the in-role includes all three dimensions, requiring the usage of operant resources only. More specifically, the extra-role CMEs refer to persuasive and benevolent engagements, whereas the in-role CMEs include interactive, affective, and cognitive engagements. Conative CME encompasses students' interactions with others on and off-campus (i.e. *interactive*), their persuasion of others to join the university (i.e. *persuasive*), and their willingness to donate to the university (i.e. *benevolent*). Students' affective CME reflects social and psychological attachment to the university based on feelings of pleasure or alienation (i.e. *affective*), and cognitive CME indicates their rationality on economic matters (i.e. *cognitive*) (Ganesan, Brown, Mariadoss, & Ho, 2010). All five dimensions are considered students' CME. However, the in-role behaviors (i.e. *interactive, affective, and cognitive*) are prerequisite of extra-role behaviors (i.e. *persuasive* and *benevolent*), which are resulted from the level of student satisfaction with the university.

2.4. Hypotheses development

Attachment theory states that people have a natural inclination to make and maintain lasting bonds with familiar and irreplaceable focal objects (Dwayne Ball & Tasaki, 1992). In a student-university relationship, attachment reflects the extent to which students bond with the institution. Attachment is a critical factor in the study of post-purchase consumption behaviors, and helps explain the how and why of customer engagement behaviors toward a product/service (Van Doorn et al., 2010). The established quality, security, and stability of the ties between individuals and service providers are likely to influence their attitudes and behaviors (Lin, 2010). When consumers become attached to the service or service providers, they are more likely to engage in the post-consumption activities (Harmeling, Moffett, Arnold, & Carlson, 2017). This attachment increases the student's inclination to build a relationship with the university and encourages them to interact with its members, develop sentiment and form positive assessment toward the university. We propose that such attachment manifests itself in the form of interactive, affective, and cognitive engagements.

From the service-dominant perspective of value co-creation (Vargo & Lusch, 2004), service systems such as universities provide the context for value co-creation involving exchanges between service providers and customers. It is important to nurture and maintain good relationships with these consumers because the potential costs and benefits involved with the service consumption might inhibit CME. Since CME also encompasses customer value co-creation, the connections between drivers of CME and value co-creation are iterative and reciprocal (Jaakkola & Alexander, 2014). Some authors have suggested that highly engaged consumers can help firms in a variety of ways by attracting and retaining potential customers (v. Wangenheim & Bayón, 2004), increasing customer welfare (Van Doorn et al., 2010), and generating new product/service ideas (Schau, Muñiz Jr, & Arnould, 2009). For higher education services, the benefits of CME go beyond student satisfaction and loyalty with the university. International students can play a powerful role in influencing the university reputation among prospective students either positively or negatively (Van Doorn et al., 2010). The risks can be financial or non-financial such as loss of reputation or key relationships. The engagement behaviors of international students are likely a function of several antecedents that are part of the pre-consumption decision-making process.

Based on the literature above, we argue that the pre-consumption decision-making factors also influence international students' post-consumption CME. Specifically, external factors that are uncontrollable by international students but positively influence their satisfaction include a shorter program of study in host country, the difficulty and expensiveness of study program in home country, positive recommendation from faculty, family or friends, and perceived value of the program, as well as the internal desire to study abroad, might lead to higher level of engagement behaviors. Furthermore, employability after graduation remains one of the most important antecedents of decision to study overseas and satisfaction with the host university (Nilsson & Ipmeester, 2016). However, employment opportunity in a foreign country is considered to have negative influences on CME due to many volatile causes. The intricacies of acculturating to the US culture, society, job market through networking, resume building, and interviewing require a tremendous investment of time, energy, and effort (Sangganjanavanich, Lenz, & Cavazos, 2011). In addition to the complexities of maneuvering through the process of landing a job, international students also face with the uncertainties of governmental immigration and work policies. In fact, the inability to secure a job in the US after graduation has contributed to the decline of international student enrollment (Migration Policy, 2018). These challenging uncertainties, we argue, may result in negative affective and cognitive responses, leading to a lower level of engagement behaviors among international students. Taken together, the review of theoretical propositions and empirical findings suggest the following five hypotheses regarding the connections between pre-consumption decision-making factors and post-consumption CME behaviors:

H1: The external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the interactive (i.e. *conative*) aspect of international student engagement behaviors, while the risk factor (e) employment has a negative impact.

H2: The external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the affective (i.e. *affective*) aspect of international student engagement behaviors, while the risk factor (e) employment has a negative impact.

H3: The external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the cognitive (i.e. *cognitive*) aspect of international student engagement behaviors, while the risk factor (e) employment has a negative impact.

H4: The external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the persuasive (i.e. *conative*) aspect of international student engagement behaviors, while the risk factor (e) employment has a negative impact.

H5: The external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the benevolent (i.e. *conative*) aspect of international student engagement behaviors, while the risk factor (e) employment has a negative impact.

If international students are satisfied with the service experience, they would have a more positive emotional attachment with the service providers, are more likely to spread positive word-of-mouth, participate in university international student initiatives, as well as donate money to the foreign alma mater. Communications with international students with respect to their foreign study expectations and experiences are key to subsequently engaging them. The engagement strategy includes encouraging them to interact with others and building affective as well as cognitive connections (Dessart et al., 2015). In addition, overall satisfaction with the educational experience promotes the host university by engendering trust among students (Harmeling et al., 2017). Therefore, satisfaction and trust are proposed as antecedents of customer engagement behaviors (Van Doorn et al., 2010). Further, empirical evidence has shown that post-acquisition behaviors of satisfied consumers are dependent on their level of participation (i.e. persuasive through WOM and interactions with the firm) in co-creating values for the service provider (Eisingerich et al., 2014). In the same line of logic, we reason that student satisfaction with the university encourages those who exhibit positive in-role CMEs to deepen their attachment with the university through extra-role CMEs. Therefore, we hypothesize that:

H6: Satisfaction with the service provider moderates the relationship between in-role CMEs such as (a) interactive, (b) affective, (c) cognitive engagements and extra-role CME such as being persuasive.

H7: Satisfaction with the service provider moderates the relationship between in-role CMEs such as (a) interactive, (b) affective, (c) cognitive engagements and extra-role CME such as being benevolent.

3. Research method

3.1. Data collection

The context of this study is US higher education service marketed to international students. A total of 174 schools with an international student enrollment of at least 1000 were identified from the directory prepared by the Institute for International Education in New York, NY. Collectively these schools enroll almost 563,100 international students. The International Student Office (ISO) or equivalent at these schools were contacted via email and invited to participate in a national survey of international students. Twenty-two schools accounting for nearly 75,000 international students agreed to participate. The draft survey was previewed by them and feasible modifications they suggested were incorporated into the survey. The finalized online survey URL and drafts of survey notification, survey activation and survey reminder emails were made available to the ISOs and they took care of distributing these to the international students at their schools. The survey resulted in a total of 2030 responses. However, not all 2030 survey participants completed all 244 variables in the survey, causing some missing data. One reason for this was that the survey incorporated two alternative multiple-item scales of the importance of and satisfaction with various factors that determined international student satisfaction with their respective US universities. Each survey participant was randomly presented with only one of these two sets. On average, there were 730 responses per question (median = 683). Seventy variables registered 1000 responses or more; 66 variables received between 501 and 1000 responses; 99 variables received 251–500 responses; and 5 variables received 100–250 responses. Only 4 variables registered fewer than 100 responses and all were ‘other (specify)’ variables. Specific to this study, there were 964 responses completing 31 variables without any missing data.

Key background characteristics of the international student sample are as follows: Their average age is 26.30 years (median = 25.00). Nearly 53% of the sample is female and nearly 80% are from a middle-class or better background in their home countries. About 76% are not married and 88% know at least one other language besides English. China (25%), India (16%), and Brazil (3%) are the top three home countries of survey participants. The remaining 56% come from 192 countries with no more than 1–2% from each. Almost all (97%) of the students are in the USA on an F1 or J visa, nearly 84% are in the USA for their first experience as international students with the rest having spent some time previously in Canada, Germany, UK, or China. They have been in the USA for an average 2.06 years (median = 1.00), and at their current university for 1.59 years (median = 1.00). Approximately 51% indicate that their current university is their first choice while 49% say it is not. Nearly 33% are here for Masters-level studies and 37% for doctoral work. Clearly, international students are a significant part of graduate education in this country. Nearly 25% of the students are pursuing engineering or computer science while another 12% are in various liberal arts fields and another 14% in intensive English language programs. They are good students.

Nearly 23% perceive themselves to be among the top 5% of their universities while another 24% place themselves in the top 6–10%, 20% in the top 11–25% and 13% in the top 26–50%. Their average GPA is 3.68 (median = 3.78).

3.2. Measuring instrument

The survey questionnaire design process began with a review of personal experiences of the authors all of whom were international students at US universities and extensive literature review. Specifically, extrinsic and intrinsic motivation variables were replicated and enhanced from previously published works (Paswan & Ganesh, 2005, 2009; Paswan et al., 2007). We relied on these studies to capture the augmentation factors influencing international students' endogenous experiences with their service providers. The 11 scale items were drawn from previous research and measured with 7-point Likert scale (1 = strongly disagree; 7 = strongly agreed). Exploratory factor analysis (EFA) was used to calculate Cronbach alphas (Nunnally, Bernstein, & Berge, 1967). As discussed previously for international students, the external factors include the difficulty, expense, and time requirements to complete a study program (Program factor, three items, $\alpha = .677$), influences of family, friend, faculty, and advisor (Influence factor, three items, $\alpha = .628$), value of the degree (Value factor, two items, $r = .620$). The desire to study in the US is viewed as an intrinsic motivator (Desire factor, one item, factor loading = .965), and the risk factor of employment opportunities during and after graduation (Employment factor, two items, $r = .593$). The independent variables forming the above were averaged for composite score except for desire to study aboard (one item), where mean of the item was used (Hair, Black, Babin, Anderson, & Tatham, 2006). Inter-item correlation analysis was

Table 1. Exploratory Factory Analysis (EFA) of independence variables, variance explained, Cronbach's alpha, mean, and std. deviation.

Program	Influence	Value	Employment	Desire	
PRO1 Program of study too difficult to get admission in your country	0.823				
PRO2 Program of study too expensive in your country	0.788				
PRO3 Program of study shorter in the USA, saving you time	0.639				
INF1 Recommendation of a faculty advisor in your country who has NOT studied in the USA	0.778				
INF2 Recommendation of a faculty advisor in your country who has studied in the USA	0.771				
INF3 Influence of family and/or friends who have NOT studied in the USA, but desire that you do	0.627				
VAL1 Prestige of a degree from the USA in your country		0.875			
VAL2 Value of a degree from the USA in the job market in your country		0.869			
EMP1 Employment opportunities in the USA (e.g. practical training) after your education		0.87			
EMP2 Employment opportunities in the USA during your education (summer job, part time job etc.)		0.866			
DES1 Desired the experience of studying abroad.					0.965
Total variance explained = 71.667%	16.607	16.299	14.926	14.756	9.079
Cronbach's alpha	0.677	0.628	.620(r)	.593 (r)	0.965
Mean	2.050	3.180	5.290	4.483	5.773
Std. deviation	1.297	1.573	1.615	1.878	1.521

**indicates significance at $p < .01$; * indicates significance at $p < .05$. $N = 964$.
Note: 7-point Likert scale was used to measure each item. $N = 964$.

performed with the 11 scale items, indicating the within-factor correlation figures are generally higher than the across factor. The correlation results indicate that the measurement scales have acceptable levels of discriminant and convergent validity (Churchill Jr, 1979; see Tables 1 and 2).

Similarly, 20 items measuring 5 outcome CME behaviors: interactive (5 items, $\alpha = .872$), affective (5 items, $\alpha = .872$), cognitive (4 items, $\alpha = .866$), persuasive (4 items, $\alpha = .897$), and benevolent (2 items, $r = .481$) were adapted from previous studies (Carroll & Ahuvia, 2006; Paswan & Ganesh, 2009). These 20 scale items were also subjected to EFA resulting in Cronbach alphas acceptable enough for exploratory studies (Nunnally et al., 1967). The interactive factor captures the degree of interactions international students have on- and off-campus. Affective factor captures the fun, enjoyment, pleasure, friendly aspects of the relationship. The cognitive factor is exemplified by strategic, valuable, rational, respectful aspects of the relationship. The persuasive factor captures word-of-mouth likelihood (Carroll & Ahuvia, 2006). Finally, the benevolent factor captures the intent to or actually making a monetary donation. Inter-item correlation analysis was performed with the

Table 2. Inter-item correlation matrix between independent variables.

	Program	Influence	Value	Employment				Desire			
	1	2	3	4	5	6	7	8	9	10	11
1. PRO1											
2. PRO2	.458**										
3. PRO3	.348**	.443**									
4. INF1	.165**	.194**	.223**								
5. INF2	.147**	.240**	.246**	.295**							
6. INF3	.218**	.313**	.353**	.357**	.448**						
7. VAL1	.076*	.079*	.098**	.266**	.214**	.191**					
8. VAL2	.0.019	.064*	.087**	.246**	.200**	.167**	.620**				
9. EMP1	.191**	.210**	.284**	.175**	.118**	.122**	.163**	.198**			
10. EMP2	.136**	.164**	.193**	.226**	.126**	.123**	.206**	.257**	.593**		
11 DES1	0.06	−0.006	.099**	.159**	.171**	.117**	.271**	.244**	.106**	.136**	

Table 3. Exploratory Factory Analysis (EFA) of dependence variables, variance explained, Cronbach's alpha, mean, and std. deviation.

	In-role CME	Extra-role CME			
CME dimensions	Conative	Affective	Cognitive	Conative	
CME dimensions	Interactive	Affective	Cognitive	Persuasive	Benevolent
INT3 On campus academic-interaction w other students at this university	0.827				
INT4 On campus non-academic interactions w other students at this university	0.797				
INT1 On campus academic-interaction w faculty at this university	0.755				
INT5 Off-campus interactions w members of the general public	0.742				
INT2 On campus interactions w university administrators	0.721				
AFF1 Fun		0.786			
AFF2 Enjoyment		0.776			
AFF3 Pleasure		0.738			
AFF4 Loving		0.703			
AFF5 Friendly		0.678			
COG1 Strategic			0.808		
COG2 Valuable			0.752		
COG3 Rational			0.719		
COG4 Respectful			0.615		
PER3 I spread the good word about this university	0.793				
PER2 I talk up this university to my friends who are not students here	0.774				
PER4 I always express positive opinions about this university	0.748				
PER1 I have recommended this university to lots of people in my home country	0.742				
BEN1 I am willing to donate money to this university now or in the future	0.809				
BEN2 I will contribute to the university's international student initiatives	0.703				
Total variance explained = 72.332%	17.146	17.01	15.489	15.35	7.336
Cronbach's alpha	0.872	0.913	0.866	0.897	.481 (r)
Mean	5.514	4.938	5.155	5.182	4.320
Std. deviation	1.163	1.297	1.136	1.397	1.562

Note: 7-point Likert scale was used to measure each item ($N = 964$).

Table 4. Inter-item correlation matrix between dependent variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. INT1																				
2. INT2	.702																			
3. INT3	.640	.564																		
4. INT4	.507	.492	.752																	
5. INT5	.455	.447	.584	.662																
6. AFF1	.377	.366	.416	.435	.395															
7. AFF2	.466	.421	.513	.533	.457	.744														
8. AFF3	.356	.339	.391	.416	.362	.775	.714													
9. AFF4	.275	.314	.333	.349	.277	.627	.618	.621												
10. AFF5	.312	.307	.354	.350	.284	.688	.619	.661	.741											
11. COG3	.336	.329	.329	.297	.273	.458	.461	.425	.460	.506										
12. COG4	.455	.426	.405	.372	.351	.540	.613	.490	.542	.572	.655									
13. COG1	.286	.297	.257	.220	.220	.365	.382	.359	.422	.431	.535	.507								
14. COG2	.399	.405	.371	.322	.312	.513	.536	.485	.483	.504	.615	.667	.671							
15. PER1	.254	.256	.291	.260	.195	.437	.444	.414	.458	.456	.402	.445	.354	.458						
16. PER2	.317	.299	.321	.318	.246	.486	.499	.450	.464	.465	.408	.487	.319	.470	.642					
17. PER3	.393	.384	.386	.348	.275	.538	.550	.491	.489	.518	.452	.540	.359	.536	.672	.728				
18. PER4	.406	.399	.391	.364	.328	.525	.560	.491	.487	.500	.488	.555	.388	.526	.632	.704	.809			
19. BEN1	.195	.205	.198	.189	.173	.325	.313	.327	.399	.334	.294	.268	.248	.326	.401	.412	.430	.431		
20. BEN2	.186	.199	.203	.192	.158	.363	.307	.324	.420	.392	.316	.354	.263	.347	.437	.469	.497	.456	.472	

Note: Correlations within constructs are greater than between constructs. $N = 964$.

20 scale items, indicating the within-factor correlation figures are generally higher than the across factor. The correlation results indicate that the measurement scales have acceptable levels of discriminant and convergent validity (Churchill Jr, 1979). All items measuring the five outcome variables were averaged and the final composite scores were used for further analysis (see Tables 3 and 4).

3.3. Data analysis results

Multiple regression analyses were utilized to test all seven hypotheses. Hypothesis one (H1) stated that the external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the interactive engagement (i.e. *conative*) of international student engagement behaviors, while the risk factor (e) employment has a negative impact. Thus, value, influence, program, desire, and employment variables were entered in the equation with interactive as the dependent variable. Multiple regression results revealed the following relationships ($\beta_{value} = .018$, ns; $\beta_{influence} = .039$, ns; $\beta_{program} = -.14$, $p < .05$; $\beta_{desire} = .073$, $p < .05$; $\beta_{employment} = .025$, ns). Thus, H1a,b,e are not supported, but H1c,d are supported.

Hypothesis two (H2) stated that the external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the affective engagement *(i.e. affective)* of international student engagement behaviors, while the risk factor (e) employment has a negative impact. Similar to hypothesis one, value, influence, program, desire, and employment variables were entered in the equation with affective as the dependent variable. Multiple regression results showed the following relationships ($\beta_{value} = .036$, ns; $\beta_{influence} = .111$, $p < .05$; $\beta_{program} = -.011$, ns; $\beta_{desire} = .114$, $p < .05$; $\beta_{employment} = .041$, $p = .076$). Therefore, H2a, c,e are not supported, but H2b,d are supported.

Hypothesis three (H3) stated that the external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the cognitive engagement (i.e. *cognitive*) of international student engagement behaviors, while the risk factor (e) employment has a negative impact. Multiple regression results indicated the following relationships ($\beta_{value} = .046$, $p = .065$; $\beta_{influence} = .064$, $p < .05$; $\beta_{program} = -.056$, $p = .072$; $\beta_{desire} = .06$, $p < .05$; $\beta_{employment} = .052$, $p < .05$). Although employment factor had significant impact on cognitive behavior, but it is in the opposite direction of hypothesized relationship. Thus, H3a,c,e are rejected while H3b,d are supported.

Hypothesis four (H4) stated that the external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the persuasive engagement (i.e. *conative*) of international student engagement behaviors, while the risk factor (e) employment has a negative impact. Multiple regression results disclosed the following relationships ($\beta_{value} = .132$, $p < .05$; $\beta_{influence} = .100$, $p < .05$; $\beta_{program} = -.097$, $p < .05$; $\beta_{desire} = .118$, $p < .05$; $\beta_{employment} = .052$, $p < .05$). The influence of program and employment factors were significant on persuasive behavior, but in the opposite direction of hypothesized relationships. Thus, H4c,e are not supported, but H4,a,b,d are supported.

Hypothesis five (H5) stated that the external and internal factors (a) value, (b) influence, (c) program, and (d) desire positively influence the benevolent engagement (i.e. *conative*) of international student engagement behaviors, while the risk factor (e) employment has a negative impact. Multiple regression results discovered the following relationships ($\beta_{value} = .093$, $p < .05$; $\beta_{influence} = .095$, $p < .05$; $\beta_{program} = .058$, ns; $\beta_{desire} = .105$, $p < .05$; $\beta_{employment} = .175$,

Table 5. Multiple regression results ($N = 964$).

Hypotheses	Dependent variable		Unstd. coeff. Beta	Std. coeff. Std. error	Std. coeff. Beta	*t*	Sig.
H1	Interactive Conative	(Constant)	5.044	0.178		28.281	**0.000**
$R = 18.10\%$		VAL	0.018	0.025	0.026	.729	0.466
$p < .05$		INF	0.039	0.027	0.052	1.436	0.151
		PRO	−0.140	0.032	−0.156	−4.412	**0.000**
		DES	0.073	0.026	0.096	2.863	**0.004**
		EMP	0.025	0.021	0.041	1.199	0.231
H2	Affective Affective	(Constant)	3.572	0.196		18.233	**0.000**
$R = 24.80\%$		VAL	0.036	0.028	0.045	1.293	0.196
$p < .05$		INF	0.111	0.030	0.135	3.767	**0.000**
		PRO	−0.011	.0.35	−0.011	−0.312	0.755
		DES	0.114	.0.28	0.134	4.056	**0.000**
		EMP	0.041	0.023	0.060	1.775	0.076
H3	Cognitive Cognitive	(Constant)	4.246	0.174		24.457	**0.000**
$R = 19.60\%$		VAL	0.046	0.025	0.065	1.855	0.064
$p < .05$		INF	0.064	0.026	0.089	2.44	**0.015**
		PRO	−0.056	0.031	−0.064	−1.804	0.072
		DES	0.060	0.025	0.080	2.398	**0.017**
		EMP	0.052	0.021	0.086	2.526	**0.012**
H4	Persuasive Conative	(Constant)	3.450	0.208		16.593	**0.000**
$R = 29.80\%$		VAL	0.132	0.030	0.153	4.489	**0.000**
$p < .05$		INF	0.100	0.031	0.112	3.175	**0.002**
		PRO	–.0970	0.037	−0.090	−2.613	**0.009**
		DES	0.118	0.030	0.128	3.951	**0.000**
		EMP	0.052	0.025	0.070	2.107	**0.035**
H5	Benevolent Conative	(Constant)	2.016	0.227		8.863	0.000
R=35.60%		VAL	0.093	0.032	0.096	2.868	**0.004**
$p < .05$		INF	0.095	0.034	0.095	2.753	**0.006**
		PRO	0.058	0.041	0.048	1.439	0.150
		DES	0.105	0.033	0.103	3.227	**0.001**
		EMP	0.175	0.027	0.211	6.482	**0.000**

$p < 05$). The impact of employment factor was significant on benevolent behavior but in the opposite direction of the hypothesized relationship. Thus, H5c,e are not supported, but H5,a, b,d are supported. Please see Table 5 for a summary of the H1–H5 hypotheses test results.

Hypothesis six (H6) stated that satisfaction with the service provider moderates the relationship between being persuasive and (a) interactive, (b) affective, (c) cognitive engagement. Moderation analysis revealed that all the predictor variables and moderator were significant in model one ($\beta_{\text{interactive}} = .097$, $p < .05$; $\beta_{\text{affective}} = .395$, $p < .05$; $\beta_{\text{cognitive}} = .414$, $p < .05$) and model two ($R = 70.90\%$; $F2\Delta = 44.20$, $p < .05$) ($\beta_{\text{satisfaction}} = .217$, $p < .05$). In model three ($R = 71.20\%$; $F3\Delta = 2.964$, $p < .05$), the interaction terms were significant for affective ($\beta_{\text{satisfaction} \times \text{affective}} = -.062$, $p < .05$) and cognitive ($\beta_{\text{satisfaction} \times \text{cognitive}} = .053$, $p < .05$), providing partial support. Thus, H6a is not supported, but H6b,c are supported.

Hypothesis seven (H7) stated that satisfaction with the service provider moderates the relationship between being benevolent and (a) interactive, (b) affective, (c) cognitive engagement. Similar moderation analysis procedure to hypothesis six was performed to test hypothesis seven. However, model three revealed the non-significant change from model two ($R3 = 50.90\%$, $F3\Delta = 1.480$, ns), indicating no presence of moderation relationship. Thus, H7a,b,c are not supported (see Table 6 for a summary of the H6-H7 hypotheses test results).

Table 6. Moderation analysis results ($N = 964$).

Hypothesis	DV		Model 1			Model 2			Model 3		
			Unstd. coeff.	Std. error	Sig.	Unstd. coeff.	Std. error	Sig.	Unstd. coeff.	Std. error	Sig.
H6	Persuasive	(Constant)	0.567	0.178	**0.001**	0.415	0.175	**0.018**	0.789	0.472	0.095
		INT	0.097	0.034	**0.004**	0.021	0.035	0.544	−0.066	0.11	0.553
		AFF	0.395	0.036	**0.000**	0.308	0.037	**0.000**	0.618	0.114	**0.000**
		COG	0.414	0.04	**0.000**	0.386	0.039	**0.000**	0.127	0.122	0.299
		SAT				0.217	0.033	**0.000**	0.135	0.1	0.180
		SATXINT							0.019	0.022	0.390
		SATXAFF							−0.062	0.022	**0.004**
		SATXCOG							0.053	0.023	**0.025**
			R1=69.20%			R2=70.90%			R3=71.20		
			$p < .05$			F2Δ=44.20			F3Δ=2.964		
						$p < .05$			$p < .05$		
H7	Benevolent	(Constant)	0.886	0.238	**0.000**	0.812	0.24	**0.001**	1.552	0.646	0.017
		INT	−0.02	0.045	0.660	−0.057	0.048	0.233	−0.01	0.151	0.947
		AFF	0.401	0.048	**0.000**	0.358	0.051	**0.000**	0.478	0.156	**0.002**
		COG	0.304	0.054	**0.000**	0.29	0.054	**0.000**	−0.03	0.167	0.855
		SAT				0.106	0.045	**0.017**	−0.048	0.137	0.727
		SATXINT							−0.01	**0.03**	0.749
		SATXAFF							−0.024	**0.03**	0.421
		SATXCOG							0.065	**0.032**	**0.043**
			R1=50.10%			R2=50.50%			R3=50.90%		
			$p < .05$			F2Δ=5.714			F3Δ=1.48		
						$p < .05$			0 ns		

4. Discussion and implication

The relationships between consumer decision-making factors in the pre-acquisition and CME in the post-acquisition stages are complex and important. The external, internal, and risk factors in the pre-acquisition stage influence international student engagement differently. Our study showed that among the external factors, the perceived value factor significantly impacted the persuasive and benevolent aspects of international student engagement in a positive way. The friends and family influence factor had a positive influence on almost all aspects of international student engagement except the interactive aspect. The program factor had a negative effect on interactive and persuasive aspects of international student engagement. On the other hand, the internal factor (i.e. desire factor) positively affected all aspects of international student engagement, while the risk factor (i.e. employment opportunity) was not found to have any negative influences on international student engagement, but have significantly positive relationship with cognitive, persuasive and benevolent aspects of international student engagements. In addition, satisfaction with the university negatively moderated the impact of affective international student engagement (in-role CME) on persuasive international student engagement (extra-role CME), and positively moderated the relation between cognitive international student engagement (in-role CME) on persuasive international student engagement (extra-role CME).

The findings of this study provide empirical insights on how external, internal, and risk factors play a role in service provider's marketing engagement outcomes. This is the linkage that has not been identified from the extant literature on services marketing, higher education industry, customer journey experience, and customer marketing engagement. From the international student perspective, their desire to study abroad has the broadest influence on all five dimensions of international student engagement, which shows the significant role of internal motivation among international student in their future CME behaviors in foreign universities. By comparison, the external and risk factors partially impact the future CME behaviors among international students. For example, the value factors such as the prestige and value of U.S degree only impacted the persuasive (their effort to spread good word-of-mouth about the foreign university) and benevolent (their willingness to donate money to and contribute to the university's international student initiatives) aspects of international student engagement (extra-role CME). At the same time, the influence factors such as faculty recommendation and family/friend influence lead to positive in-role CME (affective and cognitive dimensions) and extra-role CME (recommending and contributing to the university outreach efforts).

In addition, employment opportunities during study or after graduation exert a positive effect on cognitive (in-role CME), persuasive and benevolent aspects of international student engagements (extra-role CME). International students with positive employment prospect are more likely to recommend and contribute to the foreign university both financially and behaviorally. Perhaps, having employment opportunities and not employment outcomes meets international students' expectation when choosing to study in the US. In addition, the opportunity to obtain employment in the US is encouraging for international students. Of the visas issued for foreign workers in 2014, 40 percent (124,326) were for first-time employment (Department of Homeland Security, 2012). Comparatively, there was 293,766 international students enrolled first-time at a US institution in the same period (IIE, 2018). In other words, approximately 42 percent of international students would be able to gain employment in the US after graduation. These statistics are the potential explanations for the positive relationships between employment opportunity factor and cognitive, persuasive, benevolent engagements.

On the other hand, the difficulty, costs and study length of a foreign program negatively influence interactive (in-role) and persuasive (extra-role) aspects of CME. The constraints of the foreign program inhibit CME behaviors. A plausible explanation would be that when the program is challenging and expensive, international students are unable to allocate the additional time, energy, and effort required for CME activities. In short, all five decision-making factors have a significant relationship with students' willingness to persuade others to join the university. Except for the negative association with the program factor, all other factors positively affect CME behaviors.

This study provides evidence to support the connection between decision-making factors and CME, providing theoretical and practical implications for service marketing for higher education literature as well as international student outreach and engagement. Specifically, international students are mostly likely to use their time and effort to provide positive persuasion except when the foreign university's program is considered difficult or expensive in the home country. When influenced by the constraint of the program of study, they are likely to withdraw from promoting host universities to their friends and family. Instead, the perceived value of the program, the influence of others, the employment opportunities, and the desire to study overseas all have a positive significant relationship with student's intention to be benevolent toward the host university. Furthermore, international students exhibit positive affective attitude toward the university when they are strongly influenced by family, friends, faculty, or advisor. It is the relationship with these actors that determines student's affection toward the university. Similar to consumer emotional engagement, consumer cognitive engagement is impacted by the influence of others and student's internal motivation. However, different from the emotional aspect, employment opportunities, the risk factor, play a significant positive role in determining student's cognitive engagement. On the other hand, student satisfaction with the university encourages positive extra-role persuasive engagement, or word-of-mouth to prospective students and stakeholders. However, satisfaction does not have the same moderating relationship with extra-role benevolent engagement, or intention to donate to the university. Perhaps, other factor such as employment opportunities is much more powerful predictor of intention to donate to the university.

On the managerial level, understanding the role of pre-purchase decision-making factors on post-purchase CME provides three key benefits. First, the International Service Organizations (ISO) or those responsible for international study programs can proactively enhance CME by encouraging faculty and advisors to develop stronger relationships with prospective students while promoting a culture of belongingness to current students. These students can potentially endorse the university by spreading positive word-of-mouth to a new generation of international students. It is important to build a strong alumni connection with former international students, encouraging them to exert a positive influence on prospective students. Second, with the exception of internal desire to study aboard, where universities might have minimal influence, the perceived value of the program significantly impacts the likelihood of student's engagement with university outreach efforts and their monetary contributions to the university post-graduation. Highlighting accreditation, recognition, award of the program to international students would be advantageous (Gai et al., 2016). Third, universities might want to invest significantly in assisting international students with employment opportunities during the program and post-graduation. Developing career pathways, building job searching skills, navigating through governmental policy and procedures would facilitate and enhance positive employment outcomes for students. Recruiting the first-time international student is undeniably important while capturing and exploiting this potential marketing resource for the university is equally important.

The motivation to attract international students differs among countries and among institutions. Economic enhancement, financial benefits, and integration or assimilation of knowledge and culture are a few desirable outcomes (Altbach & Knight, 2007). Understanding the impacts of specific decision-making factors on student engagement enables institutions and countries to devise appropriate strategic alliances, institutional consortiums, student-employer mobility programs (i.e. internship and post education employment programs for international students), and interaction platforms to maximize students' pre- and post- educational and cultural experiences.

5. Contribution, limitation, and future research

In higher education service literature, various pre-purchase factors and expectations have been explored, but they have not been brought together in a single study to explore their impacts on post-service CME (Gai et al., 2016; María Cubillo, Sánchez, & Cerviño, 2006; Paswan & Ganesh, 2005, 2009). Van Doorn et al. (2010) investigated the customer-based antecedents of CME and emphasized the importance of customer goals, resources available, and value perceptions on customer engagement. Fuller (2010) identified the expected benefits from non-transactional behaviors influencing CME; while Jaakkola and Alexander (2014) argued that consumer expectation of value outcomes influences their motivation to engage. In this study, we identify the internal, external, and risk factors that international students might face when they evaluate foreign universities, how these factors influence their CME, and how satisfaction with the universities moderate the pre- and post-acquisition relationships.

This study makes several key contributions to existing higher education and service marketing literature. First, the research explores other marketing mechanism (e.g. CME) to provide insightful nuances of service consumption experiences. Second, given the relatively embryonic state of a holistic view of the customer journey from need-recognition to CME, the investigation offers empirical relationships between pre-purchase factors to post-purchase outcomes in a higher education industry context. The findings demonstrate that CME does not begin at or after the exchange, but rather suggest an integrated excursion from need-recognition to CME. The increasing focus on customer engagement has evolved due to the significant contribution of customers co-creating values for the firm through their own resources, resulting in significant challenges and opportunities for the firm (Jaakkola & Alexander, 2014; Vargo & Lusch, 2004). CME can be used to segment customers in groups that have high vs. low propensity to engage in activities associated with the services and the institutions (Van Doorn et al., 2010). Understanding various antecedents of and their effects on specific dimensions of CME provides firms the knowledge required to facilitate and encourage specific desirable CME. Managerial attention needs to be given to the relative importance and interactions among the antecedents of CME to maximize total customer marketing engagement value (Kumar et al., 2010).

We apply the pre-purchase decision-making model for services to the higher education context in order to better understand the motivators behind the international students' post-consumption engagement (Kurtz & Clow, 1998; Rickwood & White, 2009). This research endeavor is worthwhile due to the sparse literature on pre-purchase decision-making for services, especially, the higher education industry. In addition, this study fills a literature void by building and testing a theoretical model that connects the pre-purchase decision-making factors with post-consumption CME among international students. The findings would provide valuable insights for improving international student recruitment and management of service loyalty and alumni relationship management. Student loyalty behaviors have been found to boost the university brand equity (McAlexander, Koenig, & Schouten, 2006) and contribution to the alumni fund.

To our knowledge, there is no study to date that explains donation intentions and positive word-of-mouth of international students, although alumni-sourced resources significantly fund important activities at many universities (McAlexander et al., 2006). Notwithstanding the values of the findings, due to the measures employed, four variables (i.e. value, employment, desire, and satisfaction) in this study have less than three items required to calculate Cronbach's alpha (Hair et al., 2006), although, the limited items sufficiently quantify the intended constructs. Further refinement of these constructs is needed to validate the results reported here. Future research can also investigate the surprising findings of this study such as the negative impact of employment factor and positive effect of employment factor. Other theories such as prospect theory or expectation confirmation/disconfirmation theory can be utilized in the future studies to further explore the intricate relationships studied here.

It is especially critical now for higher education institutions to build long term relationships with international students through programs that can get them involved and connected with the universities. For this purpose, CME is a viable way to strengthen the relationship between international students and their host universities. Engagement is a key component of relationship marketing which seeks to develop and maintain good relationships with the existing and potential customers not only for final transactions but also for pleasant customer experience (Vivek et al., 2012).

Disclosure statement

No potential conflict of interest was reported by the authors.

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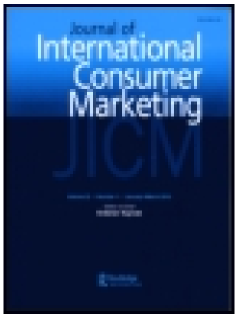

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Exploring study abroad journey: Chinese and Indian students in U. S. Higher education

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Exploring study abroad journey: Chinese and Indian students in U. S. Higher education

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ABSTRACT
Chinese and Indian students represent over half of all international students in the United States. This study explores the study abroad journey of Chinese and Indian international students by connecting their pre-consumption decision-making factors, service experience, and post-consumption consumer marketing engagement (CME) behaviors. The results show that consumer decision-making factors and service experiences have more influence on Chinese international students' post-acquisition CME than on Indian international students. The prestige and value of a U.S. degree have a positive impact on CME of both Chinese and Indian international students but in different ways. Interestingly, the influence factor inhibits the interactive, persuasive and benevolent aspects of CME behaviors among Chinese international students, while it positively impacts the persuasive aspect of CME among Indian international students, that is, their effort to spread good word of mouth about the U.S. University and their willingness to recommend the university to people in their home country. Besides, international student satisfaction with social opportunities encourages them to promote positive interactive and affective engagement with host universities. Finally, satisfaction with campus quality promotes interactive, cognitive and persuasive aspects of CME. Implications and limitations of the study conclude the paper.

KEYWORDS
Decision-making factors; service experience; consumer marketing engagement; international students; study abroad journey

Introduction

Consumer engagement is not only a measure of firm competitiveness and marketing effectiveness in service industries (Brodie et al. 2011), but also a key component of relationship marketing to develop and maintain good connections, with existing and potential customers (Vivek, Beatty, and Morgan 2012). Consumer engagement is related to service value co-creation with an emphasis on meaningful customer experience (Zhang et al. 2018; Homburg, Jozic, and Kuehnl 2017). The entire customer experience and manifested engagement begin with initial expectations during the pre-purchase stage of the customer journey (Lemon and Verhoef 2016). In the case of international students, this journey begins with their expectations about U.S. universities at the pre-purchase stage (i.e. decision-making factors), continues with their actual experiences while at the U.S. universities and concludes with post-acquisition assessment. If their experiences are, in general, quite satisfactory, co-creating values with their universities is a highly viable possibility. Such post-purchase engagements or customer marketing engagements (CME) are defined as consumer involvement in a service provider's marketing activities (Vivek, Beatty, and Morgan 2012). However, few studies in services marketing literature investigate the value co-creation role of student engagement in service relationship marketing in the context of the higher education industry. In particular, this study explores the study aboard journeys of two major international student groups, Chinese and Indian, to better understand their marketing engagement with U.S. universities and thus the international higher education services marketing effectiveness.

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Foreign students contribute $42.4 billion per year to the U.S. service economy (U.S. Department of Commerce, 2017). In 2017–2018 international students from China represented the largest group with 363,341 (33.2%) students, and India represented the second largest group with 196,271 (17.9%) students, according to the Institute of International Education (IIE). Together, these two groups represent over half (51.1%) of all international students in the U.S., and their presence has grown steadily over the years. Yet, as a top host of international education, the U.S. is experiencing an overall percentage decrease in international student enrollment for the first time, while the same number worldwide is climbing (IIE, 2019). Therefore, it is quite likely that international students are selecting other countries for their oversea studies. For example, Australia and Canada have experienced a sharp increase in international student enrollment, especially from China and India over the past decade (ICEF Monitor, 2019; India Daily, 2019; Hiscock, 2018). For these reasons, the U.S. universities have an urgent need to critically review their international students' educational journey, beginning with their expectations, consuming experiences, and ending with engagements (or lack thereof) with the host universities. Such a review potentially provides U.S. educational institutions a more insightful measure of international service marketing effectiveness of the higher education industry and its impact on the service sector of the U.S. economy.

Against this backdrop, this research attempts to explore the study abroad journey of international students and compare the journey maps of Chinese and Indian international students, the two dominant international student groups in the U.S. International students' marketing involvement with host U.S. universities could serve as a leading indicator of their contributions (i.e. brain gain and monetary) to the U.S. higher education service economy as well as marketing effectiveness of the higher education service. Since the extant literature has not postulated on the significant higher education international marketing implications of Chinese and Indian international students in the U.S., we make an important contribution through this paper. To explore the study abroad journey of international students, it is necessary to build connections among the pre-consumption decision-making behaviors, the service experience evaluation, and post-consumption engagement. However, it is not clear from extant research how the pre-consumption decision-making behaviors, the service experience evaluation, and post-consumption engagement could differ between Chinese and Indian international students. To better understand the expectations, experiences, and engagements of their foreign educational journeys, we address the following four research questions in this study:

> RQ1: What expectation similarities and differences exist between Chinese and Indian international students in the pre-consumption decision-making stage?

> RQ2: What experience similarities and differences exist between Chinese and Indian international students in the service consumption stage?

> RQ3: What CME similarities and differences exist between Chinese and Indian international students in the post-consumption stage?

> RQ4: How do pre-consumption expectations and the service evaluation factors influence the post-consumption CME of Chinese and Indian international students?

Literature review

International student expectations – pre-purchase decision making factors

Consumer experience and manifested engagement begin with the rise of expectations during the pre-purchase stage of the customer journey (Lemon and Verhoef 2016). Marketing literature suggests various potential consumer pre-purchase decision-making factors that might influence consumer consumption experience, post-consumption evaluation, and behavior. These reflect different expectations of service offerings in the higher education context, which influence specific purchase decision-making and varying levels of post-acquisition satisfaction (Rickwood and White 2009; Kurtz and Clow 1998). Past research on international students suggests that factors such as the difficulty, costs, and time requirements to complete a study program, the influence from family members, friends, faculty, or advisors, the perceived value of the degree, and the employment opportunity during and after graduation influence international students' decision to and choice for study abroad (Nguyen, Sun, and Ganesh 2019; Gai, Xu, and Pelton 2016; Paswan and Ganesh 2005, 2009; Paswan, Spears, and Ganesh 2007). Together, these factors represent international students' expectations while making decisions to join a specific host university.

The motivation to study abroad was similar for most international students, regardless of their country of origin (i.e. European vs. non-European). For example, King and Sondhi (2018) studied UK and Indian international students and found that the motivations for studying abroad were similar between the two groups, such as their desire for a prestigious university, better career, unique experience, and family consideration. It has also been found that their native culture affects international students' competitiveness and academic performance in the U.S. (Baumann and Hamin 2011). This finding implies that Chinese and Indian international students have similar expectations for U.S. universities when making decisions to study board. However, due to language and cultural background, Chinese and Indian international students experienced differences in their educational endeavors, which could potentially lead to different foreign study experiences and engagement outcomes. Chinese and Indian international students in the U.S. share several characteristics (Tung 2008). However, similarities and differences between Chinese and Indian international students in their specific expectations, experiences, and post-graduation engagements have not been investigated and compared in extant research.

In the current era of fiercely competitive global market, recruiting global talent or brain gain is critical to all countries, especially the United States. For instance, Dreher and Poutvaara (2011) examined the impact of the inflow of foreign students into the United States on migration patterns in the country over the 1971–2001 period and found that international student flows lead to a significant brain gain for the United States. The declining educational appropriations also results in the growing influx of international students to the U.S. (Macrander 2017), and international students provide much-needed tuition revenue and help subsidize the cost of enrolling additional domestic students (Shih 2017). As Chinese and Indian international students represent over half of all International students in the U.S., it is necessary to examine and compare their expectations, experience, and their evaluation of host universities.

International student experiences – evaluation of service augmentation mix

In the context of higher education, core service offering is the degree itself (Paswan and Ganesh 2009). Student experience and satisfaction with service offerings are conceptualized as a cumulative measurement evaluating different aspects of the international student education journey. Consumer satisfaction construct has received much attention in the literature as an important outcome as well as predictor (Paswan, Spears, and Ganesh 2007; Browne et al. 1998; Churchill and Surprenant 1982). However, as a predictor, satisfaction alone is not enough to infer customer loyalty, repeat purchase, or consumer defect (Oliver 1999). For this reason, host universities can and may modify degree offerings into customized offering to achieve loyalty, repeat purchase, or marketing engagement (Paswan and Ganesh 2005, 2009). Specifically, host universities can alter their service augmentation mix to meet the needs of international students (Paswan and Ganesh 2005, 2009). A review of the literature suggests the following service augmenters: campus quality (quality of classroom instruction, instructional resources, recreational facilities, and physical safety); study costs (tuition and fees, financial aid and scholarships); living costs (costs of food, clothing, housing, and insurance); and social opportunity available to international students, i.e. interactions with students, general public, and integration with U.S. holidays (Paswan and Ganesh 2005, 2009).

The expectation of international students during the pre-purchase stage and their experience with service augmentation mix at the consumption stage determine the outcomes of service evaluation. Service evaluation can be satisfaction, dissatisfaction, or something in between. Due to the inseparability between providers and consumers for service offerings, consumer evaluation of service or level of satisfaction with the service provider is determined by the consumer's initial expectations (pre-purchase decision-making factors) about the service offerings and the discrepancies between expectations and performance (Churchill and Surprenant 1982). International students' level of satisfaction is expressed through post-purchase engagements. A satisfied international student is more likely to exhibit affective responses (Berman 2005), recommend a university to friends or relatives (Browne et al. 1998), engage in positive word-of-mouth, and collaborate with the university post-graduation (Alves and Raposo 2009; Elsharnouby 2016). Customer satisfaction literature also emphasizes consumer behaviors that support the service provider's marketing engagement including interaction with faculty, staff, and other students, as well as the affective and cognitive engagement with the university (Eisingerich, Auh, and Merlo 2014; Jaakkola and Alexander 2014; Yi and Gong 2013).

Scholars have made attempts to investigate various aspects of international student experience in the U.S. universities, such as the persistence of international students (Mamiseishvili 2012), their psychosocial adjustment to the U.S. universities (Brunsting, Zachry, and Takeuchi 2018; Zhang and Goodson 2011), their participation in recreational activities, intercultural friendship, and adaptation to college (Glass et al., 2014), as well as social media use and adaption (Forbush and Foucault-Welles 2016). Their GPA, degree plans, and academic integration were found to positively influence the persistence of international students, while remediation in English and social integration had a negative impact (Mamiseishvili 2012). Acculturation stress, psychological adjustment, social belonging, depression, and anxiety are the most commonly researched U.S. international student-related topics (Brunsting, Zachry, and Takeuchi 2018).

Extant literature has investigated a few antecedents and outcomes relating to Chinese or Indian international students' experiences in foreign institutions. The main focus has been on factors influencing the probability of academic performance and post-graduation employability of these students. For instance, Yang, Webster, and Prosser (2011) reported that Chinese students' goals, experiences, and learning outcomes were strongly associated with their going abroad for higher studies. Forbush and Foucault-Welles (2016) found that Chinese international students who utilized Social Networking Sites (SNSs) more often during their preparation for study abroad had higher levels of social and academic adaptation in the host culture, compared with students who used SNSs less often or not at all. Also, in preparing for future employment post-graduation, Chinese students place a strong emphasis on personal skills and attitudes. Through coursework, work experience, social activities, and university participation, Chinese students hope to differentiate themselves from other international students (Huang, Turner, and Chen 2014).

Compared to Chinese students, Indian students have better command of English proficiency since English is an official language in India through historical contact with Great Britain (Levis, Levis, and Slater 2012). Coming from the largest democracy in the world, Indians are also likely to have a good understanding of U.S. and Western political systems and governance compared to Chinese (Almeida 2005). However, when comparing the ability to acculturate to the U.S. between Chinese and Indian international students, Rice et al. (2012) found that Indian students suffer deeper depression than Chinese counterparts. These findings imply that although Indian students have language and cultural advantages, they have not capitalized on these fully. On a related note, Indian international students, have experienced violent attacks in Australia due to deep cultural mismatching (Caluya, Probyn, and Vyas 2011). However, no academic studies have investigated the study experience of Chinese and Indian international students and its relations to post-acquisition customer marketing engagement.

International students engagements – post-acquisition customer marketing engagement

Customer marketing engagement (CME) is defined as the degree of consumer involvement in a firm's marketing activities (Vivek, Beatty, and Morgan 2012). Extant studies suggest that the characteristics of programs and universities influence the level of CMEs, resulting in higher level of engagement among international students like proactive interactions with other service users in brand communities to enhance their service experience, or share their knowledge and experience with other international students (Dessart, Veloutsou, and Morgan-Thomas 2015), or benevolent activities, word-of-mouth recommendation, involvement in product development, inducement of concrete actions of other stakeholders, and other contributing behaviors (Jaakkola and Alexander 2014). On the other hand, CME also defines the type of engagement and the use of knowledge and skills among international students. Since engagement strategies intend to build and maintain relationships with existing and potential customers (Vivek, Beatty, and Morgan 2012), it is important to look at the antecedents of customer engagement (i.e. expectations and experiences) to better facilitate the process, develop appropriate platforms, and encourage customers to co-create value. We argue that the value co-creation process does not only occur at the post-consumption stage of customer marketing engagement but begins right from the pre-consumption decision-making stage.

In the higher education service context involving international students, CME manifests itself in students' interactions with others on and off-campus (i.e. *interactive CME*), their persuasion of others to join the university (i.e. *persuasive CME*), and their willingness to donate to the university (i.e. *benevolent CME*). It also manifests itself in social and psychological attachment to the university based on feelings of pleasure or alienation (i.e. *affective CME*), and their rationality on economic matters (i.e. *cognitive CME,* Ganesan et al. 2010). Therefore, all five dimensions are considered manifestations of CME of international students, which result from the level of student satisfaction with a university.

Both Chinese and Indian international students share similar characteristics in the post-study behaviors such as brain circulation phenomenon and entrepreneurship spirit. Devoretz and Ma (2002) found that both Hong Kong and Indian students who had obtained advanced education in Canada chose to return to their home country while maintaining relationship and economic ties in Canada. Student loyalty behaviors have been found to not only boost the university brand equity (McAlexander, Koenig, and Schouten 2006) but also spread good word-of-mouth and donate money if they perceived higher service quality from university service providers (Boulding et al. 1993). Besides, word of mouth or recommendations significantly influence international student's decision to choose a foreign university (Gai, Xu, and Pelton 2016), and alumni donations make substantial financial contributions to the long-term sustainability of the universities (McAlexander, Koenig, and Schouten 2006). However, there is no study to explore these persuasive and benevolent aspects of international student CME in the extant literature, especially among Chinese and Indian international students. Therefore, there is a need to investigate and compare these two groups as educational service consumers to better understand their CME behaviors.

Theoretical development

Based on attachment theory, people have a natural inclination to make and maintain lasting bonds with familiar and irreplaceable focal objects (Ball and Tasaki 1992). In a higher education context, attachment reflects the extent of student bond with the institution, which could help explain the international students' post-purchase expectation and their engagement with host universities (Van Doorn et al. 2010). When attached, international students are more likely to build a relationship with the university, interact with its members, develop sentiment toward the institution, and form cognitive assessment of its offerings. We argue that such attachment manifests itself in the form of interactive, affective, and cognitive engagements.

Also, customer decision factors such as their desire to find a job in a foreign country during or after getting a degree influence how the international students might engage with the universities (Van Doorn et al. 2010). If the international students are satisfied with the educational service experience, they would have more positive emotional attachment with the service providers and are more likely to spread positive word of mouth, participate in the university international student initiatives, as well as donate money to the foreign alma mater. The engagement behaviors of international students are likely a function of several antecedents that are part of the pre-consumption decision-making process.

This study thus makes several key theoretical contributions to existing international service marketing literature. First, this research is the first study to map the customer journey for higher education service by connecting international student decision-making factors, their foreign study experiences, and their engagement with higher education service providers. Second, this research compares the study abroad journey maps of Chinese and Indian international students, two significant groups of students in terms of brain and monetary gain to the U.S. economy, which has not been investigated in extant literature. Third, the findings contribute to important theoretical implications for foreign student engagement and international higher education service marketing effectiveness.

Research method

Data collection and sample profile

The context of this study is the U.S. higher education service marketed to international students. A total of 174 schools with international student enrollment of at least 1,000 were identified from the directory provided to one of the author's schools by the Institute for International Education in New York, NY. The International Student Offices (ISOs) or equivalent at these schools were contacted via email and invited to participate in a national survey of international students. Twenty-two schools accounting for nearly 75,000 international students agreed to participate. The draft survey was previewed by them, and feasible modifications they suggested were incorporated into the survey. The finalized online survey URL and drafts of survey notification, survey activation, and survey reminder emails were made available to the ISOs which took care of distributing these to the international students at their schools. The survey resulted in a total of 670 valid responses that reported home countries, among which China (170 or 25.4%) and India (109 or 16.3%) are the top two home countries of survey participants. The remaining 58.3% come from many other countries.

Table 1 shows the sample profile of Chinese and Indian international students. The Chinese report an average age of 24.25 years, average cumulative GPA of 3.67, average length of stay in the U.S. of 1.98 years and at their current university of 1.78 years. About 58% of the Chinese international students in this sample is female and almost 78% are from middle-class or better background. Almost all (99%) of the Chinese international students are in the U.S. on an F1 or J1 visa. Nearly 35% are in the U.S. for undergraduate studies, 28% for Masters-level studies, and 32% for doctoral work. The popular majors or fields of study among the Chinese international students are business including economics & MIS, computer engineering or computer science, liberal arts, life science and education (collectively 62%), while another 15% are in intensive English language programs.

By comparison, for Indian international students, the average age is 26.19 years, the average cumulative GPA (CGPA) is 3.70, and they have been in the U.S. for an average of 1.51 years and at their current university for 1.33 years. About 55% of the Indian international students in this sample is male and almost 91% are from middle-class or better background. Almost all (97%) of the Indian international students are in the U.S. on an F1 or J1 visa. The majority (92%) are in the U.S. for graduate studies including Masters-level, doctoral and post-doctoral work. The popular majors or fields of study among the Indian international students are computer engineering or computer science, business including economics & MIS, and liberal arts (collectively 67%),

Table 1. Sample profile of Chinese and Indian International Students (IS).

Variables	Items	China	India
2017–2018 enrollment	Number of first-time students	363,341	196,271
Sample distribution	Number of international students	170	109
Academic classification	Undergraduate	60	8
	UG done, practical training	4	1
	English language remedial program	3	0
	Masters	48	64
	Doctoral	54	35
	Post-doctoral fellow	0	1
Current major	Agriculture	6	6
	Business including Economic & MIS	29	12
	Computer Science	12	11
	Education	10	3
	Engineering: Computer	23	38
	Engineering: all others	5	2
	Health Professions	2	1
	Humanities	1	2
	Law	5	0
	Liberal Arts	19	12
	Life Sciences	13	1
	Mathematics	4	0
	Music	7	4
	Social Sciences	1	0
	Intensive English Language Institute	25	16
Current visa status	US Green Card	2	0
	Student F1	163	106
	Exchange Visitor J1	5	0
Gender	Male	66	60
	Female	99	47
Social class in your country	Upper class	3	2
	Upper middle class	31	52
	Middle class	98	45
	Lower middle class	25	7
	Lower class	7	1
Age	Mean	24.25	26.19
Current CGPA	Mean	3.67	3.70
Years as IS in the USA	Mean	1.98	1.51
Years at this university	Mean	1.78	1.33

while another 15% are in intensive English language programs.

It seems that both Chinese and Indian international students are good students with relatively high CGPA, and they are on an F1 or J1 visa in the U.S. Majority of these two groups of international students have good family background and they have common interest in engineering in computer or computer science, business including economics & MIS, and liberal arts. While most of them come to the U.S. for graduate level studies, a much larger percentage of Chinese students are in undergraduate programs. Besides, Chinese international students study in a wider variety of fields than Indian international students as the latter is more focused on computer engineering and business.

Measuring instrument

This study adapted existing scales to measure the pre-consumption decision-making factors, service evaluation, and post-consumption CME factors (Paswan and Ganesh 2005, 2009; Paswan, Spears, and Ganesh 2007). Specifically, the 10 items for pre-consumption decision-making factors were measured with a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Exploratory factor analysis (EFA) was used to evaluate four dimensions of pre-consumption decision-making construct (Nunnally, Bernstein, and Berge 1967). As discussed previously for international students, the pre-consumption decision-making factors include the difficulty, expense, and time requirements to complete a study program (Program factor, 3 items, $\alpha = 0.634$), influences of family, friend, faculty, and advisor (Influence factor, 3 items, $\alpha = 0.653$), value of the degree (Value factor, 2 items, $\alpha = 0.672$) and the risk factor of employment opportunities during and after graduation (Employment factor, 2 items, $\alpha = 0.713$). Please see Table 2.

Next, 17 items were used to measure the international student experience of service offerings

(Paswan and Ganesh 2005, 2009). Exploratory factor analysis (EFA) was used to evaluate the four dimensions (Campus Quality, Study Costs, Living Costs, and Social Opportunity) of service experience (Nunnally, Bernstein, and Berge 1967). As discussed previously, service augmentation mix includes quality of classroom instruction, other instructional resources such as textbook, classroom, recreational facilities on campus and physical safety (Campus Quality Augmenter, 4 items, $\alpha = 0.768$); costs of tuition and fees, the student financial situation to meet expenses, ability to obtain assistantships and scholarships, availability of financial aids and/or scholarships, and fair tuition in comparison to in-state students (Study Costs Augmenter, 5 items, $\alpha = 0.866$); costs of food, clothing, and housing, as well as the availability of housing and health insurance for accompanying family (Living Costs Augmenter, 5 items, $\alpha = 0.693$); the opportunity to interact with U.S. students at the same university and general public Americans, to enjoy special home holidays, events, occasions in the US (Social Opportunity Augmenter, 3 items, $\alpha = 0.808$). Please see Table 3.

Another 20-item scale was used to measure five dimensions (Interactive, Affective, Cognitive, Persuasive and Benevolent) of engagement, which were adapted from previous (Nguyen, Sun, and Ganesh 2019; Paswan and Ganesh 2009; Carroll and Ahuvia 2006). Exploratory factor analysis (EFA) was used to evaluate the dimensionality CME (Nunnally, Bernstein, and Berge 1967). The five CME includes: campus academic and non-academic interaction with faculty, university administrators, and other students (Interactive Engagement, 5 items, $\alpha = 0.859$); fun, enjoyment, pleasure, loving, and friendly (Affective Engagement, 5 items, $\alpha = 0.916$), strategic, valuable, rational, and respectful (Cognitive Engagement, 4 items, $\alpha = 0.862$); good word of mouth, talk up, positive opinions, and recommendation (Persuasive Engagement, 4 items, $\alpha = 0.904$); and donate money to the university

Table 2. Exploratory factory analysis (EFA) of IS expectation (pre-purchase decision making factors).

International students' expectation – pre-purchase decision making factors items	Program	Influence	Value	Employment
PRO1 Program of study too difficult to get admission in your country	0.793			
PRO2 Program of study too expensive in your country	0.800			
PRO3 Program of study shorter in the USA, saving you time	0.679			
INF1 Recommendation of a faculty advisor in your country who has NOT studied in the USA		0.765		
INF2 Recommendation of a faculty advisor in your country who has studied in the USA		0.771		
INF3 Influence of family and/or friends who have NOT studied in the USA, but desire that you do		0.574		
VAL1 Prestige of a degree from the USA in your country			0.868	
VAL2 Value of a degree from the USA in the job market in your country			0.853	
EMP1 Employment opportunities in the USA (e.g., practical training) after your education				0.869
EMP2 Employment opportunities in the USA during your education (summer job, part time job etc.)				0.872
Total variance explained = 64.293%	17.607	16.214	15.765	14.708

Note: 7-point Likert scale was used to measure each item.

Table 3. Exploratory factory analysis (EFA) of IS experience (Service Augmentation Mix).

International students' experience – service augmentation mix items	Campus quality	Study costs	Living costs	Social opportunity
CQ1 Quality of classroom instruction	0.717			
CQ2 Quality of other instructional resources, eg. textbook, classroom etc.	0.736			
CQ3 Recreational facilities on campus	0.700			
CQ4 Physical safety	0.551			
SC1 Cost of tuition and fees		0.649		
SC2 Your financial situation (to meet expenses)		0.563		
SC3 Availability of financial aid and/or scholarships		0.849		
SC4 Ability to obtain assistantships/scholarships		0.843		
SC5 Fair tuition in comparison to in-state students		0.691		
LC1 Cost of food			0.593	
LC2 Cost of clothing			0.607	
LC3 Cost of housing (dorm, apartment, rental house)			0.710	
LC4 Availability of housing (dorm, apartment, rental house)			0.672	
LC5 Availability of health insurance for your accompanying family, if applicable			0.716	
SO1 Opportunity to interact with American students at this university				0.822
SO2 Opportunity to interact with general public Americans				0.856
SO3 Opportunity to enjoy special home holidays, events, occasions in the US				0.570
Total variance explained = 60.424%	13.738	17.939	16.899	11.848

Note: 7-point Likert scale was used to measure each item.

Table 4. Exploratory factory analysis (EFA) of IS engagement (customer marketing engagement variables).

International students' engagement – post-acquisition CME Items	Interactive	Affective	Cognitive	Persuasive	Benevolent
INT1 On campus academic-interaction with faculty at this university	0.761				
INT2 On campus interactions with university administrators	0.719				
INT3 On campus academic-interaction with other students at this university	0.824				
INT4 On campus nonacademic interactions with other students at this university	0.797				
INT5 Off-campus interactions w members of the general public	0.748				
AFF1 Fun		0.791			
AFF2 Enjoyment		0.784			
AFF3 Pleasure		0.745			
AFF4 Loving		0.708			
AFF5 Friendly		0.684			
COG1 Strategic			0.815		
COG2 Valuable			0.741		
COG3 Rational			0.712		
COG4 Respectful			0.614		
PER1 I spread the good word about this university				0.744	
PER2 I talk up this university to my friends who are not students here				0.777	
PER3 I always express positive opinions about this university				0.799	
PER4 I have recommended this university to lots of people in my home country				0.754	
BEN1 I am willing to donate money to this university now or in the future					0.809
BEN2 I will contribute to the university's international student initiatives					0.707
Total variance explained = 73.658%	17.956	17.960	13.901	16.144	7.699

Note: 7-point Likert scale was used to measure each item.

and international student initiatives (Benevolent Engagement, 2 items, $\alpha = 0.720$). Please see Table 4.

Based on the factor loadings and Cronbach's Alpha values for the constructs in this study, ranging from 0.634 to 0.916, all latent constructs used in this study have acceptable reliability (Churchill 1979). The average variance extracted (AVE) are mostly above 0.50, indicating acceptable convergent validity (McDonald and Ho 2002). At the same time, since the square root value of AVE per factor (from 0.662 to 0.871) is more than the inter-factor correlations (from −0.003 to 0.719), the factors are considered to have adequate discriminant validity (Fornell and Larcker 1981). Please see Tables 5 and 6.

Table 5. Factors AVE and Cronbach's alpha values.

Factors	AVE	Square root of AVE	Cronbach's Alpha
Program	0.577	0.759	0.634
Value	0.741	0.861	0.672
Influence	0.503	0.709	0.653
Employment	0.758	0.871	0.713
Campus quality	0.462	0.68	0.768
Study costs	0.529	0.728	0.866
Living costs	0.438	0.662	0.693
Social opportunity	0.578	0.760	0.808
CME interactive	0.594	0.771	0.859
CME affective	0.553	0.744	0.916
CME cognitive	0.524	0.724	0.862
CME persuasive	0.591	0.769	0.904
CME benevolent	0.577	0.760	0.720

Data analysis results

One-way ANOVA analyses were utilized to answer the first three research questions. Table 7 shows that for the pre-consumption decision-making factors, only influence ($M_{China} = 3.60$ vs. $M_{India} = 3.17$; $p = .025$) and employment ($M_{China} = 4.30$ vs. $M_{India} = 5.11$; $p = .000$) differ significantly between Chinese and Indian international students. For the foreign student experience evaluation factors, only campus quality ($M_{China} = 5.33$ vs. $M_{India} = 5.69$; $p = .066$) varies significantly between Chinese and Indian international students, while for the post-consumption CME factors, interactive ($M_{China} = 5.40$ vs. $M_{India} = 5.74$; $p = .008$), cognitive ($M_{China} = 5.13$ vs. $M_{India} = 5.44$; $p = .027$), and persuasive ($M_{China} = 5.00$ vs. $M_{India} = 5.51$; $p = .002$) show significant differences between Chinese and Indian international students.

For research question 4, multiple regression analysis was run to get insights. Several regression models were developed to evaluate the potential relationships among the pre-consumption decision-making factors, the service evaluation factors, and post-consumption engagement factors among Chinese international students. Additional regression models were also developed to evaluate the potential relationships of these factors among Indian international students. Table 8 shows the comparison table of the regression results with CME interactive as the dependent variable and all pre-consumption decision-making factors and the service experience evaluation factors as the independent variables. The

Table 6. Factors correlations.

Factors	Program	Value	Influence	Emp.	CQ	SC	LC	SO	CMEI	CMEA	CMEC	CMEP	CMEB
Program	0.759												
Value	.130*	0.861											
Influence	.395**	.271**	0.709										
Employment	.294**	.312**	.240**	0.871									
Campus quality	−0.003	−0.023	0.157	0.018	0.68								
Study costs	0.049	−0.034	.247**	−0.09	.527**	0.728							
Living costs	0.085	0.092	.389**	0.023	.536**	.663**	0.662						
Social opportunity	0.021	−0.023	.234**	0.015	.605**	.567**	.519**	0.760					
CME interactive	-.141*	0.097	0.017	0.081	.601**	.408**	.447**	.637**	0.771				
CME affective	0.023	.133*	.202**	0.1	.496**	.431**	.519**	.569**	.611**	0.744			
CME cognitive	−0.053	0.05	.131*	0.071	.610**	.410**	.510**	.559**	.551**	.719**	0.724		
CME persuasive	−0.038	.135*	0.114	.137*	.554**	.382**	.526**	.496**	.562**	.628**	.637**	0.769	
CME benevolent	0.042	.145*	.132*	.167**	.439**	.321**	.455**	.393**	.454**	.530**	.479**	.695**	0.76

Note: *Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).
Diagonal values are square root of AVE.

Table 7. ANOVA Comparison results between Chinese and Indian International Students (IS).

International study journey	Factors	COO	*N*	Mean	Std. Dev.	Sig.
Expectations	Program	China	170	2.35	1.46	0.382
		India	107	2.21	1.13	
	Value	China	170	5.24	1.42	0.381
		India	108	5.07	1.60	
	Influence	China	170	3.60	1.49	0.025**
		India	108	3.17	1.69	
	Employment	China	169	4.30	1.70	0.000***
		India	107	5.11	1.70	
Experience	Campus quality	China	90	5.33	1.17	0.066*
		India	58	5.69	1.15	
	Study costs	China	91	4.43	1.40	0.679
		India	58	4.53	1.77	
	Living costs	China	90	4.88	1.24	0.981
		India	58	4.88	1.35	
	Social opportunity	China	91	4.62	1.35	0.155
		India	58	4.96	1.52	
Engagement	CME interactive	China	170	5.40	1.04	0.008***
		India	109	5.74	1.06	
	CME affective	China	170	5.17	1.15	0.324
		India	108	5.02	1.32	
	CME cognitive	China	170	5.13	1.17	0.027**
		India	108	5.44	1.09	
	CME persuasive	China	170	5.00	1.25	0.002***
		India	109	5.51	1.37	
	CME benevolent	China	170	4.61	1.40	0.510
		India	109	4.73	1.58	

Note: Statistically significant results are highlighted in red.
*Correlation is significant at the 0.10 level (2-tailed).
**Correlation is significant at the 0.05 level (2-tailed).
***Correlation is significant at the 0.01 level (2-tailed).

results show that for both Chinese and Indian international students, campus quality (CQ) and social opportunity (SO) play a statistically significant role in post-consumption CME interactive behaviors ($\beta_{\text{ChinaCQ}} = 0.429$, $p = .000$; $\beta_{\text{ChinaSO}} = 0.349$, $p = .002$; $\beta_{\text{IndiaCQ}} = 0.274$, $p = .044$; $\beta_{\text{IndiaSO}} = 0.583$, $p = .000$). However, the positive impact of CQ is stronger among Chinese international students than Indian international students while the positive effect of SO is stronger among Indian international students than Chinese international students. In addition, influence has a negative impact on CME interactive behavior among Chinese international student while value shows a positive impact on CME interactive behavior among Indian international students ($\beta_{\text{ChinaInfluence}} = -0.208$, $p = .028$; $\beta_{\text{IndiaValue}} = 0.187$, $p = .083$). Other factors have no statistically significant impact on CME interactive.

Table 9 shows the comparison table of the regression results with CME affective as the dependent variable and all pre-consumption decision-making factors and the service experience evaluation factors as the independent variables. The regression analysis results indicate that for

Table 8. Regression comparison results between Chinese and Indian International Students (DV: CME interactive).

IS	Factors	Unst'd Coeff.	Std. Error	St'd Coeffi.	*t*	Sig.
China	(Constant)	2.219	0.531		4.176	0.000
	Program	−0.084	0.070	−0.108	−1.204	0.232
	Value	0.102	0.062	0.145	1.655	0.102
	Influence	−0.150	0.067	−0.208	−2.231	0.028**
	Employment	0.000	0.056	0.001	0.006	0.995
	Campus quality	0.399	0.101	0.429	3.950	0.000***
	Study costs	−0.015	0.097	−0.019	−0.154	0.878
	Living costs	0.025	0.111	0.028	0.226	0.822
	Social opportunity	0.283	0.090	0.349	3.155	0.002***
India	(Constant)	0.951	0.776		1.226	0.226
	Program	0.014	0.112	0.013	0.124	0.902
	Value	0.156	0.088	0.187	1.768	0.083*
	Influence	−0.031	0.075	−0.052	−0.413	0.682
	Employment	−0.015	0.070	−0.023	−0.222	0.825
	Campus quality	0.271	0.131	0.274	2.066	0.044**
	Study costs	−0.058	0.087	−0.091	−0.670	0.506
	Living costs	0.122	0.122	0.144	0.995	0.325
	Social opportunity	0.438	0.097	0.583	4.516	0.000***

Note: Statistically significant results are highlighted in red.
*Correlation is significant at the 0.10 level (2-tailed).
**Correlation is significant at the 0.05 level (2-tailed).
***Correlation is significant at the 0.01 level (2-tailed).

Table 9. Regression comparison results between Chinese and Indian International Students (DV: CME affective).

IS	Factors	Unst'd Coeff.	Std. Error	St'd coeffi.	*t*	Sig.
China	(Constant)	0.875	0.625		1.398	0.166
	Program	−0.021	0.082	−0.024	−0.261	0.795
	Value	0.079	0.073	0.099	1.091	0.279
	Influence	−0.057	0.079	−0.070	−0.726	0.470
	Employment	0.055	0.066	0.078	0.823	0.413
	Campus quality	0.372	0.119	0.350	3.133	0.002***
	Study costs	0.025	0.114	0.029	0.222	0.825
	Living costs	0.054	0.130	0.054	0.417	0.678
	Social opportunity	0.333	0.105	0.359	3.156	0.002***
India	(Constant)	0.397	1.020		0.389	0.699
	Program	0.129	0.147	0.098	0.877	0.385
	Value	0.020	0.116	0.020	0.176	0.861
	Influence	0.162	0.099	0.218	1.633	0.109
	Employment	0.103	0.092	0.123	1.125	0.266
	Campus quality	0.059	0.173	0.049	0.344	0.732
	Study costs	0.020	0.115	0.025	0.174	0.863
	Living costs	0.262	0.161	0.253	1.633	0.109
	Social opportunity	0.301	0.127	0.326	2.367	0.022**

Note: Statistically significant results are highlighted in red.
*Correlation is significant at the 0.10 level (2-tailed).
**Correlation is significant at the 0.05 level (2-tailed).
***Correlation is significant at the 0.01 level (2-tailed).

both Chinese and Indian international students, only social opportunity (SO) has a statistically significant impact on post-consumption CME affective behaviors ($\beta_{\text{ChinaSO}} = 0.359$, $p = .002$; $\beta_{\text{IndiaSO}} = .326$, $p = .022$). The positive effect of SO on CME affective behaviors is similar between Indian international students and Chinese international students. Also, campus quality (CQ) only has a positive impact on CME affective behavior among Chinese international students ($\beta_{\text{ChinaCQ}} = 0.350$, $p = .002$). Other factors have no statistically significant impact on CME affective.

Table 10 shows the comparison table of the regression results with CME cognitive as the dependent variable and all pre-consumption decision-making factors and the service experience evaluation factors as the independent variables. The regression analysis results find that for both Chinese and Indian international students, only campus quality (CQ) has a statistically significant impact on post-consumption CME cognitive behaviors ($\beta_{\text{ChinaCQ}} = 0.383$, $p = .001$; $\beta_{\text{IndiaCQ}} = 0.322$, $p = .053$). Besides, the positive effect of CQ on CME cognitive behaviors is similar between Indian international students and

Table 10. Regression comparison results between Chinese and Indian International Students (DV: CME cognitive).

IS	Factors	Unst'd Coeff.	Std. error	St'd coeffi.	*t*	Sig.
China	(Constant)	0.336	0.626		0.536	0.593
	Program	−0.038	0.082	−0.041	−0.464	0.644
	Value	0.073	0.073	0.087	1.010	0.315
	Influence	−0.041	0.079	−0.047	−0.514	0.609
	Employment	0.067	0.066	0.092	1.012	0.314
	Campus quality	0.427	0.119	0.383	3.591	0.001***
	Study costs	0.001	0.114	0.001	0.008	0.994
	Living costs	0.152	0.130	0.144	1.165	0.247
	Social opportunity	0.296	0.106	0.305	2.809	0.006***
India	(Constant)	1.915	0.887		2.159	0.036
	Program	0.031	0.128	0.031	0.241	0.811
	Value	0.034	0.101	0.044	0.337	0.737
	Influence	0.032	0.086	0.058	0.377	0.708
	Employment	−0.008	0.080	−0.012	−0.097	0.923
	Campus quality	0.298	0.150	0.322	1.987	0.053**
	Study costs	−0.021	0.100	−0.034	−0.207	0.837
	Living costs	0.207	0.140	0.262	1.480	0.145
	Social opportunity	0.124	0.111	0.176	1.117	0.270

Note: Statistically significant results are highlighted in red.
*Correlation is significant at the 0.10 level (2-tailed).
**Correlation is significant at the 0.05 level (2-tailed).
***Correlation is significant at the 0.01 level (2-tailed).

Table 11. Regression Comparison Results between Chinese and Indian International Students (DV: CME persuasive).

IS	Factors	Unst'd Coeff.	Std. error	St'd coeffi.	*t*	Sig.
China	(Constant)	−0.104	0.680		−0.152	0.879
	Program	−0.032	0.089	−0.032	−0.356	0.723
	Value	0.170	0.079	0.191	2.152	0.034**
	Influence	−0.184	0.086	−0.203	−2.144	0.035
	Employment	0.114	0.072	0.147	1.574	0.119
	Campus quality	0.393	0.129	0.334	3.042	0.003***
	Study costs	−0.070	0.124	−0.071	−0.562	0.576
	Living costs	0.314	0.142	0.282	2.214	0.030**
	Social opportunity	0.259	0.115	0.252	2.255	0.027**
India	(Constant)	1.043	1.085		0.961	0.341
	Program	−0.145	0.156	−0.113	−0.927	0.358
	Value	−0.011	0.123	−0.011	−0.087	0.931
	Influence	0.178	0.106	0.246	1.688	0.098*
	Employment	0.117	0.098	0.143	1.197	0.237
	Campus quality	0.361	0.184	0.304	1.967	0.055**
	Study costs	0.014	0.122	0.018	0.115	0.909
	Living costs	0.275	0.171	0.271	1.608	0.114
	Social opportunity	0.048	0.136	0.053	0.354	0.725

Note: Statistically significant results are highlighted in red.
*Correlation is significant at the 0.10 level (2-tailed).
**Correlation is significant at the 0.05 level (2-tailed).
***Correlation is significant at the 0.01 level (2-tailed).

Chinese international students. On the other hand, social opportunity (SO) only has a positive effect on CME cognitive behavior among Chinese international students ($\beta_{\text{ChinaSO}} = 0.305$, $p = .006$). Other factors have no statistically significant impact on CME cognitive.

Table 11 shows the comparison table of the regression results with CME persuasive as the dependent variable and all pre-consumption decision-making factors and the service experience evaluation factors as the independent variables. The regression analysis results reflect that for both Chinese and Indian international students, influence significantly impacts the post-consumption CME persuasive behaviors but in an opposite way ($\beta_{\text{ChinaInfluence}} = -0.203$, $p = .035$; $\beta_{\text{IndiaInfluence}} = 0.246$, $p = .098$), while campus quality (CQ) has a statistically significant positive impact on post-consumption CME persuasive behaviors ($\beta_{\text{ChinaCQ}} = 0.334$, $p = .003$; $\beta_{\text{IndiaCQ}} = 0.304$, $p = .055$). In addition, value, living costs (LC) and social opportunity (SO) have a significant positive effect on CME persuasive behavior only among Chinese international students ($\beta_{\text{ChinaValue}} = 0.191$, $p = .034$; $\beta_{\text{ChinaLC}} = 0.282$, $p = .030$; $\beta_{\text{ChinaSO}} = 0.252$, $p = .027$). Other

Table 12. Regression Comparison Results between Chinese and Indian International Students (DV: CME benevolent).

IS	Factors	Unstandardized Coefficients	Std. error	St'd coeffi.	*t*	Sig.
China	(Constant)	0.248	0.725		0.343	0.733
	Program	0.033	0.095	0.035	0.351	0.726
	Value	0.121	0.084	0.140	1.435	0.155
	Influence	−0.200	0.092	−0.227	−2.185	0.032**
	Employment	0.160	0.077	0.214	2.079	0.041**
	Campus quality	0.492	0.138	0.431	3.573	0.001***
	Study costs	−0.029	0.132	−0.031	−0.222	0.825
	Living costs	0.305	0.151	0.282	2.017	0.047**
	Social opportunity	−0.034	0.122	−0.034	−0.277	0.782
India	(Constant)	−0.768	1.371		−0.561	0.578
	Program	−0.010	0.198	−0.006	−0.050	0.960
	Value	0.309	0.156	0.260	1.985	0.053**
	Influence	0.039	0.133	0.046	0.295	0.769
	Employment	0.020	0.123	0.021	0.165	0.870
	Campus quality	0.117	0.232	0.083	0.503	0.617
	Study costs	−0.038	0.154	−0.041	−0.247	0.806
	Living costs	0.267	0.216	0.222	1.238	0.222
	Social opportunity	0.400	0.171	0.374	2.338	0.024**

Note: Statistically significant results are highlighted in red.
*Correlation is significant at the 0.10 level (2-tailed).
**Correlation is significant at the 0.05 level (2-tailed).
***Correlation is significant at the 0.01 level (2-tailed).

factors have no statistically significant impact on CME persuasive.

Table 12 shows the comparison table of the regression results with CME benevolent as the dependent variable and all pre-consumption decision-making factors and the service experience evaluation factors as the independent variables. It is surprising to note that no factor has a statistically significant impact on CME benevolent behaviors for both Chinese and Indian international students. For Chinese international students, employment, campus quality (CQ) and living costs (LC) have a significant positive effect on CME benevolent while influence has a negative impact ($\beta_{\text{ChinaInfluence}} = -0.227$, $p = .032$; $\beta_{\text{ChinaEmployment}} = 0.214$, $p = .041$; $\beta_{\text{ChinaCQ}} = .431$, $p = .001$; $\beta_{\text{ChinaLC}} = 0.282$, $p = .047$). On the other hand, only value and social opportunity (SO) have a statistically significant positive influence on post-consumption CME benevolent behaviors among India international students ($\beta_{\text{IndiaValue}} = 0.260$, $p = .053$; $\beta_{\text{IndiaSO}} = 0.374$, $p = .024$). Other factors have no statistically significant impact on CME benevolent.

Discussion and conclusion

Theoretical contribution

This study examines the similarities and differences of pre-consumption decision-making expectation, the service experience evaluation, and post-consumption engagement behaviors between Chinese and Indian international students in U.S. universities. It also explores the study broad journey for international students to better assess the international higher education service marketing effectiveness. To the best of our knowledge, this is the first study in the extant literature to map the customer journey for higher education service and compare the two major international student groups in the U.S. The results reveal some interesting findings.

Research question one asks what expectation similarities and differences exist in the pre-consumption decision-making between Chinese and Indian international students. In the pre-consumption decision-making stage, both Chinese and Indian students place similar expectations on the program and value factors. In other words, motivation to study aboard for a prestigious degree and expected returns on investments are similar between the two groups. However, the influence of family and friends and employment opportunity expectations differ in that Chinese students are influenced more by family and friends, whereas Indian students are influenced more by the possibility of employment in the U.S. post-graduation. These findings are consistent with past research on these two groups. Perhaps, stronger ties with and influences from family and friends enables Chinese students group to have less depression and acculturation stress compared with Indian students (Rice et al. 2012). Indian students, on the other hand, have higher expectation for employment outcomes. The reasons for this expectation are probably due to their familiarity with Western culture and governance as well as their higher English proficiency (Levis, Levis, and Slater 2012).

Research question two asks what service evaluation similarities and differences exist in the consumption stage between Chinese and Indian international students. When they evaluate the foreign study experience in the U.S., both Chinese and Indian international students are somewhat satisfied with the study costs, living costs and social opportunities augmenters. Their experiences as international students are very similar to each other. However, the marginal difference in campus quality augmenter suggests that Indian students have a more favorable evaluation of U.S. campus infrastructure compared to Chinese counterparts.

Research question three asks what CME similarities and differences exist in the post-consumption stage between Chinese and Indian international students. As expected, Indian students reveal higher interactive, cognitive, and persuasive engagements compared to Chinese students. Perhaps, English proficiency and familiarity with Western culture facilitate Indian student engagement better than Chinese students. Both groups, however; show no difference in terms of affective and benevolent engagements.

Research question four asks how the pre-consumption decision-making factors and the service evaluation factors influence the post-consumption CME factors among Chinese and Indian international students. The results showed that no single pre-consumption decision-making and service experience evaluation factor had a significant effect on all five CME dimensions for both Indian and Chinese international students. In terms of pre-purchase expectation, the influence factor negatively affected interactive engagement among the Chinese students, whereas the value factor was marginally related to it in a positive way among the Indian students. The value factor was positively related, whereas the influence factor negatively related to persuasive engagement among Chinese students. On the other hand, the influence factor had a positive correlation with persuasive engagement among Indian students. In terms of benevolent engagement, while influence factor had a negative relationship and employment factor had a positive relationship among Chinese students, Indian students showed a positive relationship for the value factor.

Regarding international students' experiences with service mix augmentation and their relationships with student engagement, campus quality augmenter was the only significant evaluation/satisfaction factor that positively influenced all five CME dimensions among Chinese international students while it influenced only interactive, cognitive and persuasive engagements among Indian international students. At the same time, social opportunity augmenter positively influenced both interactive and affective aspects of CME for both Indian and Chinese international students. Social opportunity also had a positive impact on the cognitive and persuasive aspects of CME among Chinese international students, but only on the benevolent aspect of CME among Indian international students. Living costs positively impacted both persuasive and benevolent aspects of CME only for Chinese students. Interestingly, study costs augmenter in the service experience stage (costs of tuitions and fees, and availability of financial aids or scholarships) had no significant relationship with any of the engagements in the post-acquisition stage.

The relationships between consumer decision-making factors in the pre-acquisition stage, service evaluation/satisfaction in the consumption stage, and CME in the post-acquisition stages are complex but significant for both Indian and Chinese international students. The expectation factors in the pre-acquisition stage and the evaluation of service offerings during the consumption stage influence student engagement in the post-acquisition stage differently between these two groups. Our study shows that the consumer decision-making factors and service evaluation experiences have more influence on Chinese international students' post-acquisition CME than on Indian international students.

The findings of this study provide additional empirical insights on how the consumer expectation factors and service evaluation experiences play a role in service provider's marketing engagement outcomes. From the Chinese international student perspective, the value and reputation of foreign program, the influence of others and the potential employment opportunities are important antecedents to their CME, which shows the significant role of external motivation among Chinese international students in their future CME toward foreign universities. For instance, value factors such as the prestige and value of U.S. degree impact the persuasive aspect of CME among Chinese international students, that is, their effort to spread good word of mouth about the foreign universities. The prospect of employment influences the benevolent aspect of CME. In other words, the Chinese international students are more likely to donate money to and contribute to the university's international student initiatives if the employment opportunities exist during and after the foreign study. It is interesting to note that influence inhibits the CME interactive, persuasive and benevolent behaviors among Chinese international students. In other words, the recommendations of faculty advisors at the home country and the advice from family or friends in home country who had no U.S. study experiences negatively influence their interactions with others on or off-campus and their engagement in recommending and contributing to the university outreach efforts. It is plausible that the faculty advisors, family or friends who have had no experience studying in the U.S. might give misinformation or wrong information during the students' pre-study decision-making, leading to unrealistic or wrong expectations for the foreign studies in the U.S. When the expectation disconfirmation occurs, the Chinese international students' CME would be negatively impacted.

By comparison, only value and influence factors have relationships on Indian international students' CME. For example, the value factors, or the prestige and value of the U.S. degree, have a positive impact on the interactive and benevolent aspects of Indian international students' CME, that is, their interactions with others on or off-campus and their likelihood to donate money to and contribute to the university's international student initiatives. At the same time, influence positively impacts the persuasive aspect of CME among Indian international students, that is, their effort to spread good word of mouth about the foreign university, and their willingness to recommend the university to people in their home country. The findings provide evidence to support the connection between decision factors of international study and international student engagement, which fills a void in the extant literature on service marketing for higher education, especially international student engagement.

Furthermore, the Chinese and Indian student satisfaction with the foreign study experience in U.S. universities, especially the social opportunities factor, encourages students to promote positive interactive and affective engagement, or their interactions with others on or off-campus and their positive feelings toward the American universities. Also, satisfaction with campus quality promotes both interactive, cognitive and persuasive aspects of CME. As a result, American universities need to offer various opportunities to both Chinese and Indian students to interact with American students and the general public, and host cultural events to celebrate their home holidays and events. In this way, they are more satisfied with foreign study experiences and thus more likely to spread word of mouth to prospective students and stakeholders.

The differential impacts of expectation factors on CME behaviors between Chinese and Indian international students emphasize the need to promote U.S. higher education service offerings by catering to varying needs of different international student groups. For instance, it is feasible for the universities to showcase their program values, campus quality, and living costs when communicating with Chinese students while focusing more on social opportunities for Indian students. It is also important to note the negative impact of influence on involvement in international outreach efforts and alumni donations among Chinese international students. This indicates the possibility of some miscommunication among Chinese international students. Therefore, it is key to ensure the clear communication of school and program information with prospective Chinese students. These efforts would help maximize the pre-, during, and post- educational experiences among Chinese international students.

Managerial implications

Understanding the international higher education service marketing effectiveness through the education journey from expectations to experiences and engagements provides interested parties an overview of attitudes, values, and behaviors of Chinese and Indian as students and service consumers. Managerially speaking, it is important to understand the roles that pre-purchase expectation factors and satisfaction with study experience play in post-purchase CME for several reasons. First, the International Student Offices (ISOs) or those responsible for implementing the university's international education mission can proactively enhance CME among Chinese and Indian international students by understanding their expectations, motivations, and experiences. ISOs can proactively position and market the value of their degrees and campus quality to both groups. Interestingly, study costs do not influence any of the engagement variables. Perhaps, the expected study abroad investments and returns are well understood among international students. This finding can potentially assist administrators in designing and promoting programs in the U.S. or other countries that benefit both international students and the host universities.

In higher education service literature, no study has been conducted to compare the differential impacts of various pre-purchase expectations and foreign study experience factors on post-service CME in general and particularly between Chinese and Indian international students. Therefore, this study makes an important contribution to the existing higher education service marketing literature. The focus on customer engagement has evolved rapidly due to significant contribution to literature on customers co-creating values for the firm using their resources (Jaakkola and Alexander 2014; Vargo and Lusch 2004) and the sequential nurturing of long term relational exchanges (Harmeling et al. 2017). Understanding various antecedents of CME provides universities the knowledge required to facilitate and encourage specific desirable CME behaviors among Chinese and Indian international students, a measure to evaluate service marketing effectiveness.

Limitations and future research directions

There are also some limitations. We developed four dimensions of service evaluation in this study based on existing studies, but there is a need to further evaluate the validity and reliability of these four factors. It is also necessary to explore the potential moderating or mediating impact of satisfaction with service providers on the connection between pre-purchase decision factors and post-acquisition CME outcomes. Future research can investigate the surprising findings of this study such as the negative impact of influence factor on some dimensions of CME among Chinese international students, but not their Indian counterparts. It is also interesting to note that the living costs positively impact the persuasive and benevolent SME behaviors among Chinese students but have no influence on Indian students' CME. Further investigation is necessary to better explain these connections. We only looked at Chinese and Indian international students in this study due to the larger percentage of these students in the U.S. international student population and our sample. But they are geographically close. It would be insightful to compare them with international students from other continents such as those from Saudi Arabia, Canada, Mexico or the U.K. In addition, this study could expand its focus to look at the internal marketing orientation (IMO) of higher education (Boukis 2019), specifically how the staff or faculty could help co-create service values for international students to enhance their study abroad journey from expectations to experiences till post-consumption engagement.

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Positioning strategies of foreign and indigenous firms in an African cultural milieu

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ABSTRACT

Despite the pivotal role of positioning in marketing strategy formulation, few studies explicitly examine positioning strategies employed by foreign and indigenous firms operating in the same cultural milieu. Relying on the concepts of culture and positioning as the backdrop, this research contributes to the literature by answering two key research questions: What are the differences between African indigenous firms' and Africa-based foreign firms' pursuits of positioning strategies? And is a Western-developed typology of positioning strategies applicable in an African cultural milieu, and more specifically, in the Ghanaian cultural environment? The results of the study demonstrate that indigenous and foreign firms replicate each other's positioning strategies to carve out positions, although foreign firms aggressively pursue a wider range of strategies than indigenous firms. While there is a uniform attempt by indigenous and foreign firms to reach the mass-market and lower- to middle-class target audiences, foreign firms focus more on middle-class audiences than do indigenous firms. The authors discuss implications for marketing theory and practice.

1. Introduction

The adoption of marketing and positioning strategies never occurs in a cultural vacuum. Instead, it unfolds within social contexts that encode values, beliefs, and acceptable patterns of behavior (Anambane, 2017; Cayla & Arnould, 2008). Culture determines business models and approaches in international markets (Cayla & Arnould, 2008; Gao, 2013). Examining the relationship between culture and indigenous entrepreneurship in Ghana, Anambane (2017) concludes that culture not only acts as a motivational factor for women's entrepreneurship but also largely limits the growth and expansion of women-owned enterprises. Thus, the ability to appreciate the execution of marketing practices (e.g., branding, advertising, selling, pricing, positioning, and customer service) of indigenous and foreign firms in Africa, particularly given the contrast between African and Western cultures, is an opportune research task.

Values endemic to and dominant within consumers' cultures affect their cognitive processing styles and ultimately their buying behavior (Wen, Qin, Prybutok, & Blankson, 2012). The branding or product attributes that ensue from the employment of positioning strategies affect consumers' perceptions and responses to marketing efforts and ultimately impact purchasing behaviors (Cayla & Arnould, 2008; Monga & John, 2007). The determination of positioning strategies selected by indigenous and foreign firms warrants conceptualization and empirical examination in that several international brands have failed due to their inability to appreciate local culture and execute relevant positioning strategies (Gao, 2013; Schuiling & Kapferer, 2004).

We argue that the cultural milieu is closely related to the manner in which positioning strategies (see Ellson, 2004; Halkias, Micevski, Diamantopoulos, & Milchram, 2017) and branding tactics (see Cayla & Arnould, 2008) are manifested. Despite the important relationship between culture and positioning strategies in international marketing

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strategy formulations, the extant literature has overlooked the examination of indigenous and foreign firms' positioning activities within a nation's cultural milieu, even though Ellson (2004) has long touted the pivotal role of organizational culture, environmental culture, and positioning in firms' marketing activities. Ellson (2004, pp. 56 & 60) writes, "the personality of an organization, and the environment within which the firm operates, provides the foundation of an accord between the customer and the business and a satisfactory framework for strategic positioning… the ultimate source of culture is based on a founder's beliefs and values that, when validated by the survival of the organization, become cognitive assumptions." In support, Lee (2000, cited in Gao, 2013, pp. 180–181) defines culture as the way of life of a people, and stresses that theories of management and marketing are culture-bound. For example, while Home Depot's DIY positioning model—-which requires customers to labor on projects themselves—is compatible with American culture, the same Home Depot DIY positioning model is not compatible with Chinese culture (Gao, 2013, pp. 181).

Culture concerns patterns of thinking, feeling, and acting that are rooted in common values and societal conventions (Laroche, Ueltschy, Abe, Cleveland, & Yannopoulos, 2004; Nakata & Sivakumar, 1996) which therefore makes it a relevant piece of marketing study. The extant literature reveals that culture does indeed influence consumers' perceptions and evaluations of firms' marketing deliberations (Webster & White, 2010). Using survey data from the United States and China, Wen et al. (2012) found that culture has a moderating effect on the interrelationship among service quality, food quality, perceived value, customer satisfaction, and behavioral intentions in the fast food industry. Also, Kalliny et al. (2011, p. 42) write that no study has examined advertising information in any African nation or any part of the Middle East, with the exception of Saudi Arabia. Nakata and Huang's (2005) examination of 600 articles revealed that 26% were devoted to marketing organization and strategy. The authors go on to highlight that the subcategories of marketing management and organization constituted 12% of the articles, while marketing strategy made up 14%. Even though Nakata and Huang (2005) did not indicate the specific marketing strategy categories, further examination of the key topics identified by Nakata and Huang (2005, pp. 613) still reveals the oversight by extant international marketing research literature of positioning—a key component of marketing strategy because culture is a major foundation of international marketing (Nakata & Sivakumar, 1996). These gaps in the literature provide additional momentum for this research and highlight the potential contribution of this study.

The primary objective of the study is to examine the manner in which indigenous and foreign firms in an African cultural milieu engage in positioning activities. The key research question thus states: How do foreign firms operating in Africa—and specifically, Ghana—compare with indigenous firms when it comes to the employment of positioning strategies in the marketplace?

Among the cultures of nations, the least explored are those from Africa. Specifically, unlike Asia and Latin America, Africa remains largely under-researched and lags behind other regions with regard to the comprehensive study of national cultures and firms' pursuits of positioning strategies (Yang, Wang, & Su, 2006). An exception, to a degree, is Darley, Luethge, and Blankson's (2013) review on African culture and international marketing. Consistent with extant literature, in this study, we use the term "Africa" interchangeably with sub-Saharan Africa and aim to represent black Africans south of the Sahara (see Ibeh & Debrah, 2011). Thus, for the purposes of this research, we exclude the Arab countries of North Africa that are often identified with the Middle East (Mellahi, Demirbag, & Riddle, 2011).

In the next sections of the article, as a backdrop to the study, we discuss the conceptual background encompassing taxonomies of cultural patterns and the concept of positioning. Next, we state the hypotheses before discussing the research method. We finally discuss the results, followed by conclusions, implications, limitations, and future research directions.

2. Conceptual background and hypotheses development

2.1. Taxonomies of cultural patterns

African culture differs from other cultures in the way Africans construct meanings, negotiate social contexts, and make sense of their environment (Ahiauzu, 1986). Understandably, to propose a monolithic African culture may be misleading because of strong national differences (Gannon, 2004). Mufune (2003) notes that even within African national states, a myriad of cultures and subcultures exist. Nonetheless, there are certain indigenous trends of thought, cultural influences, and value orientations that are shared by the majority of people in sub-Saharan Africa (Edoho, 2001; Oppong, 2003). Also, several African scholars argue for culture relatedness across Africa (Gyekye, 2003; Mbiti, 1990). African cultural characteristics and value systems include a hierarchical social structure, the importance of kinship, primacy of the group, time orientation (Safavi & Tweddell, 1990), and the driving norms of human interdependence, the virtue of symbiosis, and reciprocity (Mangaliso, 2001).

Despite the gradual shift away from traditional high collectivism in urban areas because of economic hardships and the influence of Western business and marketing practices (Kuada & Hinson, 2012), our observation of the vast majority of sub-Saharan Africans who live in small towns and rural communities reveals a rather slow pace of cultural change. Cavusgil, Knight, and Riesenberger (2014) write that cultural values change at a "glacial pace," and that despite the convergence of economies and consumption patterns, people usually hold traditional attitudes, values, and beliefs rooted in the history and core culture of the country in which they live.

We now briefly discuss Hofstede's (1991) taxonomy, Hall's (1989) high and low context communication, and House, Hanges, Javidan, Dorfman, and Gupta's (2004) time orientation in the context of African culture. Hofstede's (1980) taxonomy (i.e., power distance, individualism-collectivism, uncertainty avoidance, and masculinity-femininity) is important in marketing and allied literature; it proves to be stable and meaningful in explaining cultural differences (Lustig & Koester, 1996; Pomerantz, 2004), is accepted widely, provides criteria to interpret cultural differences (Cavusgil et al., 2014), and is often used to study cultural dynamics in international marketing contexts (Hewett, Money, & Sharma, 2006; Paul, Roy, & Mukhopadhyay, 2006; Soares, Farhangmehr, & Shoham, 2007). Time orientation is also important in cultural explication because it affects decision making, negotiations, and human interactions (Kaynak, Kara, & Apil, 2011). Moreover, Hall's (1989) work on communication style has gained renewed attention because of the explosion of business interaction between East Asia and the rest of the world (Cavusgil et al., 2014).

2.2. Cultural dimensions

2.2.1. Power distance

Cultures differ in the extent to which they view status inequality as good or bad and the ways in which they describe how a society deals with the inequalities in power that exist among people (Soares et al., 2007). Authority is inherent in one's position within a hierarchy in high power distance cultures. There are strong dependency relationships between parents and children or bosses and subordinates, and a significant social distance between superiors and subordinates. For low power distance cultures, the opposite is true: the gaps between the powerful and the weak are reduced. According to Hofstede (1991), most sub-Saharan African cultures exhibit high power distance (Munene, 1996). The elderly are seen as the true repositories of wisdom and knowledge, examples for the youth to emulate (Moemeka, 1996), and the forbearers or gatekeepers of society. Individuals treat elders with deference, respect, and dignity (Nnoruka, 1999).

2.2.2. Individualism-collectivism

Individualism describes the importance of the individual and the virtues of self-reliance and personal independence, while collectivism emphasizes the interrelationships of persons and the importance of human connections (Blackwell, Miniard, & Engel, 2006). Sub-Saharan Africans exhibit a high need for connectedness in their community, an imposition of societal/group norms, and adherence to traditional beliefs, which underscore the focus on a collective self over the individual self (Hofstede, 1991; Kiggundu, 1988; Munene, 1996; Triandis, 2004). Communities are characterized by placing the individual self after the collective self. This collectiveness fosters group dynamics, facilitates the building of team spirit, minimizes conflicts, creates loyalty, generates trust, and fosters friendly work environments (Nnandozie, 1998). Not surprisingly, the perceptions and behaviors of individuals in sub-Saharan Africa are distinct from the individualistic beliefs of those living in the United States. Individuals in the United States exhibit a preference for the personal self, which manifests as expressions of one's opinion, assertiveness, autonomy, creativity, emotional independence, and self-actualization (Hofstede, 1980; Lindridge, Vijaygopal, & Dibb, 2014).

2.2.3. Uncertainty avoidance

Uncertainty avoidance is the extent to which cultures focus on ways to reduce uncertainty and create stability (Hofstede, 1991; Thomas, 2002) and concerns how a society reacts to life's inherent ambiguities. Uncertainty avoidance cultures prefer structure and consistent routine, whereas uncertainty acceptance cultures exhibit positive responses to change and to new opportunities; while uncertainty avoidance societies prefer predictability and stability, uncertainty acceptance societies have a greater tolerance for unclear or indefinite situations (Hofstede, 1980, 1991; Pomerantz, 2004).

In Hofstede's (1983) survey, the multi-country regions of East Africa (i.e., Kenya, Tanzania, and Ethiopia) and West Africa (i.e., Nigeria, Ghana, and Sierra Leone) scored at the intermediate position on the uncertainty avoidance dimension. In Hofstede's (1991) survey, Nigeria and Zimbabwe were included in the "cautious" group (Munene, 1996). In a study involving Zimbabwe, Zambia, Namibia, and Nigeria, House et al. (2004) give these African countries mid-level scores on their uncertainty avoidance scale. The evidence suggests African cultures are in the moderate category of uncertainty avoidance.

2.2.4. Masculinity-femininity

Masculinity-femininity refers to a society's orientation based on traditional male and female values (Hofstede, 1991) and describes the extent to which "traditional" male orientations of assertiveness, competitiveness, materialism, ambition, and achievement are emphasized over "traditional" female orientations of nurturance, quality of life, relationships, and interpersonal harmony (Soares et al., 2007). A masculine orientation also includes respect for achievement and the acquisition of money and material possessions, whereas feminine orientation includes concern for the environment, championing the underdog, and caring for the less fortunate (Blackwell et al., 2006).

The high affiliation orientation within African culture strongly suggests that African societies exhibit some degree of femininity (Kiggundu, 1988; Nnandozie, 1998), and, in fact, some researchers note that African cultures tend toward the feminine (Pomerantz, 2004). The two African countries (i.e., Nigeria and Zimbabwe) included in Hofstede's (1991) survey fall in the "feminine" category.

2.2.5. High and low context

Hall's (1989) taxonomy organizes cultures by the amount of information implied by the context of the communication itself. High-context cultures prefer messages where the meaning is implied or is presumed to be part of the individual's internalized beliefs, values, and norms; in such cultures, meanings are internalized and an emphasis is placed on non-verbal cues or codes (Pomerantz, 2004). High-context cultures view communication as a means to promote smooth, harmonious relationships, whereas low-context cultures rely on elaborate verbal explanations, putting much emphasis on spoken words (Kaynak et al., 2011).

Reactions in low-context cultures are direct and explicit, whereas reactions are reserved and indirect in high-context cultures (Lustig & Koester, 1996). People in high-context cultures refrain from critiquing each other openly because of their unwillingness to separate the actor from their actions (Sawadogo, 1994). Sub-Saharan Africa is usually placed in the high-context category.

2.2.6. Time orientation

Time orientation covers the temporal aspect of human life and whether time is anchored in the past, present, or future (House et al., 2004; Kaynak et al., 2011; Kluckhohn & Strodtbeck, 1961). This dimension also considers whether people make decisions with respect to events in the past, events in the present, or events in the future (Thomas, 2002). The term also encapsulates monochronic and polychronic time (Hall, 1989) as well as socialized time (Onwubiko, 1991).

Cultures with a linear time orientation have a highly organized view of time (Lustig & Koester, 1996). Punctuality is expected and people view time as a commodity. With this orientation toward time, time can be spent, wasted, lost, or managed. According to Hall (1989), cultures may also be monochronic or polychronic with respect to their time orientation. Cultures that have a monochronic orientation prefer to do one thing at a time, with a high importance placed on tasks and schedules (Pomerantz, 2004). Polychronic cultures, however, tend to do multiple things at the same time, with schedules being used as general guidelines rather than deadlines, and involvement with people is regarded as more important than schedules. To the African, "time is simply a composition of events which have occurred, those which are taking place now and those which are inevitable or immediately to occur" (Mbiti, 1990). Even the term "deadline" infers completion of the task, a notion that is absurd to Africans, as schedules and time should not dictate one's actions. Most of Africa is polychronic and recognizes the complexities of life and the elasticity of time (Pomerantz, 2004).

Time within African culture is also socialized. *Socialized time* is the use of time that does not sacrifice social duties and human relations in favor of clock-time or punctuality. Time is programmed into socio-culture norms of human behavior and interpersonal relationships (Onwubiko, 1991). Using time in social contexts takes precedence over the use of time in other contexts.

Fayolle, Basso, and Bouchard (2010) find that in business, culture serves as a conductor of performance while management's pursuit of strategies serves as the catalyst for competitive advantage. In view of the fact that the environment's culture affects the ways in which management evaluates firm goals and deliberations (Mukherjee, Hanlon, Kedia, & Srivastava, 2012), firms operating in cultures of high individualism, for example, achieve higher performance from their marketing and positioning activities relative to those in collectivistic cultures (Todorovic & Ma, 2008). This is because risk-taking and risky investments—more common in individualistic cultures (Darley et al., 2013)—reflect the use of a sizable amount of resources, including the employment of marketing and positioning strategies (Boso, Cadogan, & Story, 2012). At the same time, risk-avoidance—a common trait of collectivistic cultures (Anambane, 2017)—may reduce management's confidence in pursuing certain marketing and positioning strategies (Darley & Blankson, 2008). We now discuss the concept of positioning as a backdrop to the study.

2.3. The concept of positioning

Positioning is defined as the particular bundle of benefits targeted to consumers (Ghosh & John, 1999). These benefits underpin "value propositions" (Noseworthy & Trudel, 2011). Ries and Trout (2001) argue that positioning is not what is done to the product/service, but rather what is done to the mind of the customer. Arnott (1992, p. 111) defines the concept of positioning as "the deliberate, proactive, iterative process of defining, modifying and monitoring consumer perceptions of a marketable offering." Arnott suggests that the application of the concept of positioning involves three related activities: (a) defining the dimensions of a particular perceptual space that adequately represents the target audience's perceptions, (b) measuring objects' locations within that space, and (c) modifying actual characteristics of the offering and perceptions of the target audience via marketing communication strategies. Positioning efforts entail iterative processes that require the deliberate and proactive involvement of marketing managers.

Ansari, Economides, and Ghosh (1994) claim that the essence of the positioning decision is the selection of the optimal mix of tangible and intangible offering attributes, pricing, distribution of consumer preferences, and positions of competitive offerings. Coffie (2018) argues that the key positioning strategies for firms to pursue are "service reliability," "social responsibility," "branding," "top of the range," "value for money," "attractiveness," "country of origin," and "safety," which can enhance long-term competitive advantage (see also, Aaker & Shansby, 1982; Fuchs & Diamantopoulos, 2010; Hooley & Greenley, 2005; Ries & Trout, 2001). These positioning strategies serve as the foundations on which marketing communication plans are formulated (Ries & Trout, 2001; Rossiter & Percy, 1997). These fundamentals are germane regardless of the national or international market for which or within which a positioning strategy is formulated and executed (Alden, Steenkamp, & Batra, 1999).

2.3.1. Hypotheses development

Not only have researchers overlooked empirical investigation of positioning deliberation in international markets, but sub-Saharan Africa, in particular, also appears to be the most under-researched region in international business discourse (see Yang et al., 2006, p. 609). The capability to build a desirable and defensible market position is and shall always remain a key element of the marketing function's credibility and/or its justification for advertising execution and budgets (Hooley & Greenley, 2005; Rossiter & Percy, 1997). So too are marketing or advertising executives' insights into their positioning strategies, executions, and outcomes of the firms they lead or serve. On this basis, we assert that absent a proper diagnosis of the positioning efforts pursued (and outcomes achieved)—as reflected in their firms' communications (advertising, other promotions, etc.) efforts—executives cannot expect to select the best competitive options in their efforts to enhance and/or defend their firms' and their brands or offering positions within the targeted markets.

Such literature omissions may endanger, or, at the least, degrade the effectiveness of international marketing practices and research. Of course, these issues are problematic with respect to executives' appreciation of positioning practices in sub-Saharan Africa, and more specifically, Ghana, particularly in view of Ghana's comparatively stable and democratic governance, economic growth rates (Whitfield, 2005), growing joint ventures and foreign direct investments (Kuada, 2002), natural resources, and the recent discovery of oil in commercial quantity. Within the broader context of sub-Saharan Africa as a viable domain for academic study, the Ghanaian marketplace represents a challenging but potentially fruitful research area. The cultural complexity and challenges that routinely present in its transitional liberalized environment means that marketers must address challenges such as competition, growing middle class and expatriate communities (Bruner, 1996; Zachary, 2001), comparatively poor infrastructure, low purchasing power, socio-political challenges, and unpredictable government interventions in the operations of firms (Ayittey, 2001). The foregoing discussion further underscores both the motivation and justification for the study context.

The key factors offered as impetus for this research regarding the examination of Ghana-based firms' positioning activities include: (1) a liberalized open-market environment, (2) the growth in local private businesses, (3) the influx of foreign firms, foreign goods, and foreign-enhanced marketing communications, (4) firms' appreciation of market orientation and customer service (Kuada & Hinson, 2012) and positioning orientation (Coffie, 2016, 2018), (5) the surge in business collaboration between firms in industrialized countries (e.g., Denmark), who then pass along their marketing and positioning skills to their Ghanaian counterparts (see Kuada, 2002), and (6) governmental attempts to project the country as "open for business." The study also evaluates the stability of a typology of positioning strategies developed in a Western and industrialized environment (i.e., USA) in Ghana: a transitioning middle-income African economy.

The level of economic development thus allows for a limited scope of experimentation in positioning. Hence, we infer that indigenous firms—with their restricted experience—will be prone to emulate the strategies employed by foreign firms operating in the Ghanaian marketplace. Therefore, certain positioning strategies that are aimed at attracting the broader mass market and/or are competitively inclined (including "value for money," "service," and "attractiveness") would remain prominent across both indigenous and foreign firms.

Schuiling and Kapferer (2004) note that while several international brands have failed to entrench themselves in different countries for myriad reasons, critical among them is a lack of appreciation for local culture, leading to an incongruous pursuit of positioning strategies. Without a diligent appreciation of culture, as in the case of Home Depot's failure in China (see Gao, 2013), success in international markets will elude a firm's foreign positioning deliberations. In Ghana, foreign firms face more challenges in wooing consumers as compared to their local counterparts who are already aware of local market pulses. Admittedly, doing business in Africa is not easy (Babarinde, 2009), particularly for foreign firms. However, creative thinking about how to surmount challenges in the African cultural environment, due diligence about investment opportunities, and creativity in managing bureaucracy are bound to find the untapped business environment to be a reservoir of profitable and viable business ventures.

In view of the fact that Ghanaian culture emanates from collectivist values—such as people orientation and risk aversion (Darley & Blankson, 2008)—indigenous firms and entrepreneurs often embed these values in their business activities (Anambane, 2017; Kuada & Hinson, 2012) and are risk-averse and conservative (Jackson, Amaeshi, & Yavuz, 2008). To that end, we concur with Blankson, Nkrumah, Opare, and Ketron's (2018) finding which shows that relative to foreign retailers, indigenous Ghanaian retailers pursue positioning strategies such as "service," "value for money," and "reliability" in the retail sector. In contrast, foreign retailers (even those originating from collectivist cultures, see Appendix 2) tend to be more aggressive and more future-oriented due to the learning curve. We infer that because of the competitive Ghanaian marketplace, foreign firms will be attracted to the positioning strategies employed by indigenous firms in addition to still other strategies, including "attractiveness," "top of the range," and "country of origin" strategies.

Moreover, apart from their risk aversion, indigenous firms have more constrained resources than foreign firms. The lack of resources means that indigenous firms may not be able to emulate all the positioning strategies engaged by foreign firms. Naturally, indigenous firms insist on the strategies they know have worked for them in the past within the local market culture (Cayla & Arnould, 2008; Jackson et al., 2008). On the other hand, since foreign firms have the necessary resources, and are more experienced and aggressive, they can pursue a wide selection of (i.e., multiple) positioning strategies compared to indigenous firms. Nevertheless, in order to cope with the competition from indigenous firms and accumulate competitive advantage, foreign firms have no choice but to try to develop their positioning strategies along the lines of indigenous firms and in congruence with the cultural milieu of the local market (Cayla & Arnould, 2008; Gao, 2013). To that end, foreign firms, like indigenous firms, must employ a wide range of

Table 1A
Copy points identified from newspapers' ads of indigenous firms' offerings in Ghana.

Positioning strategy	Frequency			Percentage of total copy points	Expected N	Residual	Rank (in order of highest copy points)
	2016	2017	Total number of copy points identified				
Top of the range	107	41	148	30.3	81.2	66.8	1
Service	45	20	65	13.3	81.2	−16.2	4
Value of money	101	33	134	27.5	81.2	52.8	2
Attractiveness	50	21	71	14.5	81.2	−10.2	3
Reliability	30	30	60	12.3	81.2	−21.2	5
Country of origin	4	5	9	1.8	81.2	−72.2	6
Total copy points	337	150	487	100			
Mean = 2.70; Std. deviation = 1.44; χ^2 = 163.600; df = 5; asymptotic sig. = 0.000							
Total number of ads content analyzed	148	52	200				
Number of newspapers examined	8	9	17				

Note: N = number; Std. = standard.

positioning strategies to offset being a foreigner in the local market. Worthy of note is that successful brands are characterized by their pursuit of multiple positioning strategies (Hooley, Piercy, & Nicoulaud, 2012; Rossiter & Percy, 1997). Based on these arguments, we formulate the following hypotheses:

H1. Within the Ghanaian marketplace, indigenous and foreign firms will employ similar positioning strategies in their bid to be competitive.

H2a. Within the Ghanaian marketplace, indigenous firms will pursue a limited (i.e., narrow) number of positioning strategies in view of their weak financial capability and their more risk-averse stance regarding marketing activities.

H2b. Within the Ghanaian marketplace, foreign firms will pursue a comprehensive (i.e., large) number of positioning strategies in view of their strong financial capability and their aggressive stance regarding marketing activities.

3. Research method

Ghana is an important research setting (Yang et al., 2006), given its population of 28.8 million (2018), and GDP of $47 billion (2018) with a growth rate of 8.5% (World Bank, 2018). While Ghana is clearly a subsistence economy, it is an emerging market in Africa and is the first country in Sub-Saharan Africa to achieve the Millennium Development Goal 1, which is the target of halving extreme poverty. Ghana embodies the characteristics of several sub-Saharan African economies and is an appropriate context for understanding business insights in a developing economy.

Pursuant to the purpose of this study, the primary objective is to measure the manner in which foreign and indigenous firms use positioning cues in the Ghanaian cultural milieu. A consumer-derived, managerially relevant, empirically based typology of positioning strategies developed and validated in the United States (Blankson, Kodua, & Njoroge, 2018) has been adapted for this study. The typology is generic (applicable to both goods and services) and is managerially relevant. Paying heed to suggestions regarding the use of adopted/adapted scales in cross-national/cultural settings (Douglas & Craig, 2006), we validated the typology prior to the commencement of this research in Ghana.

Validation involved discussion with five senior executives, two academicians, and four business owner-managers from Ghana regarding how Ghanaian-based firms pursue positioning strategies. Next, in a pilot study carried out in June 2013 and June 2014, we surveyed a convenience sample of 60 executives enrolled in EMBA programs at a major university in Ghana concerning their perceptions of the positioning strategies firms engage in Ghana. These executives represented multinational firms from Western Europe, the United States, Canada, China, Japan, South Africa, and indigenous firms encompassing large family-owned, state, not-for-profit, and small firms. The executives defined the concept of positioning and went on to list the positioning strategies of their own firms. To allow us to appreciate the explication of their identified strategies, we requested them to discuss, in short written essay form, their firms' short-term, medium-term, and long-term marketing activities. We used inductive reasoning to determine the positioning strategies from their discussion following the suggestions and practices of de de Chernatony and Cottam (2009), Dubois and Gadde (2002) and Coffie (2016).

3.1. Sampling procedures

Advertising—the primary channel through which positioning strategies are executed (see Alden et al., 1999; Rossiter & Percy, 1997)—was selected as the domain from which firms' positioning strategies would be examined. The role that advertisements play in portraying positioning strategies is well-documented in marketing scholarship. As noted by Jewell and Barone (2007, pp. 551), "competitive positioning is often achieved via the use of comparative advertising, a form of advertising that has traditionally involved comparisons of brands from within the same product category." Recently, in an experimental study, Noseworthy and Trudel (2011, pp. 11) manipulated product positioning through explicit promotional claims. Based on availability and convenience, data in the form of advertisements from two nationally distributed newspapers in Ghana (*The Daily Graphic* and *The Ghanaian Times*) were collected randomly over a period of six weeks in 2016 (May, June, July) and six weeks in 2017 (June, July, August). Seventeen newspapers were collected during this period. In all, the content of 200 ad components carrying indigenous firms' offerings was analyzed. At the same time, 63 ads for foreign firms' offerings were analyzed (see Tables 1A and 1B). Notably, Ghanaian newspapers feature only English-language ads.

3.2. Coding procedures

The content coding involved the frequency procedure. Specifically, this involves pre-designated copy points or themes which are identified and assigned one (1) point (termed a *copy point*) (Kassarjian, 1977; Kolbe & Burnett, 1991). Each copy point or theme that is recognized is presumed to capture and/or reflect the use of a specific positioning strategy (Nelson & Paek, 2007). The detection of the positioning strategies (as they manifest in the form of advertising themes) involved both images/photos, background, and text in the advertisement (see also Kennedy & McGarvey, 2008). We used the single-point frequency system (i.e., counting the presence of a strategy) in that the use of

Table 1B
Copy points identified from newspapers' ads of foreign firms' offerings in Ghana.

Positioning strategy	Frequency			Percentage of total copy points	Expected N	Residual	Rank (in order of highest copy points)
	2016	2017	Total number of copy points identified				
Top of the range	41	27	68	33	34.3	33.7	1
Service	22	19	41	19.9	34.3	6.7	2
Value of Money	20	16	36	17.4	34.3	1.7	3
Attractiveness	16	20	36	17.4	34.3	1.7	3
Reliability	7	7	14	6.7	34.3	−20.3	4
Country of Origin	6	5	11	5.3	34.3	−23.3	5
Total copy points	112	94	206	100			
Mean = 2.61; Std. deviation = 1.52; χ^2 = 62.369; df = 5; Asymptotic sig. = 0.000							
Total number of ads content analyzed	36	27	63				
Number of Newspapers examined	8	9	17				

Note: N = number; Std. = standard.

single-point recording method simplifies calculations and further lessens the chance of error. The procedure was used in this study because of its recommendation and employment by scholars, including Nelson and Paek (2007), Kolbe and Burnett (1991), and Kennedy and McGarvey (2008).

Coding was based on the appearance of any or several of the positioning-scale items in a particular advertisement (see Ries & Trout, 2001). Thus, a firm's advertisement may carry a single positioning strategy or multiple positioning strategies that are employed concurrently (Rossiter & Percy, 1997). Consistent with the fundamental principle of summated scales, when any of the scale items of a distinct positioning item was agreed upon by the coders as manifesting within an advertisement, the incidence was presumed to point toward the presence of its corresponding positioning strategy. This enhanced the objectivity of the content analysis exercise (Kassarjian, 1977; Kolbe & Burnett, 1991). Thus, an advertisement may feature more than one positioning strategy (e.g., “service” and “value for money”) in view of firms' use of multiple positioning strategies (Rossiter & Percy, 1997). To that end, multiple counts of positioning strategies were permitted (Kennedy & McGarvey, 2008).

3.3. Reliability analysis

Mindful of concerns raised about coding by independent judges (Varki, Cooil, & Rust, 2000), a pilot test was initiated. This was undertaken to ensure that the results were reliable and valid prior to engaging in the main content analysis procedure. The purpose of this pilot study, which also involved the assessment and coding of ad content, was to familiarize coders with the coding procedures and the research setting. The judges were comprised of three undergraduate marketing students and one MBA student. These judges were given three newspapers, each containing several advertisements, to practice coding over a weekend. The pilot study provided an appreciation of the study context.

There are three types of reliability tests conducted in content analyses: stability, accuracy, and reproducibility. Stability becomes relevant when the same content is coded more than once by the same coder. Therefore, after conducting the first analysis of the data by the authors but prior to the “inter-judge” (i.e., inter-coder) reliability exercise, the authors took turns revisiting the materials for a general cross-check and overview, as prescribed by Kirk and Miller (1986). More specifically, we re-examined the process by re-coding a handful of advertisements several times to ensure consistency among the authors. Next, we created a description of our coding procedures to capture the essence of the strategies in a particular advertisement. From this step, we interpreted how the advertisements must be coded and used those interpretations in our training of the independent judges. These approaches confirm the reliability of the coding procedure by further ensuring the stability of the adopted coding procedures (Stern & Resnik, 1991).

To ensure accuracy, a session was scheduled where an academic expert was asked to analyze the content of ads from two randomly selected newspapers—*The Daily Graphic* and *The Ghanaian Times*—over two weeks. This content analysis coding revealed > 90% agreement with the prior coding efforts of the authors and indicated the presence of considerable accuracy in the coding procedures (Kassarjian, 1977).

Reproducibility involves inter-judge tests. Once again, four independent and internationally experienced individuals were recruited. The team of independent judges who initially had served in the pilot study included three undergraduate students (two Ghanaian foreign students studying economics and one American student studying marketing) and one MBA finance student from Brazil. All judges had overseas experience and were familiar with other cultures (Nelson & Paek, 2007). These individuals served as “judges” and were formally trained by the first author in four individual sessions. Each session lasted 1 h and involved evaluations of 20 print ads. Judges were taught how to identify copy points in the categories that satisfy the meanings established in the positioning strategies (Appendix 1). The rationale given for the reproducibility method (also called the inter-judge reliability test) is that the process should achieve agreement between the judges and the authors (Fay & Currier, 1994). Thus, the level of reliability agreement should be high, ranging between 80% and 100% (Javalgi, Cutler, & Malhotra, 1995; Kassarjian, 1977). In this research, a 90% agreement between two judges and the authors was achieved, while two other judges registered a 95% level of agreement with the authors.

The validity of the coding procedure relates to concerns about the concepts and methods used in the classification scheme itself. The review of relevant literature and authors' efforts undertaken to ensure adequate understanding of the coding procedures (pilot study, training of judges, consultations with an academic expert) and reliability measures employed provide assurance for the reliability and validity of the coding procedure (Kirk & Miller, 1986; Weber, 1990). Moreover, following a precedent established by Goodwin, Mayo, and Hill (1997), the reliability and validity of the coding procedure was further assessed by first sending copies of the findings to two Ghanaian marketing academics with expertise in advertising and content analysis, two business executives in Ghana, and two American marketing academics for their review. Their minor suggestions, which concerned writing clarity, were incorporated in the final manuscript.

4. Results and discussion

The null hypothesis stipulating that no differences exist across the application of the positioning strategies (Sawyer & Peter, 1983), was rejected, following the nonparametric asymptotic chi-square tests for indigenous and foreign firms' data. All six positioning strategies were statistically significant ($p < 0.000$) (indigenous firms: $\chi^2 = 163.6$; df = 5; Asymptotic sig. = 0.000; foreign firms: $\chi^2 = 62.36$; df = 5; Asymptotic sig. = 0.000). The *P* value suggests these results are not due to chance. Thus, there is a good fit to the data set for both indigenous and foreign firms' positioning activities. Tables 1A and 1B show a summary of the results.

Consistent with the literature, our assumption is that firms utilize positioning strategies that are effective in their communication channels and that firms would gravitate naturally toward a greater use of positioning strategies that do work (Ries & Trout, 2001). Similarly, strategies used minimally are not popular (Rossiter & Percy, 1997).

As shown in Tables 1A and 1B, the most consistent and dominant positioning strategy for both indigenous and foreign firms is "top of the range" (33% and 30.3% for foreign and indigenous firms, respectively). "Top of the range" is followed by "value for money" (17.4% foreign; 27.2% indigenous). Notably, compared to foreign firms, indigenous firms employ "value for money" to a higher degree. In subsistence marketplaces such as Ghana, the pursuit of "value for money" is expected (Blankson, Cowan, & Darley, 2018). Foreign firms, compared to indigenous firms, pursue "attractiveness" somewhat more often (17.4% foreign; 14.5% indigenous). However, foreign firms (41/206 = 19.9%) engage in a "service" positioning strategy more than indigenous firms (65/487 = 13.3%). These findings reveal a uniform attempt by indigenous and foreign firms to target the mass market (as in the case of "value for money") and the lower- to middle-class target audiences (as in the case of "top of the range," "attractiveness," and "service") in their bids to create competitive advantages and thus remain well-positioned in the Ghanaian marketplace. However, worthy of note is that foreign firms focus more on "attractiveness" than indigenous firms do, while the relative convergence in positioning strategies is an attempt by indigenous firms to emulate the strategies of increasingly dominant foreign firms. Foreign firms also tilt toward a "service" strategy in their effort to remain relevant to a majority of the population. Thus, as predicted, foreign firms have no option but to compete with indigenous firms using a combination of high-end (e.g., "top of the range," "service" and "attractiveness") and low-end ("value for money") positioning strategies that are commensurate with the middle-income, open-market Ghanaian marketplace. Based on these results, we find support for H1.

To test for H2a and H2b, we used an independent sample *t*-test to check the strategies employed by indigenous and foreign firms in the Ghanaian culture marketplace. As expected, the results indicate that in order to withstand the growing competition and thus secure favorable positions in the Ghanaian marketplace, foreign firms pursue a wide range of positioning strategies compared to indigenous firms. Thus, with their depth of resources, foreign firms aggressively pursue an extensive number (i.e., a wide selection) of positioning strategies (i.e., "top of the range," "service," "value for money" and "attractiveness") as compared to indigenous firms (i.e., "top of the range" and "value for money") (foreign firms mean value = 3.11; indigenous firms mean = 2.25, $p < 0.000$). H2a and H2b are thus supported. Moreover, an examination of Appendix 2, which lists the strategies employed by firms, confirms a higher selection of strategies by foreign firms (e.g., 18 foreign firms use four or more strategies concurrently compared to 10 indigenous firms; 11 foreign firms employ one or two strategies concurrently relative to 73 indigenous firms). The latter further confirms H2a and H2b.

5. Conclusions and implications

In this paper, we sought to examine the positioning strategies that are employed in the contemporary Ghanaian cultural milieu. The results suggest that all six positioning strategies (Appendix 1) are invariably employed in firms' positioning deliberations in Ghana. Specifically, our first hypothesis (H1), which states that within the Ghanaian marketplace indigenous and foreign firms will employ similar positioning strategies in their bid to be competitive, is significant. Likewise, hypothesis 2a, which states that within the Ghanaian marketplace indigenous firms will pursue a limited (i.e., narrow) number of positioning strategies in view of their weak financial capability and their more risk-averse stance regarding marketing activities is significant. Finally, hypothesis 2b, which states that within the Ghanaian marketplace foreign firms will pursue a comprehensive (i.e., large) number of positioning strategies in view of their strong financial capability and their aggressive stance regarding marketing activities is significant. The case of "country of origin" is an interesting ancillary finding because of the stark contrast in its engagement as a positioning strategy: foreign firms use it much more often (5.3%) than indigenous firms (1.8%) (see Tables 1A and 1B). A possible reason for this finding is the potent effect of "country of origin" strategy in firm positioning and marketing deliberations (Chao, 1998; Koubaa, 2008; Roth & Diamantopoulos, 2009): foreign firms capitalize on a "country of origin" strategy in developing countries because of consumers' historical affiliations with and revered perceptions of foreign firms' brands compared to local brands (Kaynak, Kucukemiroglu, & Hyder, 2000).

We also conclude that the adopted typology of positioning strategies is stable and applicable in the Ghanaian marketplace. The latter provides justification for adopting the Western-derived typology of positioning strategies with the purpose of studying Ghana-based firms' positioning practices. This study also provides insight into the most prominent positioning strategies used by firms in an African cultural milieu. To that end, this study contributes to knowledge not only by responding to Mpoyi, Festervand, and Sokoya's (2006) suggestions for African companies to create competitive strategies but also by putting forward empirically based competitive positioning strategies pursued in the African marketplace and, more specifically, in Ghana. To our best knowledge, this study is the first to employ content analysis in examining positioning strategies employed by indigenous and foreign firms in the study setting.

Three major contributions to international marketing and international business literature become evident in this study and are described below:

- First, the results have generated theoretical and practical value for researchers and practitioners currently engaged in positioning research, positioning practice, or policy-making in Africa and Ghana in particular. The results are also valuable for researchers or practitioners considering engaging in any of those activities.
- Second, this research has responded to calls for research assessing firms' positioning practices in Ghana's liberalized post-SAP (Structural Adjustment Program) marketplace (Coffie, 2018).
- Third, the authors have attempted to answer calls from other scholars for additional studies of the degree to which conventional marketing principles originating from Western marketplaces can be applied successfully within transitional African markets and economies (Mpoyi et al., 2006).

5.1. Theoretical Implications

The results of the content analysis suggest that the applicability of Western-based positioning strategies in a sub-Saharan African economy is feasible—consistent with Blankson, Nkrumah, et al. (2018). This is in line with calls for studies on the degree to which conventional marketing principles originating from developed economies can successfully apply within African culture markets (Dadzie, Johnston, Yoo, & Brashear, 2002). Overall, the findings contribute to international marketing literature by showing that both foreign and indigenous firms follow relatively similar positioning strategies to reach the mass market and lower- to middle-class target audiences, albeit foreign firms focus more on the middle class than do indigenous firms.

For academics, this research adds to our understanding and appreciation of the concept of positioning in subsistence markets. Moreover, in light of African firms' competitive disadvantages and their vulnerability in global competition and global negotiations (Mpoyi et al., 2006), this study may serve as a foundation toward the appreciation of the strategies capable of serving as competitive advantages in business operations. To that end, this study contributes to knowledge not only by supporting Mpoyi et al.'s (2006) suggestions for African companies to create competitive strategies but by putting forward empirically based positioning strategies pursued in Ghana's cultural milieu.

Therefore, on the basis of the study, we conclude that even in Africa, a continent ignored in global business discourse (see Yang et al., 2006), a liberalized, open-market business climate can ignite competition in which firms position themselves through "top of the range," "value for money," "service," and "attractiveness" strategies. The results thus reveal the pursuit of the mass market and lower-middle-class target audiences, a characterization akin to Ghana-based (see Bruner, 1996; Zachary, 2001) firms' orientations in the marketplace.

5.2. Managerial implications

Contrary to Cui and Liu's (2001) claim that emerging markets present significant challenges in the determination of global marketing strategies in that several segments are distinctive and need to be catered to in a unique manner, this research highlights that the Ghanaian cultural milieu influences firms' pursuit of positioning strategies to the mass market as well as to lower-middle-class audiences. Specifically, firms (indigenous and foreign) copy each other's strategies in order to survive. Armed with the insight put forward in this research, foreign firms can approach African economies with the positioning strategies outlined in this research. Their depth of resources and the ability to pursue a wide range of positioning strategies should provide foregin firms with competitive advantages. At the same time, indigenous firms stand to gain from observing foreign firms' positioning activities and replicating them. Although misconceptions about African economies have led to several firms overlooking opportunities in Africa (see Mahajan, 2011), foreign firms would do well to follow Chinese and Indian firms that have established a strong presence throughout the African continent (Versi, 2012). This research is a stepping stone for further research in the African cultural milieu and the positioning activities of firms operating within it.

In view of the scarce stream of empirical studies dealing with firms' positioning activities in Ghana, this research comes at an opportune time, as the Ghanaian government is encouraging foreign investment, the establishmentof private businesses, marketing activities, and entrepreneurship (Whitfield, 2005). With the insight developed in this study, foreign firms (e.g., Chinese, Indian, and Western) may target African and specifically Ghanaian firms for possible franchise agreements, partner with agents in the country, engage in joint ventures, or seek foreign direct investment (FDI) opportunities. Foreign entrepreneurs seeking local agents for collaboration as well as local and international advertising agencies could find this study of interest in providing actionable knowledge about the Ghanaian marketplace. Local businesses and foreign firms already settled in Ghana may adopt the positioning strategies discussed in this study as benchmarks in their present or future positioning strategies. Such results are important for marketing managers and advertising executives as well as for business consultants interested in the Ghanaian marketplace.

The strategies may be employed individually or collectively in marketing communications that reflect, in one way or another, the location, situations, castings, lighting, style, and tone used in advertisements, commercials, promotions, public relations, and other sales-inducing efforts. More specifically, managers and advertising executives may pursue the following two sets of tactics:

(1) Attitude change: Managers and advertising executives may direct efforts geared toward altering or re-positioning consumer beliefs or perceptions of their firms and their offerings by using the strategies put forward in this research.
(2) Brand change: Managers and advertising executives may actually or symbolically modify the offerings' positioning strategies and tactics to reflect the strategies identified in this study.

6. Limitations and future research directions

We acknowledge that this research is relatively dated and cross-sectional in nature and the results do not capture the current interface between culture and positioning activities. This problem is common in cross-sectional and cross-cultural research (Malhotra, Agarwal, & Peterson, 1996). Future researchers should endeavor to undertake longitudinal studies to measure positioning deliberation. In addition, we acknowledge that there are disparities in the number of advertisements analyzed from foreign firms and those from indigenous firms. Even though it was beyond the reach of this study, we suggest longitudinal data collection efforts for matching data samples. We recognize that to remedy the current deficit in knowledge about firms' positioning activities in Ghana, more studies must be undertaken to validate or replicate this research. While it was beyond the scope of this study to assess the size of the firms and examine the country of origin of the foreign firms (Appendix 2) whose advertisements were analyzed, the challenge for future researchers is to ascertain the differences in positioning practices in terms of size of the firm and country of origin of firms.

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Appendix 1. Typology of positioning strategies

Strategy 1	Top of the range: top of the range (higher-end), upper class, the brand name, status, prestigious, highly selective in the choice of customers.
Strategy 2	Service: consider people as important, friendliness of our staff/personnel, personal attention to customers, high principles, impressive service, safety use of our products or services.
Strategy 3	Value for money: affordability, reasonable price, value for money.
Strategy 4	Attractiveness: cool, youth market, elegant, posh.
Strategy 5	Reliability: durability, warranty, good aesthetics.
Strategy 6	Country of origin: country of origin, patriotism, middle class.

Source: Blankson, Kodua, and Njoroge (2018).

Appendix 2. List of foreign and indigenous firms and their respective positioning strategies used

Foreign firm name	Positioning strategy used* used	Indigenous firm name	Positioning strategy used*
		Mobile Zone	3,4
Volkswagen	1,2,3	Compu-Ghana	3,4
Zain Telecom Network	2,3	Freddies Corner	3,4
DSTV	1,2,3,4	Power Abler	3,5,6
Sanyo	3,4	Atlantic Computers	3,5
MTN	2,3,4	F.C Skin & Beauty “Klinik”	1,3
Broad Crown	3,4,5,6	North American Video Giant	4
Emirates	1,2,3,4	House Party	4
Zain	2,3	Telefonia	3,4,5
Honda	1,2,3,4,5	IPMC	3,4
Toyota	1,2,3,5	Ezo Jam Ltd.	4
Somovision	1,2,3,4	Aquatec	3,5
DSTV	2,3,4	Star Assurance	1,3,5
Ford	1,2,3	TT Brothers Ltd.	2
Pierre Cardin	3,4,5	Hanbee Plaza	4,5
MTN	1,2,3,4	Ashesi University	1
Acer	1,2,4	Kumesh Ghana Ltd.	3,4
Tigo	1,2,3,4	Rowi Electronics	3,4
Lekmark	3,4	Computer House	3,4,5,6
BMW	1,2,3,5	PHC Motors Ltd.	1,2,3,4,5
Cetera	3	Solatek (Fridge Guard)	1,4,5
Unilever	3	Seth Steel	1,4
Japan Motors	1,3,4,5	Texsa	1,6
Ecobank	1,2,3,4	Telefonika	3,4
Guinness	2,3	Power Abler	4,5
BMW	1,2,3,4	Price Club	3,4
Kimo	3	Micro Ware House	3,4,5,6
Honda	1,3,5	Atlantic Computers	1,3
Western Union	2,3,4	Next Computers	1,4
Mac Book Air	1,3,4	Masoquarry	1,4
KLM	1,2,3,4	Bacchus wine shops	2,4
Mantrac (CAT)	3	City & Business Guide	2,3
Senda Motors Ltd.	1,3,4	Furniture City	1,3
Landrover	1,2,3,4	Fairwork Ltd.	3
HP Laptop	3,4	Kay Gee	1,3,5
Compaq Presario	3,4	Tintas Renner	3
Cetera	3,4,6	Screppies enterprise	1,4
Cerelac (Nestle)	1,2,3	EPP book service	1,3,4
MTN	1,2,3	Mobilezone	3,4
ABD	3,4	Sikelele	2
I Burst Africa	1,3	Jay Electronics	5
One Touch	2,3,4	Unique Trust	1,2,3,4
Tigo	1,2,3,4	Comet properties Ltd.	1,2,3
OneTouch-vodaphone	1,2,3,4	Freddies corner	3,4
Amal bank	1,2,3,4	BWA	3,5
Melcom	2,3,4,5,6	Oman Fofor	3
		Divine cleaners	1
		Surfcom	1,4
		Edtiman computers	3,4
		Navigation, communication & technology Ltd.	4
		Mobile Zone	2,3,4
		APL	1,3
		Unik image	1
		Atlantic Climate Control Ltd.	1,3,6
		Computer house	3,4,6
		Set mat	3,4
		Blink security System	1,3,4,5
		Future Planet	3,4
		Sky Bil Computer Systems	4
		Intercontinental Bank	2,3,4
		Computers & Accessories	3,4
		Omatek	2,3,5
		Hysen Data System Ltd.,	3,4,5
		True Mobile Internet	2,3,4
		Epack	2,3,4
		EPP Book Services	1,3,4
		Eddiko Systems	4
		Link	3,4,5
		Tele fonika	3,4
		Next computers	3
		Neovita	3
		Henkoq Ventures	2,3,4,5
		E-Tranzag	2,3,4
		Atlantis Structures	1,2,3
		Estap Rack Cabinet	2

Hp dx 2390	3,4
Suvinil Paints	3
Kasapa	2,3,4
Novotec Ltd.	2,3,4
Ronny Properties	1,3
Kay Gee	1,3,5
Unibank	2,3,4
Newtec	1
Magna Tris Land estate	1,3,4
Computer House	3,4
Men's suit outlet	4
Mobi Game	2,4
Novotec Ltd.	1,3,4
Computers & Accessories	1,4
Fidelity Bank	3,4
Mobile Zone	2,3,4
Can-West Ltd.	3,4
Lexmark	3,4,5
Set Mat	2,3,4
Combert Impressions	3
House party Computers	3,4
Kimo Ltd.	1,2,3
UT Financial services	3,4
Computer House	3,4
Technology Consult	4
Sky Biz Computer systems	4
Mahama & Associates	3,5
J.A Plant Pool Ltd.	3,5,6
Gneiss Marketing Ltd.	4
Sikelele	2,3,4,5
Bond Financial Services Ltd.	2,3,4
Modern Auto Services	1,3,5
UT Financial services	1,2,3,4
Accu Computers Ltd.	1,3,4,5
FoodSaf	2,3
Fidelity Bank	2,3,4
NIB	2,3
HFC Bank	2,3,4
Otfak	1
Kwali works construction	1
Comet properties Ltd.	1,2,3,4,5

Notes: Positioning strategy used* (1) service; (2) attractiveness; (3) top of the range; (4) value for money; (5) reliability; (6) country of origin. We used inductive reasoning to determine the strategy pursued by a firm following suggestions and practices of de Chernatony and Cottam (2009) and Dubois and Gadde (2002).

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Principal-independent manufacturers' representative relationships: Review, synthesis, directions for future research

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ABSTRACT

Independent manufacturers' representatives (IMRs) are independent companies that sell products on behalf of manufacturers (principals). Principal-IMR relationships play important roles in domestic and international industrial marketing practice. This review structures and synthesizes 40 years of research that has addressed IMRs and their relationships with principals and customers. This review is based on and delineated by four life cycle stages through which principal-IMR partnerships might pass: pre-relationship, relationship-initiation, relationship-maintenance, and relationship-termination. The literature examined during each stage was further categorized based on the focal perspective taken by researchers: principal focus, IMR focus, or customer focus. Material gaps in the literature were identified. The resulting theoretical insights might guide and inform future researchers who investigate how principals might manage IMR relationships more effectively and/or how IMRs might improve relationships with principals during their relationships' expected life cycles. Pending the successful execution of studies recommended based on this review, the resulting managerial insights could empower IMRs and principals to execute existing and future partnerships to their mutual benefit.

1. Introduction

Economists argue that three core reasons exist to outsource business functions: to secure cost savings, to augment existing strategic capabilities, and to enhance flexibility (Hätönen & Eriksson, 2009). This rationale for outsourcing key business functions is grounded in an assumption that the market's invisible hand encourages more efficient performance and corrects any inefficiencies (Williamson, 1975). Each economic rationale aligns with Rogers and Rodrigo's (2015) observation that decisions to outsource industrial sales functions are generally motivated by opportunities to improve selling skills, lower selling costs, and/or enhance flexibility.

Industrial sales functions are outsourced when organizations use independent manufacturers' representatives (IMRs) to sell their products to industrial buyers. IMRs contribute $684 billion dollars in sales to U.S. manufacturers (U.S. Census Bureau, 2019). During 2019, International United Commercial Agents and Brokers, an organization representing IMRs in Europe, North America and Africa, reported sales exceeding one Trillion Euros from 531,000 IMR firms (IUCAB, 2019). Given the strategic advantages that IMRs provide to principals and their customers these results should not surprise. What may surprise, however, is how few synthesized insights exist about the complex workings of IMR-principal relationships as they transition through typical life cycles. Capturing these insights from past research is complicated by the varying terms used in the literature to describe IMRs, such as manufacturers' agents, commercial agents, outsourced sales professionals, or contract sales organizations. More generic terms have also been used, including independent channel, contract sales force, third-party channels, independent distribution channels, or independent agents. However, hereafter, all are identified as IMRs in this study.

Consequently, IMRs is an appropriate focus area for a review, both based on its importance as a distribution channel for industrial products, but also because of the wide range of IMR-related topics that have been addressed in relatively few articles, leaving several opportunities for future research in this domain. This article also provides a future research agenda based on gaps in past research and input from current practitioners in IMR or principal roles.

2. The role of the IMR

IMRs are independent companies or agents who sell products on behalf of principals (manufacturers), typically on a commission basis.

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IMRs rarely represent competing product lines (McQuiston, 2001; Weinrauch, Anitsal, & Anitsal, 2007). Instead, IMRs typically represent complementary, non-competing product lines from various principals that potentially generate product synergies for industrial buyers by providing one-stop shopping efficiencies that simultaneously solve multiple customer problems. The opportunity to exploit these synergies justifies selling efforts that would not be sufficiently profitable for individual principals.

IMRs offer principals specialized knowledge about product areas or customers/markets. IMRs often learn more about customers' current or future needs than principals' in-house salesforces because they engage more frequently with customers. The use of IMRs also provides principals with short-term financing, as IMRs typically finance their own sales efforts, and receive commission payments from principals 30 days after goods ship to the customer. IMRs' financing of their own sales efforts transfers risks associated with allocating resources toward failed sales initiatives from principals to IMRs. Enhanced opportunities to purchase portfolios of complementary products from IMRs benefit customers, providing one-stop-shopping synergies and conveniences.

IMRs bridge gaps between manufacturers, distributors, and customers. IMRs differ from distributors in two ways. First, distributors take ownership of goods; IMRs do not. Second, distributors usually sell multiple brands of competing product lines; IMRs rarely represent competing product lines, as discussed above. Jackson and d'Amico (1989) compared markets served by IMRs with markets served by distributors. IMRs were typically used when products were non-standard, more technically complex, or possessed lower gross margins. IMRs were also used more frequently when markets featured fewer, geographically concentrated customers, or when customers ordered relatively infrequently with long lead-times.

Different selling issues and methods arise when IMRs, rather than distributors, are selling goods. IMRs consequently merit specialized research attention. The scope of this review is limited to IMRs. Distributor research is evaluated only as part of the review of joint IMR/distributor research.

3. Methodology

The motivation for a synthesizing review emerged from insights obtained from exploratory conversations with 12 executive-level practitioner informants employed in IMR or principal roles. North American and European executives were interviewed to identify key issues and keywords that reflect IMRs' or principals' decision-making with respect to IMR-principal relationships.

Four relationship stages structure this review (see Fig. 1). The four stages are:

- Stage 1 - "pre-relationship stage" – addressing decisions to enter principal/IMR relationships;
- Stage 2 - "relationship-initiation stage" – addressing IMR selection, recruiting, and training;
- Stage 3 - "relationship-maintenance stage" – addressing sales and managerial systems operations in principal/IMR relationships;
- Stage 4 - "relationship-termination stage" – addressing termination or exit decisions in principal/IMR relationships.

Collectively, these four stages typically unfold in principal-IMR relationship life cycles. However, no assumption exists that every principal-IMR relationship passes through all stages.

This literature review analyzes IMR research published between 1980 and 2021 and follows a common model for review papers (Grant & Booth, 2009; Palmatier, Houston, & Hulland, 2018). An initial article search was conducted in ProQuest using the keywords identified by the practitioner informants. The keywords were: "manufacturers' representative," "manufacturers' agent," "independent sales organization," "commercial agent," and "sales outsourcing." The search was limited to top marketing journals (As and Bs in the Australian Business Deans Council list). This constraint was imposed to ensure that each article evaluated featured reliable, valid, and relevant research contributions.

As articles in the initial search were evaluated, references in these articles were examined for possible inclusion in the review. Empirical and conceptual articles written based on principals', IMRs', and customers' perspectives were included. In total, 52 articles were included in the review. The majority (42) came from top marketing journals: *Industrial Marketing Management* (15%), *Journal of Marketing* (10%), *Journal of Personal Selling & Sales Management* (10%), *Academy of Marketing Studies Journal* (8%), *Journal of Marketing Research* (8%), *Marketing Science* (6%), *European Journal of Marketing* (4%), and *Journal of Business and Industrial Marketing* (4%). Ten articles emerged from respected journals in other disciplines. Table 1 summarizes all article sources.

4. Stage 1 – "Pre-relationship stage"

Research on the use of IMRs began in earnest during the 1980s, with one exception summarizing findings that evaluated how industrial buyers differentially perceived IMRs and in-house salespeople (Gallop, 1964). Key take-aways from studies addressing the pre-relationship stage are summarized in Table 2, and synthesized below.

4.1. Principals' perspectives

4.1.1. Cost, capabilities, and flexibility rationales

Comparing "*production costs*" associated with respective industrial sales efforts is difficult. In-house sales organization cost structures are intertwined with the costs of executing other corporate functions, exacerbating the challenges associated with accurately measuring field sales activities' costs (Anderson & Trinkle, 2005). Analyses comparing the use of in-house sales people versus IMRs typically assume that in-

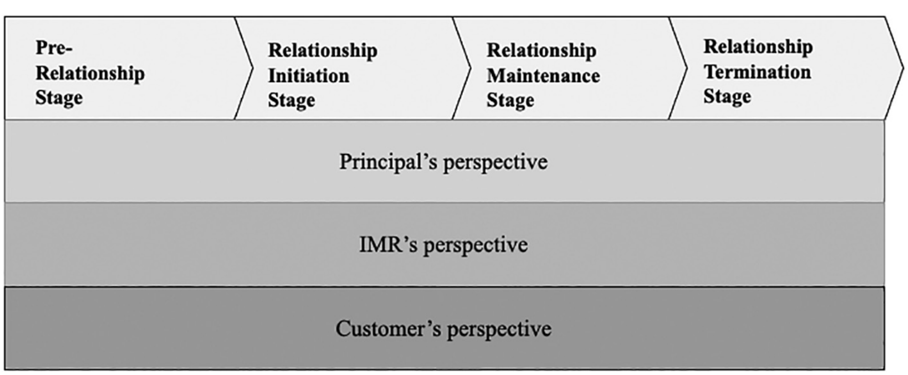

Fig. 1. Structure of systematic review.

Table 1
Overview of article sources.

Journal	Frequency
Industrial Marketing Management	8
Journal of Marketing	5
Journal of Personal Selling & Sales Management	5
Journal of Marketing Research	4
Academy of Marketing Studies Journal	4
Marketing Science	3
European Journal of Marketing	2
Journal of Business & Industrial Marketing	2
JAMS	1
International Journal of Research in Marketing	1
International Academy of Marketing Studies	1
Journal of Marketing Channels	1
Journal of Business-to-Business Marketing	1
The Marketing Management Journal	1
Journal of Relationship Marketing	1
Marketing Intelligence and Planning	1
The RAND Journal of Economics	1
Management Science	1
Journal of Law, Economics, & Organization	1
Management Decision	1
Business Horizons	1
Strategic Outsourcing	1
International Journal of Business Research	1
SAM Advanced Management Journal	1
Decision Sciences	1
Journal of Managerial Issues	1
HEC Research Paper Series	1
	52

house salespeople represent fixed costs (salaries) while IMR costs are variable (commissions). Yet this analysis features flawed assumptions (Ross, Dalsace, & Anderson, 2005). Correcting these flawed assumptions still fails to reveal the entire picture because selling efficiency and effectiveness are ignored (Ross et al., 2005).

Rather than focusing on production costs, outsourcing decisions research has routinely attempted to account for *governance costs.* Transaction cost analysis (TCA) theory typically provides the underpinning framework (Williamson, 1975). TCA theory suggests organizations should vertically integrate as they make transaction-specific investments. When manufacturers invest heavily in salesforces, TCA suggests manufacturers should keep sales functions in-house. TCA offered useful explanations of manufacturers' decisions to outsource or retain sales functions (Anderson, 1985; Anderson & Coughlan, 1987; Anderson & Schmittlein, 1984; Krafft, Albers, & Lal, 2004; Wilson & Zhang, 2002). The need for transaction-specific investments related to export markets also impacts manufacturers' decisions to employ IMRs or distributors (Bello & Lohtia, 1995).

TCA-based research investigating IMR-principal relationships has generated contradictory findings. Anderson and Schmittlein (1984) failed to reveal interactions between asset transaction-specific investments and environmental uncertainty. But Anderson (1985) demonstrated how transaction-specific investment positively influenced integration of the sales function as environmental uncertainty arose.

Research on the frequency of purchasing transactions also generated inconsistent results. One study observed positive relationships between transaction frequency and integration (Wilson & Zhang, 2002). Another found no relationship (Anderson & Schmittlein, 1984). Anderson (1985) observed no significant relationships between principals' integration of sales functions and salesforce size, travel requirements, and uncertainty. By contrast, Krafft et al. (2004) found significant effects in a German study.

Anderson (1988) examined prevailing industry practices related to whether in-house salesforces or IMRs represent the optimal strategic alternative. The Darwinian criterion suggests competitive market environments force companies to "behave optimally" - the fittest survive. Pursuing optimal behaviors was associated with greater selling efficiency in unpredictable environments.

Wilson and Zhang (2002) paired a *capabilities-based perspective* (e.g., Tierce, Pisano, & Shuen, 1997) with TCA to explain when firms should retain or outsource sales functions to IMRs. Firms that organize manufacturing processes using job or small-batch routines are more likely to use in-house salesforces.

Selling through IMRs offers greater *flexibility* to principals. Flexibility is useful whenever firms right-size sales units in response to economic trends and demand shifts. Principals' engagement strategies with IMRs influences flexibility. Two primary IMR engagement strategies exist: positive and speculative (Dishman, 1996). Positive strategies "permanently" embed IMRs as principals' salesforces. Speculative strategies use IMRs for predetermined periods or until specific objectives are met.

4.1.2. *Other rationales*

Principal's *product characteristics* impacts the likelihood that the sales function will be outsourced. When products require considerable learning/training, principals generally keep sales efforts in-house. Attractive (lower priced/higher quality) and well-differentiated products are also associated with in-house sales functions (Anderson, 1985; Anderson & Coughlan, 1987). Principals also generally retain sales function control when IMRs introduce truly innovative products, to safeguard company secrets (Anderson, 1985; Good & Calantone, 2019).

Principals' *strategic orientations* also influence decisions to outsource sales functions. The presence of strong brand equity among competitors or customers, or learning orientations among customers reduced intentions to outsource sales functions (Rapp, 2009). By contrast, the presence of production, selling, or technological orientations positively influenced intentions to outsource sales functions (Rapp, 2009).

Principal's *managerial perspectives* may also influence the decision to outsource sales functions. The principal's abilities to manage outsourcing and their perceptions about the availability of IMRs as well as candidates who might function effectively as in-house salespeople influence their outsourcing decision (Rogers & Rodrigo, 2015). When management perceives reputational risk to be high (Rogers & Rodrigo, 2015) and performance evaluations are difficult to execute (Krafft et al., 2004), in-house sales functions are preferred. When sales divisions are allowed to make independent decisions to integrate selling functions and sales directors' skills, experience, preferences, and biased perceptions tilt decisions toward in-house salesforces, many manufacturers end up integrating their salesforces (Dalsace, Anderson, Jr, & William, 2003).

Using IMR distribution can also alleviate *distributor disintermediation-induced conflict* (Reday, Steyn, & Guiffrida, 2015). Specifically, manufacturers seeking to disintermediate distributors by selling directly to smaller, but growing, manufacturers might benefit from restructuring manufacturer-distributor relationships into manufacturer-IMR relationships.

4.1.3. *Dual distribution (IMR and inhouse salesforce)*

Dual distribution entails the combined use of IMRs and in-house salespeople selling through house accounts located in IMRs' territories. Adding house accounts to augment IMR efforts safeguards against lock-in problems (Dutta, Bergen, Heide, & John, 1995). Lock-in problems arise when principals experience difficulties replacing incumbent IMRs. The presence of house accounts inside IMRs' territories signals that principals enjoy positions from which IMRs can be replaced, if necessary. The presence of house accounts reduces opportunistic IMR behaviors (Dutta et al., 1995) and provides benchmarks that permit principals to evaluate IMR performance more effectively.

Dual distribution is usually more effective in markets where products are not commoditized; growth is apparent; customers use consistent decision-making styles; customers buy separate rather than bundled products/services; and buying groups are rare (Sa Vinhas & Anderson, 2005). Interestingly, principals are less likely to use house accounts for products with high unit prices. The sales of industrial products featuring

Table 2
Pre-relationship stage.

Principal's view	Author(s)	Key takeaways
Exploring Strategies for Companies That Use Manufacturers' Representatives as Their Sales Force	Dishman (1996)	CONCEPTUAL PAPER - Explores positive strategy (permanent use of IMRs) vs speculative strategy (tactical, temporary use of IMRs) - investigates four determinants contributing to speculative strategy decision (1) the manufacturer's environment, (2) the IMR's environment; (3) the nature of the product; (4) the structure of the market.
Integration of the Sales Force: An Empirical Examination	Anderson and Schmittlein (1984)	- Integration of sales function is associated with increasing levels of asset specificity, difficulty of performance evaluation, and the combination of these two factors. - Surprisingly, neither frequency of transactions nor environmental uncertainty is significantly related to integration. - The larger the firm, the more likely it is to integrate.
The Salesperson as Outside Agent or Employee: A Transaction Cost Analysis	Anderson (1985)	- The greater the difficulty of evaluating a salesperson's performance, the more likely the firm is to go direct. - Direct salesforce is associated with complex, hard-to-learn product lines and with districts that demand considerable non-selling activities (service). - Attractive product lines (low price and high quality) are more likely to be sold by direct salesforce.
International Market Entry and Expansion via Independent or Integrated Channels of Distribution	Anderson et al. (1987)	- Integration of sales function is associated with the degree of transaction specificity in the distribution function and whether the product is highly differentiated. - There is a tendency to sell product through whatever channel is already in place. - Firms are more likely to integrate distribution channel in more culturally similar markets.
Strategic Implications of Darwinian Economics for Selling Efficiency and Choice of Integrated or Independent Sales Forces	Anderson (1988)	- "Darwinian economics" proposes that competitive markets operate to force optimal behavior, in this case whether to fill a sales district with company sales force or IMRs. - The most efficient sales forces conform to prevailing practice and the least efficient deviate, but only in uncertain environments. - In more certain environments, conformity and efficiency are unrelated.
Understanding Dual Distribution: the Case of Reps and House Accounts	Dutta et al. (1995)	- Lock-in problems with IMRs (when IMRs cannot be easily replaced) and performance ambiguity (difficulty in evaluating IMRs' performance) significantly increases the probability that dual channels will be used. - Offering a premium commission rate to IMRs has no significant effect on probability that dual channels will be used. - When the selling function has greater economies of scope, the probability that dual channels will be used decreases. - An existing direct sales force for other products in the territory increases the probability that dual channels will be used. - IMRs selling supplies are more likely to face house accounts than IMRs selling equipment.
Export Channel Design: the Use of Foreign Distributors and Agents	Bello and Lohtia (1995)	- Both transaction costs associated with enforcing contracts and production costs involved in performing export function influence choice of entry mode - asset specificity is a key discriminator between distributors and IMRs. - IMRs are used for sophisticated products and for customers with complex buying motives. - Distributors are used for higher levels of equipment and other capital expenditures and highly diverse environments. - IMRs are most appropriate for high-export-intensity firms that export to foreign markets with high sales growth.
Do Organizational Routines in Manufacturing Inform Contracting Choices in Distribution?	Wilson and Zhang (2002)	- Introduces two theoretical perspectives: capabilities-based perspective and the transaction-based perspective to inform contracting choices in distribution. - Firm specificity in functional assets of manufacturing and sales forces increases the likelihood that salesforce is integrated. - Client relation importance, credit risk of buyers, transaction frequency of buying, and client credit-worthiness uncertainty increase the likelihood of an integrated salesforce.
Path Dependence in Personal Selling: A Meso-Analysis of Vertical Integration	Dalsace et al. (2003)	CONCEPTUAL PAPER - Discusses four forces driving firms toward employee sales force: (1) sales function's low inclusiveness and ambiguous standards of desirable performance, (2) interplay between director of sales and the rest of the organization, motivated to accept sales director's recommendation, (3) path-dependence mechanisms (legitimacy, need for critical mass, and asymmetric switching costs between governance models), (4) characteristics of the institution of outsourcing sales.
Relative Explanatory Power of Agency Theory and Transaction Cost Analysis in German Salesforces	Krafft et al. (2004)	- Explores direct salesforce vs. IMR decision and the design of compensation plans in German workforce. - Only variables derived from transaction cost analysis exert a significant impact on the decision to integrate the salesforce. - The proportion of salary in the compensation plan can adequately be addressed through the agency theory framework.
Should You Set up Your Own Sales Force or Should you Outsource it? Pitfalls in the Standard Analysis	Ross et al. (2005)	- Classic cost-based analysis of inhouse vs. IMR is too simplistic and there are additional cost factors to consider. - A cost-based analysis is insufficient as issues of efficiency (coverage) and effectiveness (developing close customer relationships) need to be considered. - Transition from IMR to inhouse (or vice versa) must be considered (transition costs and when expenses are paid out matters).

(*continued on next page*)

Table 2 (*continued*)

Principal's view	Author(s)	Key takeaways
How Potential Conflict Drives Channel Structure: Concurrent (Direct and Indirect) Channels	Sa Vinhas and Anderson (2005)	- Principal uses concurrent channels more often when market growth is greater, and less often when variability in customers' behavior over purchase occasions is greater, when customers form buyer groups, when customers perceive the product offer as standardized, when market is greater, and when customers are more likely to buy the product in a bundle. - Channels engage less in destructive behaviors the more the channels have differentiated offers, the more the manufacturer double compensates the channels and the more the manufacturer adopts a system that clarifies order ownership.
Outsourcing the Sales Process: Hiring a Mercenary Sales Force	Rapp (2009)	CONCEPTUAL PAPER - How do firm orientations (i.e., brand focus, competitor orientation, customer orientation, learning orientation, production orientation, selling orientation, technological orientation) affect principal's intention to outsource sales function? - How does complexity of selling task and market turbulence moderate the relationship between firm orientations and intention to outsource?
An Exploratory Study of Factors Influencing Make-or-Buy of Sales Activities	Rogers and Rodrigo (2015)	- Outsourcing sales function is prompted by cost pressure, the need to access skills or improve flexibility. - Outsourcing preferences are moderated by perceived reputational risk, availability of suitable IMRs and direct sales recruits and ability to manage outsourcing.
When to Outsource the Sales Force for New Products	Good and Calantone (2019)	- Outsourcing the salesforce has an effect on the relationship between new product characteristics and the meaningfulness customers derive therefrom. - Outsourcing the salesforce when the principal is competing on new product superiority may be worthwhile. - Outsourcing may be detrimental in the context of new products competing on price.
Manufacturers' Representatives as a Solution to Distributor Disintermediated Induced Channel Conflict	Reday et al. (2015)	CONCEPTUAL PAPER - When a manufacturer decides to disintermediate a distributor and sell directly to a smaller, but growing Original Equipment Manufacturer (OEM), this can cause a channel conflict. - A possible solution is to restructure manufacturer-distributor relationships into manufacturer-IMR relationships. - IMRs will continue to serve the OEM but will realize cost savings (saving inventory carrying costs and credit cost).

Agent's view	Author(s)	Key takeaways
None		

high unit prices typically demands greater human-asset specificity. This "necessity" generally impeded the ability of principals to successfully introduce in-house accounts.

4.2. IMRs' perspectives

Seven factors have been identified that IMRs use as selection criteria when evaluating prospective principals (Anderson & Trinkle, 2005): principals' market and customer potential; ability to meet customer requirements; competition; potential earnings; synergy with pre-existing IMR products; "pain levels" (principals' attempts to micromanage, interfere in personnel issues, and unreasonable demands) vs. income potential; and people factors - as in "emotional favorites". To become IMRs' emotional favorites, principals must treat IMRs in fair and trustworthy ways, communicate openly and candidly; provide opportunities to communicate with principals' top management; offer quality principal staff; commit openly to IMRs; and treat IMRs like family.

Dual distribution, where principal operates house accounts in the IMRs' territories has negative impacts on IMR's perceptions of sales controls, psychological climate, and satisfaction with the principal. However, when principals operates house territories, separate from the IMRs' territories, IMRs' perceptions of sales controls, psychological climate, and satisfaction with principals are improved (Bergestuen, Thompson, & Strutton, 2021).

5. Stage 2 – "Relationship-initiation stage"

The means by which principals recruit and select IMRs have rarely been investigated. Surprisingly so, because IMR recruiting/selection processes are crucial to principals' success. Mutual compatibility, from both personal and business practices perspectives, appears important - as does understanding factors that enhance/degrade harmony. Selecting the right IMRs elevates their prospects for successfully influencing IMRs to allocate more sales resources to their principals' products. Two levels of IMR recruitment exist: principals hiring IMR agencies; and IMR agencies hiring salespeople. Key take-aways from studies addressing relationship-initiation are presented in Table 3, and synthesized below.

5.1. Principals' perspectives

A dyadic study revealed that the most important sources of information used by principals to find potential IMR partners are: recommendations; personal knowledge of the territory; direct approaches by IMRs; and trade fairs. IMRs identified direct approaches by manufacturers as the most common method used to recruit IMRs (Moore, 1992).

5.2. IMRs' perspectives

5.2.1. Initiating relationship with new principals

Among foreign principals, Stephens (1996) found that IMRs were generally reactive rather than proactive regarding their willingness to approach foreign principals. IMRs who already represent larger firms in domestic markets were more likely to initiate efforts to represent foreign principals.

5.2.2. Recruiting sales representatives

Employees hired by IMR agencies typically have direct sales experience with principals or other IMR agencies. However, recent college graduates may also land entry-level sales positions in IMR agencies. IMRs' marketing methods exercised the strongest direct impact on IMR agencies' willingness to hire recent graduates (Weinrauch et al., 2007).

Table 3
Relationship-initiation stage.

Principal's view	Author (s)	Key takeaways
A profile of UK manufacturers and West German Agents and Distributors (dyadic study)	Moore (1992)	- Manufacturers ranked the most important sources of information used to find potential agents and distributors as: (1) recommendation, (2) personal knowledge, (3) direct approach by the IMR/distributor, (4) via trade fairs, (5) through the British Overseas Trade Board. - IMRs identified the direct approach by the manufacturer as the most common method used by UK manufacturers in recruiting IMRs or distributors.
Agent's view	**Author(s)**	**Key takeaways**
Training Requirements for Professional Certification of Manufacturers' Representatives	Weinrauch et al. (1997)	- Based on survey results, a certified training program for IMRs is developed, including five modules (1) concepts for creating a positive relationship between principals and IMRs, (2) legal rules and regulations, (3) small business issues of accounting and finance, (4) marketing the principal's products and the agency itself, (5) oral and written communication skills. - Neither size of the agency firm nor years of experience nor number of IMRs who hold equity in the agency affect IMRs' perceptions of the knowledge requirements for certification. - The proportion of time spent in management of the agency influence the way IMRs view the business knowledge requirements in entrepreneurship and business management.
Improving the Viability of Manufacturers' Representatives with Industry-Based Sales Training Initiatives	Weinrauch et al. (2001)	- Agency size does not affect perception of knowledge requirements of agencies. - Larger firms are more likely to express a need for such a course. - Program cost and formal recognition of program attendance are important factors for demand.
Manufacturers' Representative Profession: A Model About the Impact of Agency Success and Marketing Methods on Willingness to Hire Recent College Graduates	Weinrauch et al. (2007)	- Substantial and significant positive relationship between success level of agency and job expectations from IMRs. - Significant and positive relationship between success level of agency and the degree of importance that agency gave to marketing methods. - Significant and substantial relationship between job expectations from IMRs and the degree of importance of marketing methods. - The importance of marketing methods has the greatest direct impact on agencies' willingness to hire recent college graduates.
Examining the Use of Team Selling by Manufacturers' Representatives	Jackson et al. (1999)	- Team selling will more likely be used by IMRs when customers face a first-time buy of complex products, when the information needs of customers are high, when an account requires special treatment, and when several people are involved in the decision to buy. - Team selling is more likely when the potential sale is large for IMR firms and when the product is new to IMRs' product lines. - Members of the selling team can be from manufacturer, distributor, and IMR's own firm.
Global Marketing Challenges and Opportunities for Manufacturers' Representatives	Stephens (1996)	- IMRs are reactive instead of proactive in representing foreign principals. - Finding IMRs to work overseas would be fairly difficult, strategic alliances with foreign IMRs would be very beneficial. - IMRs representing larger firms were more likely to initiate efforts to represent foreign principals.

5.2.3. *Training/certifying sales representatives*

The Manufacturers' Representatives Educational Research Foundation (MRERF) aims "to improve awareness of, understanding of, and respect for IMRs while promoting and funding academic research, publications, and education programs for IMRs" (Taylor, 1990; p. 54). MRERF certifies IMR agency managers (Certified Professional Manufacturers' Representative) and sales representatives employed by agencies (Certified Sales Professional).

Program costs and formal recognition of programs impact the demand for certification programs by IMR agencies (Weinrauch, Stephens-Friesen, & Carlson, 2001). Larger firms were more likely to express needs for such courses (Weinrauch et al., 2001). But neither agency size (Weinrauch et al., 2001; Weinrauch, Stevens, & Carlson, 1997) nor years of experience (Weinrauch et al., 1997) affect IMRs' perceptions of knowledge requirements for training.

Weinrauch et al. (1997) researched the need for new curricula in MRERF certification programs. When studying pioneering IMRs who earned certifications or were currently enrolled in certification programs, the authors found that certification programs improved IMRs' perceived sales/marketing skills and amplified expertise in other business areas. Both skill-sets contribute to agency success.

Skills might also be cultivated by requiring IMRs to create teams to develop appropriate skills, especially when diverse teams feature principal, distributor, and IMR membership. IMRs often use team selling in selling contexts that feature large information needs, important accounts, complex/new products, several customer decision-makers, and/or large potential revenues (Jackson, Widmier, Giacobbe, & Keith, 1999).

6. Stage 3 – "Relationship maintenance stage"

Once principals engage contractually with IMRs, focus shifts to operating IMR systems. Principal-IMR relationships can be viewed from principals' perspectives. Here, the focus entails developing efficient and effective ways to work with IMRs. Principal-IMR relationships can also be addressed from the IMR's view. The focus then shifts toward determining how to efficiently allocate resources to and work well with multiple principals. "Life inside IMR agencies" research perspectives also exist, as IMR agencies may employ more than 100 sales professionals. Finally, IMR-customer relationships exist, which can be viewed both from the IMR and customer perspective. Key take-aways from studies addressing the relationship-maintenance stage are summarized in Table 4, and synthesized below.

6.1. Principals' perspectives

To develop loyal IMRs, Hickle and Yahn (1971) suggest principals should treat IMRs as three different entities: independent businesses, employees, and customers. Treating IMRs as independent businesses requires that principals provide relevant information, follow IMRs' recommendations, and solicit their advice. As employees, IMRs should be treated with respect and fairness. As customers, principals must provide IMRs with saleable products and services.

Effective IMR-principal relationships are characterized by six core and four supporting values (McQuiston, 2001). The core values: "shared goals/objectives, mutual dependence, open lines of communication, mutual commitment to customer satisfaction, concern for the other's profitability, and trust." The supporting values: "investment of effort by top management, continuous improvement, professional respect, and developing personal relationships" (McQuiston, 2001; p. 166). Many of these core and supporting values have been tested in the literature.

6.1.1. Outcome and behavioral controls

Principals have several sales control options available when working with IMRs. Outcome controls focus on desired results, not on how results are achieved (Anderson & Oliver, 1987). Behavioral controls are associated with closer supervision, addressing capabilities and processes used to produce results (Challagalla & Shervani, 1996).

Commissions paid to IMRs based on sales function as an outcome-based control. Attractive financial incentives ranked as the most important methods for motivating IMRs both by manufacturers and IMRs (Moore, 1992). Commission payments in dual systems, where principals operate house accounts inside IMR territories, often prove contentious. When IMRs perceive that principals compete for their business, resulting in "lost" commissions, their motivation to sell principals' products wanes. One solution entails principals double–compensating both in-house salespeople and IMRs when sales are made in IMRs' territories (Sa Vinhas & Anderson, 2008).

In addition to using outcome controls to incentivize IMRs, principals can use capability controls (such as product training) to ensure that IMRs have the required product knowledge to represent their products. The presence of absorptive capability, reflecting an ability to recognize the value of "new, external information, assimilate it, and apply it to commercial ends" (Cohen & Levinthal, 1990; p. 128), positively influenced performance in principal/IMR partnerships.

Principals provide IMRs with different resources throughout the selling process. Resources could include equipment, sales leads, sales aids, or manufacturing personnel/engineers from principals' organizations who jointly participate in sales meetings with IMRs. Principals perceive visits to the IMR as a motivating incentive for the IMR (Moore, 1992). The provision of such resources illustrates the use of process controls in principal-IMR relationships. Resource-advantage theory was employed to demonstrate that performance outcomes in principal-IMR partnerships are associated with potential complementarities between principals' and IMRs' resources (Unal & Donthu, 2014).

6.1.2. Communication, trust, and commitment

Principal-IMR communication practices are critical to the development, growth, and maintenance of relationships. Effective lines of communications are important for motivating IMRs (Moore, 1992). High-quality information features superior content (relevance, low bias, completeness) and processes (pro-activeness, timeliness, frequency, responsiveness) through which information-sharing occurs (Pass, 2015). When principals believe IMRs provide high-quality information, their assessments of IMR performance and IMR compatibility improve. Perceived IMR information quality also positively impacts principals' trust in IMRs. Principals' commitment to IMRs is likewise materially influenced by principals' evaluation of IMR performance and principals' trust in IMRs (Pass, 2016).

6.2. IMRs' perspectives

IMRs' evaluation of principals can range from informal to formal. Key criteria include product quality, potential sales, loyalty toward the IMR's agency, trustworthiness, and propensity toward teamwork between principal and agency (Merritt & Newell, 2001). Agencies that use formal evaluation processes perform better, enjoy healthier relationships with principals, and exhibit higher overall satisfaction.

6.2.1. Allocation of sales resources and compliance with principal requests

Since IMRs typically serve multiple principals, they must allocate selling time, often called "mindshare," to each principal. To make products appealing and saleable, principals need "reputable brand names, superior product performance and reliability, good design, appealing points of uniqueness, satisfactory lead times for delivery, and pricing that fits the value customers perceive in products" (Anderson & Trinkle, 2005. p. 137).

Anderson, Lodish, and Weitz (1987) assessed the impact of financial variables (marginal returns, growth, synergies, uncertainty) and characteristics of principal-IMR relationships (power, organizational climate, communications) on IMRs' allocation of selling time to principals. IMRs allocate proportionally more time to principals who maximize profitability for their agency. Additional time was also dedicated to principals operating in high growth product categories; when principals' products mesh synergistically with other product lines represented by agencies; when sales volumes are easier to predict; or when principals' products are easier to sell. IMRs also spent more than "optimal" amounts of time on principals with whom they had good communications and trusting relationships. Interestingly, both positive (principle-induced communication; field visits) and negative (principal-interference, criticisms) principal involvement generated greater resource-allocation from IMRs.

Thompson, Strutton, Mims, and Bergestuen (2021) found that interorganizational climate and perceptions of mutual satisfaction within the IMR-principal dyad mediated the effects of sales controls on IMRs' intentions to comply with principals' requests for additional selling time as well as non-selling related tasks.

6.2.2. Dependence on principals

IMRs must allocate transaction-specific investments toward each principal they represent. Investments may include dedicated equipment to sell and/or service principals' portfolios, product line training, or efforts expended toward developing sales territories for principals' product lines.

IMRs that invest more specific assets in relationships with principals can safeguard these expenditures by making offsetting investments in their relationships with customers (Heide & John, 1988). Such investments expand IMRs' abilities to replace principals, if necessary.

IMRs dependence on particular principals is directly impacted by effectiveness. Effectiveness was operationalized as satisfactory, worthwhile, or productive relationships (Bucklin & Sengupta, 1993; Pass, 2013). Interestingly, dependence failed to influence perceived performance with principals (operationalized as perceived sales performance) (Sujan, Weitz, & Kuman, 1994).

6.2.3. Communication, support, and leadership from principals

Principals' communication with IMRs positively impacts IMRs' perceptions of principal effectiveness and performance (Pass, 2013). The Internet can help IMRs more efficiently communicate with principals

Table 4
Relationship-maintenance stage.

Principal's view	Author(s)	Key takeaways
A profile of UK manufacturers and West German Agents and Distributors	Moore (1992)	- Attractive financial incentives ranked as most important methods for motivating IMRs and distributors (both by manufacturers and IMRs/distributors). - Manufacturers ranked visits to the IMR/distributor equally with attractive financial incentives. IMR/distributors did not find the visits by manufacturers a particularly motivating incentive. - IMRs/distributors ranked visits by IMR/distributor to the manufacturer second in importance. - Effective lines of communications were ranked third in importance by manufacturers and by IMRs/distributors. - Manufacturers were more dissatisfied with relationships with IMRs.
A Conceptual Model for Building and Maintaining Relationships between Manufacturers' Representatives and Their Principals	McQuiston (2001)	CONCEPTUAL PAPER - Presents model for effectively developing and maintaining relationships between IMRs and principals. - Six Core Values: Shared Goals and Objectives, Mutual Dependence, Open Lines of Communication, Concern for the Other's Profitability, Mutual Commitment to Customer Satisfaction, and Trust (inter-organizational in nature) - Four Supporting Factors: Developing a Personal Relationship, Having a Professional Respect, Investment of Effort by Top Management, and a Commitment to Continuous Improvement (inter-personal in nature)
The Antecedents of Double Compensation in Concurrent Channel Systems in Business-to-Business Markets	Sa Vinhas and Anderson (2008)	- Manufacturers double compensate more when behavioral uncertainty is higher, when customers are larger, when more customers adopt integrated supply contracts with distribution channels, in more competitive or less concentrated markets, when there are fewer customers and for higher levels of variability in customer buying behavior. - Manufacturers double compensate less for higher levels of technological uncertainty and when they have been acquiring other manufacturers.
Role of Absorptive Capabilities in Outsourcing the Headquarters Selling Task in the United States	Unal and Donthu (2014)	- Both the outsourcee and the outsourcer need to combine their resources to satisfy the endowment requirements of the task at hand. - The higher the fit of endowment to task, the better the performance. - The more common goals and expectations of both parties, the more they will be willing to learn from each other. - The more willing both parties are to learn from each other, the higher the performance.
Independent Sales Representatives: the Influence of Information Quality on Manufacturer Trust	Pass (2015)	- Perceptions of IMR information quality positively impacts principal's perceptions of IMRs. performance and IMR compatibility, as well as principal's trust in IMR. - High quality information includes information content (relevance, bias, completeness) and the process of sharing information (proactiveness, timeliness, frequency, and responsiveness).
Determinants of Manufacturer Commitment to the Independent Sales Representative	Pass (2016)	- IMRs must perform the selling function well and earn manufacturers' trust to cultivate manufacturer commitment. - IMRs need to spend time with manufacturers to develop relationships with their employees and learn about manufacturers' needs. - IMRs need to share information effectively and share content perceived as valuable by manufacturers.

Agent's view	Author(s)	Key takeaways
A Comparison of the Impact of Organizational Climate on the Job Satisfaction of Manufacturers' Agents and Company Salespeople: An Exploratory Study	Mahajan et al. (1984)	- While more than 60% of the variation in total job satisfaction among internal salespeople is explained by four climate variables (closeness of supervision, influence in determining standards, perceived role ambiguity, and perceived role conflict), only 22% of variation is explained by the same variables for IMRs. - Organizational climate variables account for over 50% of IMR variation in satisfaction with supervision and customers and over 35% of satisfaction with the job itself and company policy.
Resource Allocation Behavior in Conventional Channels	Anderson et al. (1987)	- IMRs effectively balance their returns and costs to maximize their profitability. - More time is allocated to principals with offerings in growth product categories, whose lines are synergistic with other lines in IMRs' portfolios and whose sales volumes and schedules are more predictable (less uncertain). - Higher commission rates and the quality of backup support given by the principal have diminishing returns in terms of motivating IMRs to devote more time to a principal. - IMRs fully incorporate the effects of ease of selling a principal's line into allocating resources (not diminishing returns). - IMRs spend more time on principals with whom they have a trusting relationship and good communications. - Principal's power (IMR's dependence) has a limited effect on IMR's time allocation. - Interference in IMR operations and provision of negative feedback, and visits by the principal also increase the time allocation.
Perspectives on Behavior-Based versus Outcome-Based Salesforce Control Systems	Anderson and Oliver (1987)	CONCEPTUAL PAPER - Most theories predict that environmental uncertainty argues for behavioral controls because outcome measures would be unstable and perceived as unequally distributed across salespeople.

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Table 4 (*continued*)

Agent's view	Author(s)	Key takeaways
		- The more objective the measures and the more costly the behavior measurement process, the more outcome control is recommended. - Inaccessible or inaccurate output measures argue for behavior controls. - Outcome control may be more feasible for small salesforces and behavior control may be more feasible for larger ones.
The Role of Dependence Balancing in Safeguarding Transaction-Specific Assets in Conventional Channels	Heide and John (1988)	- IMRs with more specific assets invested in their relationship with the principal attempt to bond themselves more closely to their customers to safeguard those assets. - Bonding efforts result in lower level of dependence on the principal because IMR is better able to replace principal if necessary. - Financial performance of IMR was improved when dependence was reduced.
Trust Earning Perceptions of Sellers and Buyers	Hawes et al. (1989)	- IMRs and their customers (purchasing executives) do not have the same views about what salespeople do to influence buyer trust. - Trust earning components were: likeable, competent, dependable, customer-oriented, and honest. - IMRs overestimated the value of three trust earning components (likeable, competent, and dependable), and had inflated views of the extent to which they were trusted by their customers.
An Empirical Test of the Consequences of Behavior-and Outcome-Based Sales Control Systems	Oliver and Anderson (1994)	- Provides early support for behavior vs. outcome-control consequences proposed by Anderson & Oliver, 1987 (exploring IMRs in agencies) - Perceptions of behavior control governance structure appear to be related to greater affect and acceptance among IMRs, as well as tendency to more professional competence, intrinsic motivation, and attendance to agency goals. - Outcome-control perceptions appear to coincide with bottom-line and extrinsic motivation. - Behavior-control organizations enjoy more organizational commitment from their salespeople. - Authors failed to identify clear and consistent effects on performance or reported time allocation behaviors. - Salespeople under behavior-control systems are more satisfied with their jobs and view their organizations as more participative, yet do not perform at higher levels than do salespeople in outcome-control systems.
Behavior- and Outcome-Based Sales Control Systems: Evidence and Consequences of Pure-Form and Hybrid Governance	Oliver and Anderson (1995)	- Decisions about salesperson supervision, evaluation, and compensation can be considered on a continuum ranging from behavior to outcome control. - Hybrid firms adopt both control styles. - In hybrid firms, management is concerned with all elements of sales generation, including the process itself and the results. - Salespeople in hybrid offices report the highest levels of competence, the affective variables including commitment, intrinsic motivation, and many of the performance variables. - A firm's control system changes the atmosphere and influences how salespeople think and feel about their jobs. To a lesser extent, the control system influences how salespeople act and perform.
The Extent and Formality of Sales Agency Evaluations of Principals	Merritt and Newell (2001)	- As IMRs adopt evaluation procedures, they have more positive views of their own and their principal's performance and evaluations lead to improvements in the relationship with the principal. - Whereas information evaluations is used by almost 90% of agencies in their decisions to drop or add principals, just over 50% of the agencies share evaluation reports with the principals. - Key criteria used when evaluating principals: product quality, potential sales, loyalty of the principal to the agency, trustworthiness of principal, and teamwork between the principal and agency.
A Three-Tier Model Representing the Impact of Internet Use and Other Environmental and Relationship-Specific Factors on a Sales Agent's Fear of Disintermediation Due to the Internet Medium	Gulati et al. (2002)	- The higher the IMR's internet utilization the higher the information exchange between IMR and principal, leading to increased satisfaction with the relationship. - IMRs with higher IMR internet utilization also have greater awareness of cases of disintermediation, perceiving the Internet as a threat to their position. - The higher the degree of product-market idiosyncrasy, the greater the IMR's role-salience and satisfaction with the principal. - The product-market idiosyncrasy is directly and positively related to the manufacturers' relationship-specific adaptation for the buyer, which in turn is directly and positively related to the IMR's perceived threat of disintermediation.
The Impact of Personality Variables, Prior Experience, and Training on Sales Agents' Internet Utilization and Performance	Gulati et al. (2004)	- Internal locus of control, learning orientation, and sales related Internet training relate positively to IMRs' Internet utilization. - IMRs' age relates negatively to Internet utilization. - Positive relationships exist between IMRs' Internet utilization and (perceived) sales performance.
The Impact of Relationship-Specific Adaptations and Information Exchange of Sales Agents' Role Salience	Gulati and Bristow (2005)	- Extent to which IMRs engage in open and important exchange of information with principals positively impacts their felt level of importance in the triadic relationship (principal - agent - customer). - Relationship-specific adaptations by customers positively affected IMRs' role salience.

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Table 4 (*continued*)

Agent's view	Author(s)	Key takeaways
		- IMRs' relationship-specific adaptations for principals and customers increased their perceived importance.
Manufacturers' Representatives: Relationships Between Selling Support and Satisfaction	Pass (2011)	- Six types of support elicit differences in IMRs' satisfaction with principals. - The most important support type is timely delivery of products, followed by technical support and timely commission payments. - Market analyses and case histories of accounts are also significant, but lower in importance than other support types. - Product training and advertising not significantly related to IMRs' satisfaction with principals.
Manufacturers' Representative-Principal Relationship Management: A Principal Leadership Style and Support Perspective	Pass et al. (2012)	- IMRs' satisfaction (with principals) ultimately coalesces to principals' provision of quality product support and participative leadership. - Instrumental (directive) leadership style not directly related to IMR satisfaction, but positively impacts perceived quality of planning, product, and promotion support. - Among support types, product support is most critical in achieving IMR satisfaction.
Outsourcing the Sales Function: the Influence of Communication and Customer Orientation	Pass (2013)	- Principal communication style positively impact perceptions of principal effectiveness and principal performance. - Principal customer orientation positively influences perceptions of principal effectiveness and performance. - These antecedents indirectly influence IMR dependence on the interfirm relationship, reducing probabilities that IMRs will terminate the relationship.
Satisfying and Retaining Customers through Independent Service Representatives	Brown and Chin (2004)	- Manufacturer support positively affected IMR job satisfaction. - Job satisfaction positively related to self-rated service performance. - Significant interactions exist between IMR job satisfaction and self-rated service performance with respect to customer-perceived service quality (stronger relationships abide when job satisfaction is high, no relationship arises when job satisfaction is low). - Customer-perceived service quality strongly related to customer satisfaction; customer satisfaction related to repeat purchase intentions.
Customer Loyalty to Whom? Managing the Benefits and Risks of Salesperson-Owned Loyalty	Palmatier et al. (2007)	- Salesperson-owned loyalty positively affected customer loyalty to the selling firm (agency). - Loyalty to agency exercised positive effects on customer willingness to pay price premiums. - Loyalty to salesperson positively affected customer willingness to pay price premiums, selling effectiveness, and sales growth. - Salesperson-owned loyalty also positively affected agency's latent financial risk. - Value received by customers positively affected salesperson-owned loyalty and loyalty to the agency, as well as customers' willingness to pay price premiums and sales growth. - Relationship enhancing activities positively affected value received, salesperson-owned loyalty and agency loyalty. - Relationship enhancing activities increase customer value, but this relationship is moderated by perceived agency consistency and loyalty-capturing strategies.
Returns on Business-to Business Relationship Marketing Investments: Strategies for Leveraging Profits	Palmatier et al. (2006)	- IMRs' investments in social relationship marketing has a positive impact on short-term customer specific financial outcomes - IMRs' financial relationship marketing investments exercised no effects. - IMRs' structural relationship marketing investments exert positive impacts when customers require frequent service.
The impact of sales controls on manufacturers' agents' tactical decisions: the importance of inter-organizational climate	Thompson et al. (2021)	- Inter-organizational climate and perceptions of mutual satisfaction with IMR/principal relationship mediated the effects of sales controls on willingness to comply with principal requests for extra selling and non-selling efforts. - Behavior-based sales controls demonstrated strongest direct and mediated effects on IMRs' intention to engage in non-selling tasks. - Outcome-based sales controls demonstrated strongest direct and mediated effects on IMRs' intentions to commit additional selling time to their principals.
Dual distribution systems: investigating their effects on independent manufacturers' representatives' perceptions of manufacturers	Bergestuen et al. (2021)	- Manufacturers' use of house territories, outside the domain of the focal IMR imposed favorable effects on IMRs' perceptions of sales controls and psychological climate and contributed to higher IMR satisfaction with the principals. - House-accounts inside IMR territories negatively influenced IMR perceptions of sales controls and psychological climate and contributed to lower IMR satisfaction with the principals. - Relationship between sales controls and satisfaction with principals was fully mediated by psychological climate.

and customers (Weitz, Castleberry, & Tanner, 2001). Gulati, Bristow, and Dou (2004) observed positive relationships between IMRs' Internet utilization and perceived performance. The proliferation of Internet-based processes has imposed positive and negative influences on IMRs' satisfaction with agency relationships (Gulati, Bristow, & Dou, 2002). IMRs' Internet utilization positively influenced information exchange with principals. Satisfaction with principal relationships grew. IMRs' internet utilization also elevated awareness about the threat of partial or complete disintermediation, resulting in lower satisfaction.

Positive relationships were observed between IMRs and principals based on the extent of information exchanged by principals and IMRs' perceived role salience (Gulati & Bristow, 2005). Role salience entails "the importance of one channel member to the other as determined by the incremental value provided by the channel member" (Gulati et al., 2002; p. 23).

IMRs' perceptions of principal support quality explained 69% of their satisfaction with principals (Pass, 2011). Principals' leadership styles also impact IMR satisfaction (Pass, Evans, Lastovicka, & Schlacter, 2012). Participative leadership styles contributed most to IMR satisfaction.

6.3. Inside IMR agencies

Larger IMR organizations routinely establish customized managerial structures to motivate, supervise, and support their salespeople.

6.3.1. Sales controls (used by agency management)

As discussed above in the relationship with the principal, the use of outcome- vs. behavior-based control systems has also been explored in the relationship between sales managers and their salespeople inside the agency (Anderson & Oliver, 1987; Oliver & Anderson, 1994). Salespeople in organizations emphasizing behavioral control demonstrated more commitment to their agency. Behavioral-control-based organizations appeared more supportive and provided salespeople with greater role clarity. No differences were observed between the influence of outcome- vs. behavior-based systems on time allocation and performance (Anderson & Oliver, 1987; Oliver & Anderson, 1994).

Salespeople working in agencies using both behavior and outcome controls, so-called hybrids, reported the highest commitment, intrinsic motivation, and performance outcomes (Oliver & Anderson, 1995).

6.3.2. Organizational climate and job satisfaction

The impact of organizational climate on IMRs' job satisfaction has been evaluated (Mahajan, Churchill, Ford, & Walker, 1984). Closeness of supervision, influence in determining standards, perceived role ambiguity, and perceived role conflict were assessed. The sample included principal inhouse salespeople and the same principal's IMRs. This duality revealed the presence of important differences in the impact of climate on job satisfaction for principal's employees as compared to IMRs. Climate variables explained 61% of satisfaction variation among in-house salesforces, but only 22% of IMR satisfaction. Internal salespeople were more satisfied with supervision featuring high levels of structure, direction, and support; IMRs were more satisfied when principals provided minimal direction.

6.4. IMR-customer relationships

IMRs mediate relationships between principals and principals' customers. However, researchers have rarely investigated relationships that IMRs develop with customers.

6.4.1. Customer trust and loyalty

IMRs' perceptions of their ability to earn the trust of customers was explored in a dyadic study (Hawes, Mast, & Swan, 1989). IMRs generally overestimated the value of three presumably trust-facilitating components (likeability, competency, dependability). IMRs often held overinflated views of the degree to which customers trust them.

Customers' perceptions of received value positively affects their loyalty to salespeople and their agencies (Palmatier, Scheer, & Steenkamp, 2007). Customer loyalty toward salespeople positively affected customer loyalty to agencies. Loyalty to salespeople also positively influenced customers' willingness to pay price premiums, perceived sales effectiveness, and sales growth.

IMRs' investments in social relationship marketing (e.g., meals and entertainment) had a positive impact on customer-specific returns, whereas financial marketing investments (e.g., free product or discounts, or other financial benefits that reward customer loyalty) did not. Structural relationship marketing investments (e.g., dedicated personnel, customized order processing systems, and tailored packaging) generated positive short-term returns for customers with high interaction frequencies (Palmatier, Gopalakrishna, & Houston, 2006).

6.4.2. Customer satisfaction

IMR-customer relationships are outside principals' direct control. Even so, principals' support for IMRs positively influenced IMRs' job satisfaction. Satisfaction, in turn, positively affected IMRs' self-rated customer service performance (Brown & Chin, 2004). Customer-perceived service quality was strongly related to customer satisfaction. Customer satisfaction, in turn, elevated repeat-purchase intentions. To elevate customer purchase intentions, principals should provide IMRs with excellent support. IMRs' satisfaction will rise and subsequently promote satisfaction among customers, and sales.

7. Stage 4 – "Relationship termination stage"

Termination of principal-IMR relationships can be initiated by principals or IMRs. Table 5 summarizes key take-aways from studies addressing the relationship-termination stage. These take-aways are synthesized below.

7.1. Principals' perspectives

Manufacturers who partner with IMRs routinely confront temptations to terminate IMR relationships and transition to direct salesforces. Five conditions might spur conversions to inhouse salesforces: "excessively" successful IMRs; perceptions that key competitors use in-house salesforces; "ignorance" about how to motivate IMRs; scapegoating IMRs to rationalize/justify poor principal performance; or underestimating switching costs associated with transitions to in-house salesforces (Dalsace et al., 2003).

Principals' decisions to outsource sales functions to IMRs materially differ from decisions to convert from IMR distribution to in-house salesforces. Indeed, principals often encounter substantial barriers when exiting IMR distribution. Dissatisfaction with current IMRs, existing house accounts inside IMR territories, and challenges associated with gauging IMR performance accurately are compelling reasons why principals might turn toward in-house salesforces (Weiss & Anderson, 1992). Principals typically avoid conversions to direct salesforces when switching costs are deemed excessively high. Surprisingly, IMRs' investment in transaction-specific assets imposed no direct effect on principals' intention to convert to in-house salesforces, but had an indirect effect, mediated by principals' satisfaction with their IMRs (Weiss & Anderson, 1992).

Reputation theory (Bromley, 1993) was employed to demonstrate that principals who rely on IMR salesforces develop perceptions of their own reputation as well as the reputation of the IMR (Weiss, Anderson, & MacInnis, 1999). These reputational perceptions, along with principals' beliefs about how other reputable manufacturers structure their salesforces, influence IMRs salesforce structural intentions. When principal's reputations surpass IMRs' reputations and principals believe reputable competitors use in-house salespeople, their intentions to vertically integrate selling functions rise.

7.2. IMRs' perspectives

IMRs who are satisfied with their principals were less inclined to exit relationships. IMR perceptions of the adequacy and fairness of compensation plans imposed small direct effects on exit intentions and larger indirect effects via the mediating role of satisfaction. Satisfaction with relationships was primarily influenced by IMRs' perceptions that

Table 5
Relationship-termination stage.

Principal's view	Author(s)	Key takeaways
Converting From Independent to Employee Salesforces: The Role of Perceived Switching Costs	Weiss and Anderson (1992)	- Managers avoid converting from IMR to direct salesforces when they perceive high switching costs. - Dissatisfied manufacturers are more likely to use direct salesforces than satisfied manufacturers. - IMRs' investments in transaction specific assets directly effects manufacturers' intentions to convert. - Firms more readily transition to direct salesforces when they anticipate lower switching costs; experience problems executing performance appraisals; or feature house accounts. - Firms that anticipate costly and difficult conversion exhibit substantial inertia in their choice of an IMR sales system.
Reputation Management as a Motivation for Sales Structure Decisions	Weiss et al. (1999)	- When manufacturers' reputations outpace IMRs' reputations, and manufacturers believe highly reputable firms use their own salesforce, manufacturers' intention to vertically integrate sales functions increases.

Agents view	Author(s)	Key takeaways
Determinants of Continuity in Conventional Industrial Channel Dyads	Anderson and Weitz (1989)	- Stability in principal/IMR relationships is enhanced by avoiding reputational deficits for treatment of IMRs; making relationship management (higher stakes) and trust cultivation important. - Trust is enhanced by the presence of congruent goals; good reputation; and effective communication. - Older relationships prove more stable than newer ones, but require less communication. - Trust facilitates communication; communication builds trust.
Factors Influencing the Exit Intentions of Manufacturers' Agents	Crawford et al. (2011)	- Agents' overall satisfaction with principal can reduce IMRs' propensity to terminate relationships. - Adequacy and fairness of compensation also directly influences IMRs' exit intentions. - Satisfaction primarily influenced by perceived presence of positive interpersonal climates and higher goal congruence (principal/IMR).

positive interpersonal climates existed, and by perceived goal congruence between principals and IMRs (Crawford, Thompson, & Dunipace, 2011). Congruent goals, principals' reputations (based on their treatment of IMRs), and effective IMR-principal communications were found to strengthen trust in the IMR-principal relationship (Anderson & Weitz, 1989).

8. Future research opportunities

The opportunity to identify and discuss critical gaps between what is known and what has not been studied, but should be known, represents the core value generated by successful review articles. This "research opportunities" discussion follows. Research opportunities based on conversations with practitioners are also included. The discussion is categorized based on the four principal/IMR relationship life-cycle stages identified above. Table 6, which features four discrete sections, summarizes this discussion.

8.1. Research opportunities related to "pre-relationship" stage

The synthesis of the pre-relationship literature reveals several pressing research opportunities, both from the principal and the IMR perspectives.

8.1.1. Principals' perspectives

The decision to go direct or outsource sales to IMRs has assumed efficiency, effectiveness, coverage, and ability to satisfy customer needs to be the same for inhouse salespeople and IMRs. In-house salespeople are often promoted to larger sales territories or into sales manager roles. IMRs typically remain in their local territories long-term, therefore offering more stable relationships with their customers. This difference alone may materially influence sales efficiency, effectiveness, coverage, and the ability to satisfy customer needs. Theorists should investigate these factors and determine how any differences should impact principals' decisions to outsource sales.

The impact of e-commerce channels on the decision to outsource sales represent other research opportunities. Across decades, e-commerce has increasingly taken over tasks previously handled by distributors and IMRs. Theorists should investigate the effectiveness and efficiency of such systems as compared to IMRs.

Limited IMR research has been conducted outside the USA. Theorists and practitioners could benefit from research into the role of national culture, communication, and legal environments/regulation on the decision to outsource sales to IMRs. An example of legal differences that may impact the decision to outsource sales is the regulation of circumstances under which IMR agreements are terminated. In US markets, standard 30-day termination agreements typically provide limited protection for IMRs. In Europe, a council directive provides IMRs with stronger protection against contract terminations initiated by principals.

8.1.2. IMRs' perspectives

Pre-relationship stage research has overwhelmingly adopted the perspective of principals. More theorists should adopt IMRs' perspective in their research and explore the selection criteria IMRs use when adding new principals. According to practitioners, IMRs are starting to market their services on digital and social media platforms. Will these marketing efforts impact the nature and scope of principal-IMR relationships? Manufacturers' Agents' National Association (MANA) recently developed a "dating app" ("Rep finder") for principals. This app provides principals easier access to information about IMRs in their industry. Will this new solution generate superior and longer-lasting principal-IMR relationships?

The use of dual distribution should be further evaluated from IMRs' perspective. Dual distribution, where principals operate house accounts in IMRs' territories has negative impacts on IMR's perceptions of sales controls, psychological climate, and satisfaction with the principal (Bergestuen et al., 2021), but what are the downstream impacts on IMRs' commitment to the principal and sales performance?

8.2. Research opportunities related the "relationship initiation" stage

Gaps related to "how to" initiate successful relationships from the perspective of either principals, IMRs, or customers were revealed.

8.2.1. Principals' perspectives

A need to survey principals about the content that should be added, retained, or eliminated in IMR training and certification programs is indicated. Principal perspectives on using IMR certifications as screening criteria when recruiting IMRs, and how these might predict the future performance of recruited IMRs, likewise should be investigated.

The use of team-selling, where professionals from IMR and principal's organizations collaborate and cooperate, needs investigation from the principal's perspective.

Case studies of the transition from in-house to IMR organization would provide interesting qualitative perspectives on the challenges

Table 6
Future research opportunities by stage.

Pre-Relationship Stage
Principal's Perspective: Researchers might investigate **Decision to use inhouse salesforce or IMR:** - How channel choice impacts *efficiency* (sales/cost ratio in by IMR vs. inhouse sales organizations). - How channel choice impacts *effectiveness* – developing closer customer relationships. - How channel choice impacts *coverage* of sales resources in the territory (Anderson, 1985). - How channel choice impacts *ability to satisfy manufacturer's and customer's needs* (Ross et al., 2005). ***E*-commerce:** - How the implementation of e-commerce channels impacts decisions to outsource sales explore industries that implemented e-commerce early (e.g., electronics) vs. industries that implemented e-commerce later. **Cultural and legal environments (international studies):** - How *national culture and communication style* impacts principals' decisions to go direct or work with IMRs. - How *legal environment/regulation* (e.g., related to termination indemnification in Europe vs. USA) impacts principal decisions to use inhouse salesforce or work with IMRs (Bello & Lohtia, 1995).
Agent's perspective: Researchers might investigate **Recruiting/selecting new principals:** - How the *selection criteria* used by IMRs when they are adding new principals impacts downstream success metrics (performance, satisfaction, commitment) as they engage with principals. - The effects on principal/IMR relationship that arise when IMRs proactively market their services through digital/social media channels, e.g. impact of the use of "dating apps" to find relevant IMRs (e.g., MANA's rep finder app, 2021). **Dual distribution systems:** - How dual distribution systems (inhouse sales and IMRs) impact sales performance and commitment in the relationship between principals and IMRs. - How territory size impacts IMRs' reaction to dual distribution systems (Bergestuen et al., 2021).
Relationship-Initiation Stage
Principal's Perspective: Researchers might investigate **Training/Certification:** - Input from principals regarding what constitutes *desirable training needs* for IMR certification (Weinrauch et al., 1997). - Whether principals are more likely to hire IMRs who hold industry certification, and the downstream impact on future performance that emerges from recruiting industry certified IMRs. **Team selling:** - Whether and why principals perceive team selling as a means of monitoring IMRs, as a form of training, or as a means of training. - Preferred ways to form teams and designate who "controls" teams (Jackson et al., 1999) **Transition from in-house to IMR organization:** - The nature and scope of challenges that principal organizations routinely experience when transitioning from in-house-based to IMR-based salesforces, as well as how best to manage expected challenges.
Agent's Perspective: Researchers might investigate **Training/Certification:** - The relative effectiveness of different types of training formats (face to face, online, hybrid) (Weinrauch et al., 2001) - Whether professional certification ensures or at least is associated with better relationships with principals (organizational climate, satisfaction, and commitment), resulting in improved IMR performance (sales, ROI). **Profile of successful IMRs:** - The relative contributions to principal/IMR success made by three critical IMR agency hire skillsets – including networking ability, negotiating abilities, and interpersonal skills. - Whether successful IMRs differ materially from successful in-house salespeople in terms of their locus of control, extrinsic vs. intrinsic motivation, or risk tolerance.
Customer's perspective: Researchers might investigate **IMR training needs:** - Customers' views on the most desirable training requirements for IMRs (Weinrauch et al., 1997). **Case studies:** - The implications for customer satisfaction, trust, and commitment to principal that arise as inhouse salesforces are partially or completely replaced by IMRs.

Relationship-Maintenance Stage
Principal's Perspective: Researchers might investigate **Dual distribution systems:** - The impact of different types of double compensation (equally split commission, full commission to both channels, split commission to some preset criteria or assessment of the effort put by each channel toward winning a given sale). - Leadership strategies that maximize benefits and minimize problems associated with the use of dual distribution systems. (Sa Vinhas & Anderson, 2008) **Evaluation systems:** - The use of IMR evaluation systems, and impact on IMR sales performance. (Merritt & Newell, 2001) **Multinational/cultural studies of IMR systems:** - Principal/IMR relationships in different countries as cultural differences may impact relational aspects. **Dyadic studies:** - Perceptions of information quality, IMR compatibility, IMR performance and principal/IMR trust, measured from both principal and IMR perspectives. (Pass, 2015) **Longitudinal studies:** - How Principal/IMR relational outcomes evolve over time in order to explore the development and effects of rising or falling levels of trust and commitment in these relationships. (Hawes et al., 1989)
Agent's Perspective: Researchers might investigate **Sales control systems:** - The impact of principal's sales control system on IMR's cognitions, attitudes, motivation, and performance (using actual sales and commission data as dependent variable) **IMR power and dependence:** - Power and dependence in principal/IMR relationship as antecedents of IMR performance. **Principal selling support and leadership styles:** - The impact of principal's selling support and leadership style on IMR performance. - How these relationships are moderated by factors such as degree of dependence, relationship length, and industry conditions (Pass, 2011). **"Life of Part"/"Life of Program" terms:** - How "Life of Part"/ "Life of Program" terms impact IMRs' resource allocation decisions given that IMRs can feel more secure about the receipt of future commission payments for existing customers. **Forward Financing Contracts:** - How principal decisions to finance (part of) IMR's selling costs impacts IMR resource allocation, especially when engaging in sales efforts characterized by lengthy gestation cycles. **Dual distribution systems:** - Explore the impact of dual distribution systems on IMR commitment and sales performance. - Explore the impact of principal's double compensation to in-house and IMR sales organizations.
Customer's Perspective: Researchers might investigate **Inhouse salesforce vs. IMR:** - Customer satisfaction, trust, commitment for inhouse salesforce vs. IMRs. **Trust in IMR-customer relationships (dyadic studies):** - IMR's relationship building activities and other antecedents that earn customers' trust.
Relationship-Termination Stage
Principal's Perspective: Researchers might investigate **Commission as predictor of termination:** - The commission levels at which principals believe they can save money by developing or exclusively using inhouse salesforces. **Switching costs as predictor of termination:** - The true switching costs associated with converting from employee salesforces to IMRs (Weiss & Anderson, 1992). - How "Life of Part" and "Life of Program" terms impact switching costs for principals.

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Table 6 (*continued*)

Relationship-Termination Stage
Legal environment/regulation:
- How legal/regulatory environmental conditions impact principals' intention to terminate IMRs (e.g., USA vs. Europe).
Longitudinal studies:
- The relational implications that principals experience as they replace IMRs with inhouse sales organization (case studies).
Agent's Perspective: Researchers might investigate
Exit predictors and actual exit:
- How commission, commission rate (as percentage of sales, or relative to industry average) and timeliness of commission payments from each principal impact IMR's exit intentions.
- How IMR's relative dependence on respective product lines impact intentions to exit principal-IMR relationships.
- Conduct longitudinal studies analyzing actual exits (instead of stated intentions).
Customers' Perspective: Researchers might investigate
Implications of IMR termination:
- Implications for customers satisfaction, trust, and commitment to the principal when the IMR is replaced by inhouse salespeople.
Triadic research:
- How termination of IMR/principal contracts impact principal, IMR, and customer organizations.

faced by principals when initiating relationships with IMRs.

8.2.2. IMRs' perspectives

The effectiveness of different formats for IMR training/certification programs should be explored. The downstream consequences of certification such as improved IMR sales efficiency and job satisfaction likewise beg investigation.

This review also revealed the need to explore successful IMRs' skill sets. How important are networking, negotiation, and other selling skills? Do successful IMRs differ materially from successful in-house salespeople related to their locus of control, extrinsic vs. intrinsic motivation, or risk tolerance?

8.2.3. Customers' perspectives

Exploring customers' perspective on desirable skills/training needs for IMRs also represent promising research opportunities. Case studies of transitions from inhouse sales-force to IMR from customers' perspectives should also generate actionable insights that would generate value for all parties involved.

8.3. Research opportunities related to "relationship maintenance" stage

The synthesis of the relationship maintenance literature generated several interesting research opportunities, from principal, IMR, and customer perspectives.

8.3.1. Principals' perspectives

Interesting research opportunities remain for the use of double compensation plans in dual distribution systems. Exploring how different types of commission split criteria and how different leadership strategies impact conflict and performance in these systems can help principals make these systems more successful.

The need to explore principals' use of informal or formal IMR evaluation systems and the resulting impact on inter-organizational climate and IMR performance presents another research opportunity.

Exploring IMR systems in different countries/cultures can provide important insight for multinational corporations, as different cultures can impact the relational aspects of these systems. Dyadic studies where perceptions of information, compatibility, trust, and performance are measured from the principal's and IMR's perspectives represent another interesting research opportunity. Lastly, following principal/IMR relationship over time, to explore the development of trust and commitment in these relationships, can provide interesting insight into the longitudinal aspects of these relationships.

8.3.2. IMRs' perspectives

Many interesting research opportunities also remain when taking the perspective of the IMR. Exploring the impact of principal's sales control system on IMR's cognitions, attitudes, motivation, and performance represent interesting research opportunities. Past research has not investigated actual sales and commission data. Integrating actual sales and commission data into future research would illumine the current literature.

Principals' support, leadership styles, and degree of power and dependence in principal/IMR relationship as antecedents of IMR performance represent other areas where future research could provide important insights. The use of life of part/life programs provides interesting research opportunities. These contracts stipulate that IMRs receive commissions as long as customers continue to buy principals' product(s). These terms remain in effect even if the affected IMR has been terminated. These contracts should materially impact the allocation of efforts and IMR mindshare when engaging in sales efforts characterized by lengthy gestation cycles, as the IMR can feel more secure about the receipt of future commission payments for existing customers.

Another potentially fruitful research opportunity follows from the use of forward financing contracts, where principals make partial commission payments to IMRs as selling processes progress. These contracts mitigate IMR risks involved in pursuing sales opportunities that may never close.

Research on dual distribution systems has primarily taken the perspective of the principal, presenting many research opportunities related to the potential downstream effects of dual distribution, taking the perspective of the IMR. The impact of dual distribution on commitment and sales performance should be investigated. Exploring the impact of principal's double compensation to in-house and IMR sales organizations from the IMRs' perspective is another interesting extension of past research.

8.3.3. Customers' perspectives

Research has rarely investigated relationships between IMRs and their customers. Exploring customer satisfaction, trust, and commitment for inhouse salesforces compared to IMRs represent interesting research opportunities. Exploring how IMRs' customer relationship-building activities and other antecedents earn customers' trust would also be interesting, both for academics and practitioners.

8.4. Research opportunities related to "relationship termination" stage

Many opportunities exist to extend research on IMRs' exit from or principal's termination of these relationships.

8.4.1. Principals' perspectives

From the principals' perspective, understanding how large commission payments to successful IMRs might incentivize principals to terminate their IMRs would contribute actionable theoretical and practical insights. Exploring the true switching costs, including the impact of "life of part"/"life of program", for principals converting from IMR to inhouse salesforce and how the legal/regulatory environment may impact this decision would provide interesting and actionable insights for the principal. Case studies or longitudinal studies exploring the experiences of principals replacing IMRs with inhouse sales organizations would also be an interesting extension of past research.

8.4.2. IMRs' perspectives

Exploring how commission, commission rate, and timeliness of commission payments from each principal impact IMRs' exit intentions would provide interesting insights.

Researchers might further explore the IMR's dependence on various product lines they represent, and how this impacts their intention to exit the principal-IMR relationship. This should generate useful insights into IMRs' exit intentions. Research on termination of contracts between IMRs and principals has focused on intentions. Longitudinal studies that analyzes actual behavior would eliminate this shortfall.

8.4.3. Customers' perspectives

Finally, exploring the impact on customer satisfaction, trust, and commitment to principals when IMRs are replaced by inhouse salespeople would generate useful insights. Longitudinal studies where customer retention is explored after the transition could provide important insights for principals considering to replace IMRs with inhouse salespeople.

Triadic (principal, IMR, and customer) research is needed in this domain in order to better understand the relationship between principals and IMRs and how these relationships impact the customer. Longitudinal studies that track these relationships over time would likely generate actionable insights into agency relationships among academics. These insights, ultimately, should benefit practitioners.

9. Summary and conclusion

Principal-IMR relationships play a crucial role in domestic and international industrial marketing practice. This exploration of 40 years of research into IMRs and their relationships with principals and customers generated managerially significant insights and interesting opportunities for future research. This review organized past research based on four typical stages of relationship development between IMRs and principals. The research in each stage was categorized based on the perspective taken (either principal, IMR, or customer).

Stage one focused on the decision to establish IMR/principal relationships. Past research has primarily adopted the perspective of principals, exploring how costs, capabilities, flexibility, strategic orientation, and/or reputations function as criteria impacting decisions to use direct salesforces or IMRs.

During the second phase, the focus was on initiating the relationship. Most past research has explored the sources of information used by principals to find potential IMRs. Research from IMR perspectives has explored hiring recent college graduates and desires to attend industry certification programs.

In the third stage, the focus shifted to IMR sales systems operations, principals' use of sales control systems, communication, trust, and commitment to IMRs. From IMRs' perspective, past research has explored sales resource allocations, dependence, communication, support, and leadership from principals, evaluation procedures, and the Internet's influence on relationships with principals. Research inside IMR agencies has explored sales controls, organizational climate, and IMR job satisfaction. The perspective of the customer working with IMRs has received limited attention.

During the final phrase, this article addressed factors related to termination of IMR contracts. Research on termination by principals has explored transaction costs, switching costs, and reputation as key drivers of this decision. The role of compensation, climate, and satisfaction on IMR intentions to exit was synthesized.

The insights generated through this review can guide studies that address how principals might more effectively manage IMR relationships and how IMRs might similarly improve relationships with principals during these relationships' normal and expected life cycles. Were the recommended studies executed successfully and their resulting managerial insights applied, principals and IMRs could execute future partnerships with a mutual confidence approaching the assuredness that characterizes economists' view about the contextually-dependent potential value associated with outsourcing key industrial marketing managerial functions such as professional selling.

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Dual distribution systems: Investigating their effects on independent manufacturers' representatives' perceptions of manufacturers

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ABSTRACT
This study investigates how manufacturers' (principals') use of dual distribution systems—house accounts and house territories managed by in-house salespeople—influence independent manufacturers' representatives' (IMRs') perceptions of sales controls, psychological climate, and overall satisfaction. Research on the use and effects of dual distribution selling systems has previously focused nearly exclusively on the perspective of manufacturers (principals). The study is based on a nationally representative sample of IMR practitioners, is grounded in and proceeds from the opposing dyadic perspective (the IMR [agency] view), and generates new and useful strategic insights related to how best to manage critical manufacturer-IMR relationships. The study reveals that manufacturers' use of house territories, outside the domain of the focal IMR imposed favorable effects on IMR's perceptions of sales controls and psychological climate, and contributed directly to higher IMR satisfaction with the principals they represent. House accounts inside IMR territories negatively influenced IMR perceptions of sales controls and psychological climate, and contributed directly to lower IMR satisfaction with the principals. Managerial implications and future research opportunities are developed and discussed.

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Manufacturing principals competing in business-to-business (B2B) market sectors often combine manufacturer-owned and independent (agency) sales forces to improve their cost efficiency, market coverage, market insight, and to offer customers more ways to interact with them (Moriarty and Moran 1990; Sa Vinhas and Anderson 2008). These dual distribution systems benefit customers who enjoy the option of using the channel best suited to address their problems and needs. Larger B2B customers may secure more value from and consequently prefer the narrower and more specialized attention that manufacturers' own salespeople are likely to allocate them. Smaller or moderately-sized customers may benefit more from and consequently prefer the broader assortment of products and solutions that independent manufacturers' representatives (hereafter, IMRs) are typically able to provide to them. All the while, manufacturers who sell through dual distribution systems secure potential value from opportunities to offer customers and prospective customers differentiated types of marketing mix (mainly personal selling) solutions and positioning messages designed to appeal more precisely to targets' specific needs.

These dual distribution systems have variously been described as "multichannel systems" or "concurrent channels." Research on dual-channel designs has typically been conducted from the manufacturer's perspective (e.g., Dutta et al. 1995; Sa Vinhas and Anderson 2005, 2008; Kabadayi 2011). Research efforts have only occasionally adopted the perspective of distributors (Heide and John 1988; Sa Vinhas and Heide 2015) or resellers (Sa Vinhas and Gibbs 2018). Research on dual distribution systems has not been conducted based on the perspective of IMRs. The presence of this gap is telling. A theoretically grounded and empirically based investigation into key success metrics such as satisfaction and performance inside dual distribution systems could produce insights that would advance sales and sales management theory and should improve practitioner performance.

IMRs are agency organizations hired by manufacturers (principals) to sell their products on a commission basis. IMRs differ from distributors in two important ways. First, IMRs never take ownership of the products they sell. Second, IMRs rarely sell directly competing product lines. Sales by IMRs in the United States grew from \$532 billion in 2004 to \$684 billion in 2019 (U.S. Census Bureau 2021). IUCAB (International United Commercial Agents and Brokers), an international umbrella organization of IMRs in Europe, North America, and Africa, reported sales exceeding one trillion Euros in 2019 from 531,000 IMR firms (IUCAB 2019).

Scholars have called for research in this area. Heide (2003) suggested that linking different governance approaches and outcome variables constitutes a research priority. Neslin et al. (2006) called for research into how dual distribution may impact individual channels, especially sales channels. Sa Vinhas et al. (2010) concluded too little is known about how manufacturers can manage dual distribution systems effectively and how such systems impact producers, channels,

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customers, and various channel outcomes. Answers to these calls for research have continued to adopt the perspective of manufacturers (e.g., Kabadayi 2011), distributors (e.g., Sa Vinhas and Heide 2015), or resellers (e.g., Sa Vinhas and Gibbs 2018) but not the views of IMRs.

Manufacturers can use IMRs to reach accounts in geographic regions where in-house salespeople cannot be easily mustered and to maintain integrity between territories populated by in-house salespeople from territories populated by IMRs. This form of IMR dual distribution is designated as a *house territory* in this study. Where house territories exist, in-house salesforces sell to and manage accounts outside the territories of IMRs.

Alternatively, manufacturers may allow and, indeed, encourage their in-house salespeople to operate accounts inside territories already served by their IMRs. This dual distribution model is described herein as a *house account*. By introducing house accounts into IMRs' territories, manufacturers increase their ability to terminate IMR relationships and assume control over former IMR accounts, if necessary. Introducing house accounts also provides performance benchmarks that allow manufacturers to more effectively evaluate IMR performance.

A theoretically grounded and empirically based investigation into key success metrics such as satisfaction and performance inside these dual distribution systems should produce insights that would advance sales/sales management theory and improve practitioner performance. The conceptual framework for this study is shown in Figure 1. The relationship between sales controls and satisfaction, mediated by psychological climate, has been explored in research on in-house salesforces (Evans et al. 2007). Consequently, the conceptual framework in Figure 1 that depicts this relationship inside a dual distribution context appears relevant. Applying this framework to IMRs working with principals operating house territories or house account provides new insight into the IMRs' perceptions of these systems. An investigation into this distinction between house-accounts and house-territories strategies, as compared to exclusive IMR distribution strategies, should generate new insights into these complex relationships that has not been explored in past research on dual distribution systems.

Four sections follow. First, the relevant literature related to agency theory and to psychological climate is reviewed. Second, discussions of the theory-grounded research model and associated hypotheses follow. Third, methodology is discussed and validated, as are hypothesized test results. Finally, a discussion of theoretical and managerial implications, study limitations, and topics for future research closes the article.

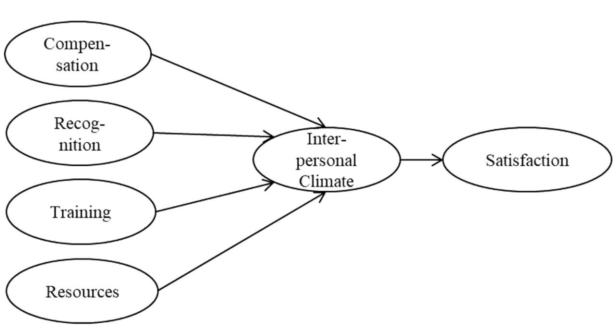

Figure 1. Conceptual model.

Literature review

Agency theory

Agency theory (Mitnick 1973; Ross 1973) provides an appropriate context for studying relationships between manufacturers, as principals, and their IMRs functioning as selling agents on behalf of their principals.

Principals can impose various control mechanisms in agency relationships. *Outcome controls* are associated with desired results, rather than with how such results are achieved. These controls are often combined with monetary incentives to achieve goals, such as sales quotas or market shares (Anderson and Oliver 1987). *Behavioral controls* impose closer supervision on agents. Two broad categories of behavioral controls exist: *capability controls* and *process controls*. In sales organizations, including IMR organizations, capability controls focus on improving salespeople's skills. By contrast, process controls focus on managing salespeople's actions throughout selling processes (Challagalla and Shervani 1996).

Because manufacturers normally have limited opportunities to closely supervise IMRs, their "agents" typically sell on a commission basis. The compensation functions as an outcome-based control imposed by manufacturers.

Manufacturers normally also impose behavioral controls upon IMRs. These principals, for example, provide product training (a capability control) to ensure that IMRs possess the requisite knowledge to effectively represent manufacturers' products. In addition, manufacturers provide various resources to support IMRs' sales efforts, i.e., special equipment, selling aids, sales leads, as well as factory or sales personnel. These resources serve as capability controls by providing support to IMRs but may also function as process controls, such as when manufacturers' sales, technical, or managerial employees participate in joint sales presentations with IMRs. These interactions provide opportunities for principals to observe IMRs and/or to provide assistance/coaching before, during, or after sales activities, as necessary and/or appropriate.

When environmental uncertainty exists, outcome controls transfer risks to agents. These risks may result from interactions between agent actions and environmental conditions; i.e., threats or opportunities (Baiman 1982). Good outcomes (results) can emerge despite poor efforts, and poor outcomes can occur despite good efforts. The net result is that selling agents are routinely rewarded or penalized for outcomes engendered, or at least influenced by, forces beyond their control. Outcome controls have been characterized as an uninvolved (sales managerial) strategy, wherein agents are expected to be more self-oriented and less accepting of managerial direction (Oliver and Anderson 1994).

The literature offers conflicting evidence about the link between types of sales control and salesperson performance (Challagalla and Shervani 1996). Some studies developed positive links between outcome controls and performance (Evans et al. 2007); others observed no relationship (Kohli, Shervani, and Challagalla 1998; Miao and Evans 2013); and still others discovered a negative link (Fang, Evans, and Landry 2005). These conflicting results likely manifest from the complexity associated with the design of effective sales control systems. These disparate findings underscore the existing need to further explore sales controls and their effects.

Agency theory helps researchers understand the complex relationships between manufacturers and IMRs. But the theory fails to address the degree to which interorganizational climate may materially influence these focal relationships (Cohon 2018). Psychological climate, discussed next, provides important insights regarding the interpersonal climate that exists between manufacturers and their IMRs.

Psychological climate

Organizational climate features two components. The first component is conceptualized at the organizational level (e.g., goals, expectations, and principles). The second is conceptualized at the personal level, identified as psychological climate, and captures how employees perceive their environment (Glick 1985). Swift and Campbell (1998) suggest that the most frequently used operationalization of psychological climate is the eight-dimension scale developed by Koys and DeCotiis (1991). The eight dimensions are trust, support, cohesiveness, fairness, recognition, innovation, autonomy, and pressure. This scale was developed in the context of relationships between employees and their managers. The scale has never been applied to relationships between IMRs and manufacturers they represent. However, Strutton, Pelton, and Lumpkin (1993) applied these scales to relationships between franchisors and franchisees. Their results demonstrated that the concept of psychological climate might apply across organizational boundaries. This study adapted scales employed by Strutton, Pelton, and Lumpkin (1993) to model the relationships between manufacturers and their IMRs. The scales are briefly discussed below.

Recognition captures IMRs' perceptions that manufacturers appreciate their contributions. Recognition can be formal, such as certificates or awards to high performers, or informal, including e-mails or calls/texts to congratulate IMRs on successful sales (Walker, Churchill, and Ford 1977). Recognition is treated as an outcome-based control in this study. *Cohesiveness* captures perceptions of sharing and togetherness—making IMRs "feel that they are part of the family." Cohesiveness is indicated by the willingness of dyadic partners to help each other. Cohesive groups are usually more satisfied than non-cohesive groups (Gross 1954). *Fairness* encapsulates IMRs' perceptions that manufacturers use equitable and nonarbitrary management practices with their IMRs. An essential element of fairness is equitable compensation, that is, offering levels of compensation that allows IMRs to earn fair returns on time spent selling manufacturers' products. *Support* captures IMRs' perceptions of manufacturers' tolerance of their behaviors, including the willingness to allow IMRs to learn from their mistakes without fear of reprisal. *Trust* represents IMRs' perceptions that they can communicate openly with manufacturers about sensitive issues without fear that the integrity of this communication will be violated. Relationships with high levels of trust last longer than relationships with low levels of trust (Anderson and Weitz 1989). Bradach and Eccles (1989) suggest that trust is integral to understanding plural distribution structures. Trust in the relationship between manufacturers and IMRs can alleviate the fear that the partner will act opportunistically (Arrow 1974). When manufacturers insert in-house salespeople inside IMR territories, trust deteriorates. IMRs may adopt more calculative or transactional attitudes toward manufacturers (Anderson and Trinkle 2005).

The literature affirms that trust, support, and fairness all describe the interpersonal relationships between principals and agents and are often difficult to separate. Indeed, these three concepts loaded on the same factor when Koys and DeCotiis (1991) originally validated the construct.

IMRs are independent organizations operating with their own goals and priorities. An unintended but inevitable consequence is that their principals have little to no opportunity to exert pressure toward or reduce the autonomy or innovativeness of their IMRs. Given their independence, most IMRs could walk away with only minor damage if they perceived principal-induced pressures as overly burdensome. Therefore, neither psychological climate dimension was included in this study. The current study purposefully elected to not investigate the role that pressure, as part of psychological climate, might play on the focal relationships that are reported below. Yet, pressure may not be unique among the other psychological-climate dimensions; reasonable sales theorists could disagree on this point. Future researchers might examine the interactive role played by pressure in expanded future versions of the current model. Or, researchers might examine the role that pressure IMRs felt from principals plays in isolation from other psychological-climate dimensions.

Research model and associated hypotheses

Investigating effects of house territories

When manufacturers operate house territories (in-house salesforces selling to and managing accounts outside the territory of a focal IMR), IMRs' perceptions of their principal's sales controls and psychological climate should be positively affected, compared to situations where principals do not host in-house sales organizations. Their strategic integration of in-house salesforces may help manufacturers become better partners with their IMRs, which represents no small win. The geographic separation between house territories and IMR territories reduces the risk of dysfunctional competition and may contribute to more mutually respectful and supportive channel environments.

House territories may help manufacturers develop more effective compensation plans and better training programs. Each outcome should benefit IMRs. Appropriate recognition of IMRs' performance requires that manufacturers correctly attribute environmental or personal causes to sales successes or shortfalls (Heider 1958; Weiner 1972). The development of and/or ongoing management of their house territories should help manufacturers' sales managers make more accurate attributions. The same conditions may contribute directly to principals' abilities to appropriately recognize IMR performance when the use of praise, acknowledgment, or other presumed incentives is merited. In such contexts, manufacturers might likewise better understand and accommodate the higher resource requirements that often prove necessary to support higher-performing salespeople. This study consequently hypothesizes that principals' use of house territories should improve IMRs' perceptions of the compensation-, recognition-, training-, and resource-based sales controls imposed by their focal manufacturer:

> H1: Manufacturers' use of *house* territories (outside IMRs' territories) *positively* impacts IMRs' perceptions of manufacturers' sales controls. Specifically, the use of (a) compensation-based, (b) recognition-based, (c) training-based, and (d) resource-based controls will be viewed more positively by IMRs when their principals establish separate house and IMR territories.

The study further hypothesizes that manufacturers' use of house territories should generate more positive perceptions of psychological climate between manufacturers and IMRs. Knowledge that is developed through the management and operation of house territories should strengthen interpersonal relationships (cohesion, fairness, trust, support) that exist between manufacturers and IMRs. Specifically, higher amounts of cohesiveness, trust, mutual support, and perceptions of fairness should emerge inside the relationship. The following hypothesis is proposed based on this theoretical rationale:

> H2: Manufacturers' use of *house territories* (outside IMRs' territories) *positively* impacts IMRs' perceptions of psychological climate. Specifically, the psychological-climate dimensions of (a) cohesion, (b) fairness, (c) trust, and (d) support will be perceived more positively when principals use separate house and IMR territories.

The current study relatedly hypothesizes that manufacturers' use of house-territory selling strategies will contribute to higher overall IMR satisfaction with their focal principal:

> H3: Manufacturers' use of *house territories* (outside focal IMRs' territories) *positively* impacts IMRs' overall satisfaction with their focal principals.

Investigating the impact of house accounts

When operating house accounts inside focal IMRs' territory, manufacturers logically might be perceived by their IMRs as competitors. The result may be that fewer customers are available to the IMR, leading to reduced sales and compensation potentials compared to a situation where the principal has no in-house sales organization. Opportunities for manufacturers to adequately recognize IMRs' performance also decline because in-house salespeople receive recognition for sales made in IMRs' territories that otherwise would have gone to IMRs. When "competitors" also function as sources of training and support, a negative impact on IMRs' perceptions of these sales controls is hypothesized:

> H4: Manufacturers' use of *house accounts* inside their focal IMRs' territory should *negatively* impact IMRs' perceptions of the sales controls that these principals impose. Specifically, manufacturers' use of (a) compensation, (b) recognition, (c) training, and (d) resources will be viewed more negatively when manufacturers establish house accounts inside IMRs' territories.

In addition, the existence of house accounts inside IMR territories should contribute to more negative perceptions of psychological climate between manufacturers and IMRs. When manufacturers assign accounts in IMRs' territories to in-house salespeople, IMRs may respond with a negative attitudinal shift. IMRs may assume a more calculated transactional approach to their relationship with the manufacturer, resulting in reduced levels of trust (Anderson and Trinkle 2005). The following hypothesis is proposed:

> H5: Manufacturers' use of *house accounts* inside their focal IMRs' territories will *negatively* impact IMRs' perceptions of psychological climate. Specifically, the psychological-climate dimensions of (a) cohesion, (b) fairness, (c) trust, and (d) support will be perceived as more negative when manufacturers establish house accounts inside their IMRs' territories.

Finally, we hypothesize that the house accounts inside IMRs' territories should result in lower overall satisfaction with principals:

> H6: Manufacturers' use of *house* accounts inside their focal IMRs' territories should negatively impact IMRs' overall satisfaction with their principals.

Investigating the relationship between sales controls, psychological climate, and satisfaction

H1 through H6 focus on the impact of distribution strategies on IMRs' perceptions of sales controls, psychological climate, and satisfaction. The next series of hypotheses address how sales controls and psychological climate impact satisfaction under each of the three distribution strategies (no in-house sales organization, house territories, and house accounts). In their study of internal sales organizations, Evans et al. (2007) identified a positive relationship between outcome controls and organizational sales supportiveness, but failed to observe a significant relationship between capability controls and sales supportiveness, or between process controls and sales supportiveness, even though the relationships were hypothesized. Evans et al. (2007) also reported a significant relationship between sales supportiveness and job satisfaction, demonstrating a fully mediated relationship between sales controls and job satisfaction.

The relevant context investigated in this study is the relationship between IMRs and their most important principal. Positive relationships should exist between IMRs' perceptions of sales controls and the various psychological-climate dimensions (cohesion, fairness, trust, support) and IMR satisfaction. Moreover, the relationship between sales controls and IMR satisfaction should be fully mediated by psychological climate. The same two relationships are hypothesized across all three distribution strategies, specifically:

H7 (*no in-house salesforce*): IMRs' perceptions of their most important principal's (a) compensation, (b) recognition, (c) training, and (d) resources will positively affect their satisfaction with the most important principal. Psychological climate will fully mediate this effect.

H8 (*house territories*): IMRs' perceptions of their most important principal's (a) compensation, (b) recognition, (c) training, and (d) resources will positively affect their satisfaction with the most important principal. Again, psychological climate will fully mediate this effect.

H9 (*house accounts*): IMRs' perceptions of their most important principal's (a) compensation, (b) recognition, (c) training, and (d) resources will positively affect their satisfaction with the most important principal. This effect will be fully mediated by psychological climate.

Investigating the impact of product characteristics on IMRs' satisfaction with principals

This study further proposes that product characteristics of the most important principal, such as sales growth, price, and quality, relative to those of other principals, will likewise impact IMRs' satisfaction with their most important principal. While formal hypotheses related to these potential relationships were not included in this study, these dimensions were included and investigated as control variables.

Figure 2 presents the full research model, investigating the relationship between sales controls, psychological climate, and satisfaction, including control measures.

Methodology and results

Sample

Research hypotheses were tested using data from an online questionnaire distributed to the members of North America's largest IMR association, the Manufacturers' Agents' National Association (MANA). MANA membership represents a wide range of industries, including automotive, building, electronic/electrical, mechanical, and retail. To promote participation, the survey was advertised in the *Agency Sales* magazine that is distributed to the members of MANA during the month before the survey was sent out. The survey was distributed to members in the weekly e-newsletter from MANA with a link to the online questionnaire. The first wave of e-mails was distributed to a list of active and inactive members of MANA (a total of 4,716 e-mail addresses). In the first month, 175 responses were received (12.7% of e-mails opened and 3.7% of e-mails sent). A second wave of e-mails was distributed to 2,167 active members (excluding inactive members included in the initial wave). A total of 268 completed responses were received across both waves, or 12.4% of active MANA members.

Responses from the first e-mail wave were compared to the responses from the second e-mail wave to assess non-response bias. Procedures developed by Armstrong and Overton (1977) were employed. No significant differences in responses were found.

The final sample consisted of 59.3% agency managers, 36.9% outside salespeople, and 3.8% inside salespeople and other roles in the agency. On average, agencies represented had operated for 31.6 years, employed 5.8 sales representatives (inside and outside), and partnered with 11.4 principals. Agencies, on average, had worked with their most important principal for 22+ years. The core purpose of this study was to examine differences between principals with house territories and house accounts compared to principals with no in-house salesforce. The sample featured 93 relationships in which the most important principal had house accounts, 91 relationships in which the most important principal had house territories, and 84 relationships in which the most important principal had neither house territories nor house accounts (no in-house salesforce).

Individual IMR respondents averaged more than 33 years of sales experience. Only 10% of respondents were less than 45 years old. Respondents were highly educated. More than 50% (52.6%) held bachelor's degrees and 21.6% held graduate degrees. The sample was heavily male-dominated; 97% were men. Table 1 summarizes sample demographics.

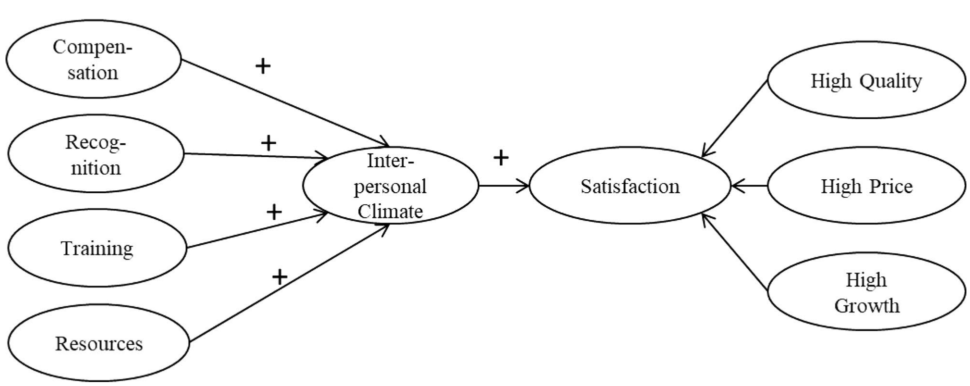

Figure 2. PLS-SEM research model.

Table 1. Sample demographics.

	Response	*n*	%
Gender	Female	8	3.0%
	Male	244	91.0%
	Missing	16	6.0%
Age	26–35 years	7	2.6%
	36–45 years	20	7.5%
	46–55 years	59	22.0%
	56–65 years	109	40.7%
	66 years and over	57	21.3%
	Missing	16	6.0%
Education	High school	7	2.6%
	Some college credit	30	11.2%
	Associate degree	16	6.0%
	Bachelor's degree	141	52.6%
	Graduate degree	58	21.6%
	Missing	16	6.0%
Area of responsibility	Agency manager	159	59.3%
	Outside sales representative	99	36.9%
	Inside sales representative	4	1.5%
	Other	6	2.2%

Table 2. Sample product categories.

	n	%
Building, architectural, and contracting equipment and supplies	41	15.3%
Electronic/electrical	34	12.7%
Mechanical components	30	11.2%
Manufacturing, process equipment, and supplies	29	10.8%
Power transmission products	22	8.2%
Automotive	15	5.6%
Hardware—industrial	8	3.0%
Gas, oil, and petroleum products and services	7	2.6%
Laboratory, scientific research equipment, instruments, and supplies	7	2.6%
Safety, emergency, and security products	6	2.2%
Controls, motion controls	5	1.9%
Environmental products	5	1.9%
General retail merchandise	5	1.9%
Telecommunication equipment, services, and supplies	5	1.9%
Aerospace and aviation components	4	1.5%
Marine products	4	1.5%
Medical equipment, supplies, and services	4	1.5%
Raw materials	3	1.1%
Computers, software, and related products	2	0.7%
Lawn, garden, patio, hearth, pool, sporting goods, spa, and playground equipment and supplies	2	0.7%
Advertising specialty products and services	1	0.4%
Agricultural	1	0.4%
Truck, trailer, and RV Original Equipment Manufacturer (OEM) and aftermarket parts	1	0.4%
Other	27	10.1%
Total	268	100.0%

The sample membership sold and represented a wide range of product categories. Given the broad representativeness of the MANA membership base, the result was expected. The largest product categories were building, architectural, and air-conditioning equipment, materials, and supplies (15.3%); electronic/electrical (12.7%); mechanical components (11.2%); and manufacturing, process equipment, and supplies (10.8%; see Table 2).

Questionnaire design

Survey questionnaire items were developed based on exploratory conversations with industry practitioners employed on both the manufacturer and agency sides and on a review of key constructs and measures extracted from the literature. The questionnaire was pretested in two stages. First, the questionnaire was reviewed for readability and clarity by two marketing faculty and was modified based on their constructive criticism. Second, the online questionnaire was sent to ten IMRs, who completed the questionnaire and provided feedback regarding clarity of the questions and time required to complete the questionnaire. Minor edits to the questionnaire were made based on these new insights before the final version was distributed to the entire MANA membership base.

Variables and measurement

Likert-type scales or semantic differential scales were used for all multi-item constructs. All items were measured along seven-point scales. Standard procedures for establishing construct validity and reliability were employed.

The *compensation* construct was assessed through a three-item scale that measured IMRs' perceptions of the fairness, adequacy, and timeliness of compensation payments from the IMRs' most important principal. Two measures (fairness and adequacy) were borrowed from Crawford, Thompson, and Dunipace (2011). The third item (timeliness of payment) was developed for this study and based on conversations with industry practitioners.

A five-item scale, adapted from Koys and DeCotiis (1991), measured IMRs' perceptions of the *recognition* received from their most important principal. Items focused on IMRs' perceptions that their most important principal recognizes them for their efforts and capabilities.

The *training* construct was also a three-item scale measuring IMRs' perceptions of the sufficiency and usefulness of training offered by their most important principal. Two items were modified from Hohenberg and Homburg (2016). The last item was developed based on conversations with industry practitioners.

The *resources* construct was represented by a five-item scale to measure IMRs' perceptions of resources made available to them by their most important principal. Resource items consisted of selling aids (e.g., presentation materials and brochures), selling information (e.g., sales leads), sales personnel (e.g., salespeople and field engineers), and factory personnel. Equipment provided by the principal was also included as an item, even though pretest feedback pointed out that this item was not relevant across all industries. All items were developed based on conversations with practitioners.

The multi-item psychological-climate scale was adapted from the 18 Likert-type statements covering the construct's four dimensions (cohesion, fairness, trust, and support) as developed by Koys and DeCotiis (1991) and as applied to franchising organizations by Strutton, Pelton, and Lumpkin (1993). Finally, a single Likert-type measure was used to describe IMRs' overall *satisfaction* with their most important principal.

Separate exploratory factor analyses (EFAs) were conducted for the sales control constructs and for the psychological-climate construct dimensions. Both EFAs employed a principal components extraction with Varimax rotation. For the sales control constructs (compensation, recognition, training, and resources), a four-factor solution explained 66.7% of the variance. All items loaded well above .50 on their respective factors. A one-factor solution explained 64.3% of the variance for the four psychological climate construct dimensions (cohesion, fairness, trust, and support). All four dimensions (cohesion, fairness, trust, and support) loaded onto the same factor. This result is consistent with Koys and DeCotiis (1991) findings, in which fairness, trust, and support loaded onto the same factor in their verification sample. Identical results were obtained by Swift and Campbell (1998). Together, these four dimensions purportedly capture key aspects of the interpersonal relationships between IMRs and their focal principal. These four dimensions, excepting two items that failed to meet the .50 loading threshold, were combined into one factor. The construct was called "interpersonal climate" and used to estimate the structural model. Interpersonal climate was substituted for psychological climate in hypotheses H7, H8, and H9.

Convergent validity was established using several criteria (Tables 3 and 4). Standardized factor loadings exceeded .7, with two exceptions (.564 for equipment and .646 for a reverse-coded recognition item). Cronbach's alpha exceeded .78, composite reliabilities (CR) exceeded .87, and average variance extracted (AVE) for all items exceeded .58, surpassing the accepted 50% rule of thumb (Hair et al. 2010).

Discriminant validity was established using the Fornell and Larker (1981) criterion. The square root of the average variance extracted for each latent construct surpassed each factor's correlations with all other constructs, except for trust vs. support (Table 4). This was expected, given that the EFA also suggested that trust and support (as well as cohesion and fairness) contribute substantially to describing the interpersonal relationship between principals and IMRs. As reported, these constructs were merged in the final measurement models employed for the structural models. Table 5 presents the updated inter-construct correlations given the merged items indicating interpersonal climate. All AVE values and construct intercorrelations met the Fornell-Larker criterion. Cronbach's alpha and composite reliabilities for interpersonal climate were .966 and .970, respectively.

Podsakoff et al. (2003) procedures were followed to control for common method variance (CMV). Specifically, Harman's single-factor test using EFA was conducted and the un-rotated factor solution was examined. Results confirmed that a single factor did not emerge. Five factors accounted for 66% of the variance; the first factor explained 47%. In addition, the construct Variance Inflation Factors (VIFs) were all below 2.8 and below the threshold level of 3.3 suggested by Kock (2015). These results support the continued use of the measurement model in the Partial Least Squares (PLS) structural model analysis.

Results

A two-stage process was employed for all hypothesis tests. First, multivariate and univariate *t*-tests were conducted for sales controls, psychological climate, and satisfaction constructs. These tests were followed by a structural model analysis using PLS with bootstrapping (SmartPLS 3.3.3).

Sales controls

MANOVA identified significant differences between the three distribution strategies (house territories, house accounts, and no in-house sales organization) when considered jointly across the four sales control variables (Wilks' Lambda = .864, $F[8, 488] = 4.619$, $p < .001$, partial eta squared [η_p^{2}] = .070). Under MANOVA, separate ANOVAs were conducted for each dependent variable. Each ANOVA was evaluated at the alpha level of .05/4 = .0125. Significant differences emerged between the three distribution strategies

Table 3. Measurement scales, construct reliability, and validity.

Construct and measures (*new or revised)	Loadings
Resources (α = 0.816, CR = 0.872, AVE = 0.582)	
Equipment*	0.564
Selling aids (e.g., brochures, presentation material, website, samples)*	0.764
Selling information (e.g., sales leads)*	0.800
Factory personnel*	0.838
Sales Personnel (e.g., field engineers, salespeople)*	0.815
Training (α = 0.812, CR = 0.889, AVE = 0.728)	
I receive sufficient training regarding principal's products	0.886
I have a good understanding of the products I sell due to information provided by principal	0.869
Training programs offered by principal are very useful*	0.802
Compensation (α = 0.857, CR = 0.914, AVE = 0.782)	
The compensation plan is adequate	0.927
The compensation plan is fair	0.937
Compensation is paid on time*	0.780
Recognition (α = 0.841, CR = 0.888, AVE = 0.617)	
I can count on a pat on the back from my principal when I perform well	0.818
The only time I hear from the principal about my performance is when I make a mistake	0.646
My principal knows what my strengths are and lets me know it	0.801
My principal is quick to recognize good performance	0.903
My principal uses me as an example of what to do	0.734
Cohesion (α = 0.924, CR = 0.943, AVE = 0.767)	
The principal pitches in to help me out	0.862
The principal takes a personal interest in me	0.897
Ample team spirit exists between the principal and me	0.920
I get along well with my principal	0.834
I feel like I have a lot in common with my principal	0.862
Fairness (α = 0.822, CR = 0.883, AVE = 0.655)	
I can count on fair treatment from my principal	0.885
The objectives my principal sets for me are reasonable	0.864
If my principal terminates a rep, the rep was probably at fault	0.722
My principal does not play favorites	0.753
Trust (α = 0.883, CR = 0.919, AVE = 0.741)	
My principal is approachable	0.884
I have complete trust that my principal will treat me fairly	0.889
I can count on my principal to help if I have difficulties with my job	0.866
If I make a mistake, my principal is willing to "forgive and forget"	0.800
Support (α = 0.932, CR = 0.949, AVE = 0.787)	
I can count on my principal to help me when I need it	0.888
My principal is interested in me being successful	0.868
My principal is behind me 100%	0.932
My principal is easy to talk to about job-related problems	0.870
My principal backs me up and lets me learn from my mistakes	0.877

Table 4. Construct correlations and discriminant validity.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Cohesion	**0.876**							
(2) Compensation	0.60	**0.88**						
(3) Fairness	0.80	0.66	**0.81**					
(4) Recognition	0.71	0.61	0.66	**0.79**				
(5) Resources	0.55	0.40	0.46	0.46	**0.76**			
(6) Support	0.83	0.61	0.79	0.64	0.49	**0.89**		
(7) Training	0.44	0.47	0.42	0.55	0.47	0.36	**0.85**	
(8) Trust	0.79	0.62	0.79	0.62	0.46	0.90	0.33	**0.861**

Note: The diagonal values (bolded) represent the square roots of the AVE values. The off-diagonal values represent inter-construct correlations.

across all four sales controls: training ($F[2, 247] = 9.571$, $p < .001$, $\eta_p^2 = .072$), compensation ($F[2, 247] = 10.749$, $p < .001$, $\eta_p^2 = .080$), resources ($F[2, 247] = 5.545$, $p = .004$, $\eta_p^2 = .043$), and recognition ($F[2, 247] = 12.097$, $p = < .001$, $\eta_p^2 = .089$).

Across all variables, IMRs' perceptions were highest (best) when manufacturers had an in-house salesforce that operated house territories and lowest when in-house salesforces operated house accounts (Figure 3).

Conducting simple contrasts for each sales control variable, using *no in-house salesforce* as the reference, shows no significant differences for the *house territory model* compared to the *no in-house salesforce* model for training: difference (diff) = .213, p = .178; compensation: diff = .084, $p = .664$; resources: diff = .232, p = .242. However, recognition generated a significant increase (diff = .438, $p = .009$), offering partial support for H1. By contrast the *house account model*, when compared with the no in-house sales model, produced a significant decline in IMRs' perceptions across all four sales control dimensions: training (diff = −.442, $p = .005$), compensation (diff = −.706, $p = .000$), resources (diff = −.400, $p = .044$), and recognition (diff = −.357, $p = .003$).

Table 5. Construct correlations and discriminant validity using interpersonal climate.

	(1)	(2)	(3)	(4)	(5)
(1) Interpersonal Climate	**0.802**				
(2) Compensation	0.667	**0.884**			
(3) Recognition	0.709	0.605	**0.785**		
(4) Resources	0.533	0.405	0.462	**0.762**	
(5) Training	0.418	0.469	0.547	0.468	**0.853**

Note: The diagonal values (bolded) represent the square roots of the AVE values. The off-diagonal values represent inter-construct correlations.

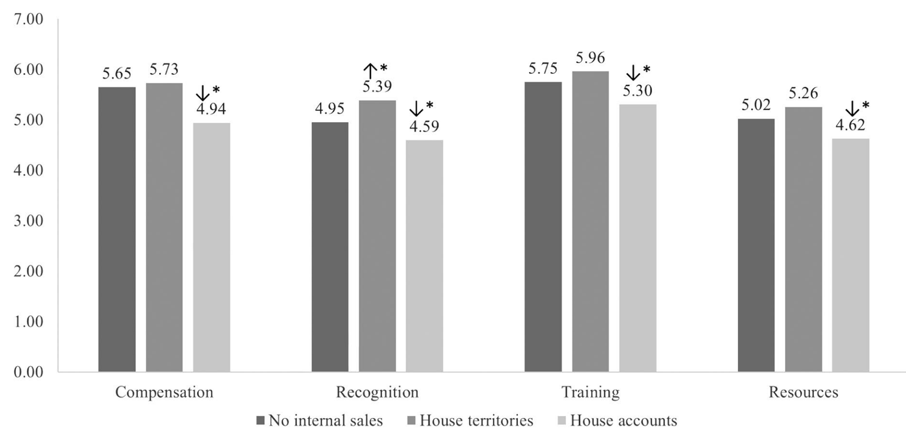

Figure 3. IMR's perceptions of manufacturer's sales controls.

H4 was fully supported. The largest decline was observed for compensation.

Psychological climate

MANOVA also indicated the presence of a significant difference across the three distribution strategies as they were considered jointly on the four psychological climate variables (Wilks' Lambda = .810, $F[8, 524] = 7.285$, $p < .001$, $\eta_p^2 = .100$). Again, separate ANOVAs were conducted for each dependent variable. Each ANOVA was evaluated at the alpha level of .05/4 = .0125. Again, a significant difference discriminated the three distribution strategies on all four psychological climate variables: cohesion ($F[2, 265) = 10.630$, $p < .001$, $\eta_p^2 = .074$), fairness ($F[2, 265] = 15.078$, $p < .001$, $\eta_p^2 = .102$), trust ($F[2, 265] = 12.826$, $p < .001$, $\eta_p^2 = .088$), and support ($F[2, 265] = 19.172$, $p < .001$, $\eta_p^2 = .126$). As was the case for sales controls, across all four psychological climate variables the results suggested that IMRs' perceptions were highest (best) when manufacturers feature in-house sales organizations that operate accounts outside focal IMRs' territories. Conversely, IMR perceptions were lowest when in-house salesforces operate house accounts inside focal IMRs' territories (Figure 4).

When simple contrast tests were conducted for each psychological climate variable with *no in-house salesforce* (Model A) used as a reference, the *house territory model* (Model B) produced a significant increase in IMRs' perceptions of support (diff = .412, $p = .013$). However, cohesion (diff = .308, $p = .058$), fairness (diff = .108, $p = .498$), and trust (diff = .086, $p = .598$) were not significantly different. These results provide partial support for H2. The *house account model*, by contrast, engendered significant declines in the favorability of IMRs' perceptions across all four psychological climate variables: cohesion (diff = −.417, $p = .010$), fairness (diff = −.680, $p < .001$), trust (diff = −.653, $p < .001$), and support (diff = −.580, $p < .001$). The largest declines were observed for fairness and trust. H5 is fully supported.

Satisfaction

A significant difference also arose between the three distribution strategies for IMRs' overall satisfaction with their most important principal ($F[2, 265] = 11.432$, $p < .001$, $\eta_p^2 = .079$). The results revealed mean scores of 6.15 for *no in-house sales*, 6.36 for *house territories*, and 5.50 for *house accounts*. Bonferroni post hoc comparisons show that the *no in-house sales* and *house territories* conditions differed significantly from the *house account* condition. The mean difference between the *no in-house sales* and *house accounts* conditions was: difference = .660, $p = 0.002$. The mean difference between the *house territories* and *house accounts* conditions was: difference = .868, $p = 0.000$.

Consistent with sales controls and psychological climate findings, the house territories model produced the greatest IMR satisfaction. With this strategy, manufacturers operate in-house salesforces but their salespeople sell outside focal IMRs' territories. H3 was supported.

The house accounts model or strategy, in which manufacturers operate house accounts inside their focal IMRs' territories, generated the lowest IMR satisfaction. H6 was fully supported.

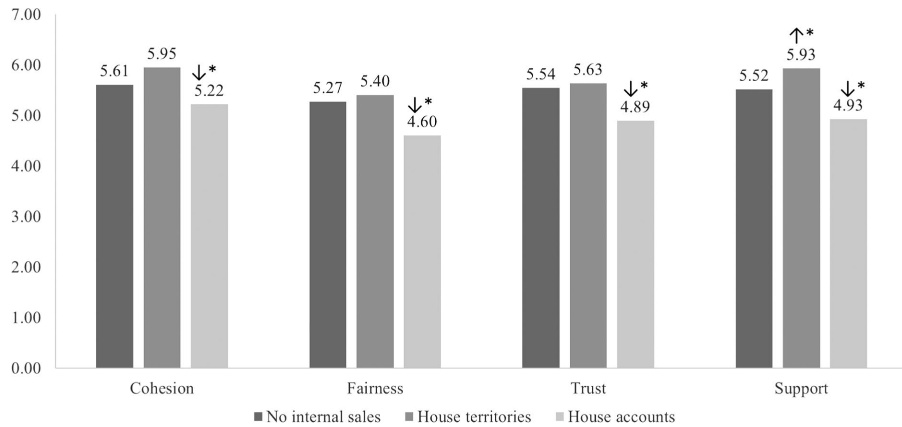

Figure 4. Interpersonal climate perceptions for different distribution models.

Table 6. PLS-SEM model results—direct, indirect, and total effects.

	No Inside Salespeople (Model A)		House Territories (Model B)		House Accounts (Model C)	
	Estimate	*p*	Estimate	*p*	Estimate	*p*
Direct Effects						
Compensation → Climate	0.333	0.000	0.212	0.032	0.441	0.000
Compensation → Satisfaction	−0.072	0.554	0.169	0.139	−0.067	0.516
High Growth → Satisfaction	0.196	0.019	0.068	0.430	0.064	0.421
High Price → Satisfaction	0.146	0.024	0.031	0.686	0.023	0.736
High Quality → Satisfaction	0.120	0.168	0.095	0.251	0.095	0.232
Climate → Satisfaction	0.526	0.000	0.664	0.000	0.692	0.000
Recognition → Climate	0.491	0.000	0.390	0.000	0.422	0.000
Recognition → Satisfaction	−0.005	0.971	−0.094	0.429	0.101	0.385
Resources → Climate	0.284	0.002	0.135	0.108	0.263	0.002
Resources → Satisfaction	0.167	0.071	0.130	0.103	0.051	0.563
Training → Climate	−0.175	0.114	0.174	0.027	−0.233	0.001
Training → Satisfaction	0.057	0.603	−0.127	0.168	0.03	0.651
Indirect Effects						
Compensation → Climate → Satisfaction	0.175	0.006	0.141	0.017	0.305	0.001
Recognition → Climate → Satisfaction	0.258	0.005	0.259	0.004	0.292	0.001
Resources → Climate → Satisfaction	0.149	0.014	0.090	0.128	0.182	0.004
Training → Climate → Satisfaction	−0.092	0.161	0.115	0.042	−0.161	0.007
Total Effects						
Compensation → Climate	0.333	0.000	0.212	0.030	0.441	0.000
Compensation → Satisfaction	0.103	0.401	0.310	0.029	0.238	0.026
High Growth → Satisfaction	0.196	0.019	0.068	0.444	0.064	0.412
High Price → Satisfaction	0.146	0.017	0.031	0.696	0.023	0.745
High Quality → Satisfaction	0.120	0.172	0.095	0.287	0.095	0.213
Climate → Satisfaction	0.526	0.000	0.664	0.000	0.692	0.000
Recognition → Climate	0.491	0.000	0.390	0.000	0.422	0.000
Recognition → Satisfaction	0.253	0.025	0.165	0.201	0.393	0.001
Resources → Climate	0.284	0.001	0.135	0.083	0.263	0.001
Resources → Satisfaction	0.316	0.002	0.220	0.030	0.233	0.018
Training → Climate	−0.175	0.105	0.174	0.025	−0.233	0.002
Training → Satisfaction	−0.035	0.785	−0.011	0.913	−0.131	0.068

Structural models

Hypotheses 7, 8, and 9 were tested to analyze the relationship between sales controls, interpersonal climate, and satisfaction in the three strategic contexts (no in-house sales function, house territories, and house accounts). SmartPLS 3.3.3 was used. The initial analysis examined each model in isolation: Model A for IMRs working with manufacturing principals without an in-house sales organization; Model B for IMRs working with principals who maintained separate house territories; and Model C for IMRs working with principals who also maintained house accounts inside the focal IMR's territory. Direct, indirect, and total effects of sales controls and interpersonal climate on satisfaction are discussed for each model below, and details are shown in Table 6. A multigroup analysis was then performed that included all three models for purposes of pinpointing any significant differences between the models (Table 7).

No in-house salesforce (Model A)

No sales control construct (compensation, recognition, training, or resources) exercised a significant direct effect on satisfaction in the *no in-house sales* model (Model A). However, the indirect effect was significant for compensation → interpersonal climate → satisfaction (est. = 0.175; p =.006);

Table 7. Multigroup analysis.

	Model C–B		Model C–A		Model B–C	
	Diff Est.	p	Diff Est.	p	Diff Est.	p
Compensation → Climate	0.232	0.072	0.104	0.415	−0.128	0.953
Compensation → Satisfaction	−0.245	0.121	0.008	0.961	0.253	0.136
Recognition → Climate	0.022	0.873	−0.083	0.508	−0.104	0.407
Recognition → Satisfaction	0.191	0.261	0.116	0.401	−0.075	0.666
Training → Climate	−0.415	< .001	−0.064	0.629	0.351	0.011
Training → Satisfaction	0.156	0.179	−0.022	0.861	−0.178	0.221
Resources → Climate	0.147	0.205	0.002	0.987	−0.149	0.214
Resources → Satisfaction	−0.097	0.421	−0.127	0.336	−0.030	0.808
Climate → Satisfaction	0.065	0.719	−0.166	0.401	0.101	0.592

for recognition → interpersonal climate → satisfaction (est. = 0.258, p =.005); and for resources → interpersonal climate → satisfaction (est. = 0.149, p =.014). Meanwhile, the total effect of training and compensation on satisfaction were not significant; the total effect of recognition on satisfaction was est. = 0.253, p = .025, and the total effect of resources on satisfaction was est. = 0.316, p = .002. Both effects were fully mediated by interpersonal climate. Therefore, support was provided for H7b and H7d. H7a and H7c were not supported. Worth noting, however, are the observations that satisfaction rose when principals' products were perceived as having high sales growth (est. = 0.196, p = .019) or high relative price (est. = 0.146, p = .017). Values for R^2 and Q^2 for interpersonal climate were 0.665 and 0.592, respectively. Values for satisfaction were 0.557 and 0.577, respectively.

House territories (Model B)

Nor did any sales control impose a significant direct effect on IMR satisfaction in Model B (principal with house territories). This result was consistent with Model A findings. Indirect effects were significant for compensation → interpersonal climate → satisfaction (est. = 0.141), p =.017); for recognition → interpersonal climate → satisfaction (est. = 0.259, p =.004); and for training → interpersonal climate → satisfaction (est. = 0.115, p =.042). The total effect of training and recognition on satisfaction was not significant. However, the total effect of compensation on satisfaction was est. = 0.310, p = .029 and the total effect of resources on satisfaction was est. = 0.220, p = .030. Both effects were fully mediated by interpersonal climate. H8a and H8d consequently were supported; whereas H8b and H8c were not. Interestingly, the IMR perceptions of principals' products (high growth, high price, high quality) that exercised significant effects on satisfaction in Model A were not significant in Model B. Values for R^2 and Q^2 for interpersonal climate were .506 and .513, respectively. Values for satisfaction were .740 and .646, respectively.

House accounts (Model C)

In Model C (principal with house accounts), no sales control exercised significant direct effects on satisfaction. The indirect effect was significant for compensation → interpersonal climate → satisfaction (est. = .305, p =.001); for recognition → interpersonal climate → satisfaction (est. = .292, p =.001), resources → interpersonal climate → satisfaction (est. = 0.182, p = .004); and for training → interpersonal climate → satisfaction (est. = −.161, p =.007). However, the total effect of training on satisfaction was not significant. The total effect of compensation on satisfaction was est. = .238, p = .026, the total effect of resources on satisfaction was est. = .233, p = .018, and the total effect of recognition on satisfaction was est. = .393, p = .001. All effects were fully mediated by interpersonal climate, supporting H9a, H9b, and H9d. H9c was not supported. Similar to Model B, IMRs' perceptions of principals' products failed to significantly influence satisfaction. Values for R^2 and Q^2 for interpersonal climate were .803 and .707, respectively. Values for satisfaction were .887 and .768, respectively. These values were the highest across the three models.

The results indicated across all three models that relationships between sales controls and satisfaction are fully mediated by interpersonal climate. Furthermore, whereas IMRs' perceptions of product characteristics (growth and price) impacted satisfaction when principals had no in-house salesforce, neither factor affected satisfaction when principals operated house territories or house accounts. Apparently, the presence of in-house salesforces (house territories or house accounts) shifted the focus IMRs place on the product characteristics of price and growth potential.

The majority of relationships were consistent across all three models. But the relationships' strength varied. For example, the total effect estimate for recognition on satisfaction is .253 in Model A and .393 in Model C. This result indicates that the conferral of recognition is more favorably received from principals with house accounts than from principals without an in-house sales organization. Moreover, although the R^2 and Q^2 values were consistently high across all three models, Model C exhibited the highest proportions of variance for both interpersonal climate and satisfaction.

Multigroup comparisons

As noted, relationships between constructs were consistent across all three models. Multigroup comparisons were examined to pinpoint any significant differences in path estimates across Models A, B, and C. Model C (house accounts) served as the reference group against which Models A and B were compared. Table 7 presents the difference scores between models and their levels of significance. The only path to show a significant difference was the path training → interpersonal climate when comparing Model B (house territories) to Model C (house accounts). IMRs' perceptions of training provided by principals yielded the most value when principals separated their own house territories from the territories that those same manufacturers allocated to their IMRs. The training →interpersonal climate path was also the only significant path when the difference between the house territories model (B) and no in-house sales model (A) was assessed: diff = 0.351, $p = 0.011$.

Conclusions and implications

This research generated original theoretical insights about how manufacturers might better manage key dimensions of their relationships with IMRs. The broad topic is relevant to sales and sales management practitioners and theorists alike, as are the specific insights that follow as collateral benefits of this study. Researchers applying either agency or organizational climate theories have long proposed that various agency control mechanisms and organizational climate dimensions can significantly influence the quality of relationships between manufacturers (as principals) and their IMRs (as agents). This study uniquely integrated and affirmed both theoretical perspectives, and yielded nationally representative and empirically validated managerial insights that may advance manufacturers' sales-management practices. This research relatedly developed a new theoretical platform that promises considerable utility to researchers who opt to study their inherently complicated manufacturing (principal) sales (agency) relationships in the future.

Dual distribution sales systems exist when manufacturers' use of in-house salesforces are combined with the use of IMRs as selling agents. The results clearly suggest that manufacturers' use of dual distribution can be managed and leveraged to produce positive reactions from IMRs, that is, managed and leveraged based on the type of distribution strategy that manufacturers choose to implement. Specifically, the results support an argument that implementing a *house territory strategy*, wherein manufacturers' in-house sales units operate accounts outside the focal IMRs' territories, can improve IMRs' perceptions of sales controls, psychological/interpersonal climate, and satisfaction with the principal-IMR relationship.

When IMR perceptions of sales controls and psychological climate for the *house territory* strategy were compared to the *no in-house salesforce* strategy, the greatest improvement in IMRs' perceptions occurred for recognition (mean difference = 0.438) and for support (mean difference = 0.412). The opportunity to address the performance ambiguity issue represents a core reason to add an in-house sales unit to an existing IMR distribution strategy (Dutta et al. 1995; Kabadayi 2011). The addition of in-house salesforces provides manufacturers with benchmark data that might help them interpret their IMRs' performance more accurately. This market intelligence, in turn, may help the manufacturer provide the right sort of recognition, but only when the right sort of recognition is delivered in the right fashion. Researchers might investigate these two "rights" in the future. The presence of in-house sales units similarly might help principals become more supportive partners with their sales agents, because manufacturers would then be better positioned to understand the specific sorts of sales-related opportunities or threats confronted by those salespeople. Based on the structural model results reported above, IMRs' satisfaction apparently is driven primarily by their perception of their compensation plan and the resources provided by principals. When principals operate in-house sales organizations, feedback from those in-house salespeople regarding "proper" compensation and the "right sorts" of sales resources not only would be more readily available but could also be leveraged more accurately in ways that improve corresponding compensation plans and resources for IMRs.

The use of *house account strategies*, wherein manufacturers operate accounts inside focal IMRs' territories, negatively influenced IMRs' perceptions of their principals' use of sales controls, psychological/interpersonal climate, and satisfaction with their most important principal. The potential emergence of this strategic tradeoff should be considered as principals' decision makers determine whether to use dual distribution sales strategies and in what form, as well as when principals' management deliberates whether and how to recognize or more formally compensate their IMRs.

The largest declines for compensation- (mean difference = −0.706), fairness- (mean difference = −0.680), and trust-perceptions (mean difference = −0.653) arose when IMRs' perceptions of sales controls and psychological/interpersonal climate were compared between the house account model and the no in-house sales model. IMRs perceive manufacturers with house accounts operating inside their territories as less fair and less trustworthy. Compensation from principals similarly was perceived as less adequate or fair. The structural model results suggested that IMRs' satisfaction with manufacturing principals is driven primarily by their perceptions of the recognition, the compensation plan, and resources that principals provide to them. A decision to have in-house salespeople operate in IMRs' territories provides principals with access to additional insider and presumably actionable information about the competitive environment, market potential, and other environmental conditions that will influence IMR performance. Such information could be used to recognize or reward/sanction IMR performance.

To summarize, this study demonstrates that dual distribution systems can exercise either positive or negative effects on IMRs' satisfaction with manufacturers, depending on whether manufacturers' in-house sales functions operate accounts inside or outside a focal IMR's territory. Under both strategies, the effect of IMRs' perceptions of principals' sales controls on satisfaction is fully mediated by the existing interpersonal climate between the two organizations. These findings are consistent with those of Evans et al. (2007), who studied in-house sales organizations, and underscores the importance of the psychological climate inside principal/agency sales relationships.

The current study's findings conflict with Sa Vinhas and Anderson's (2008) findings. Their unexpected findings (according to the researchers themselves) suggested that permitting in-house salespeople to operate inside an independent sales channel's territory could increase the independent channel member's satisfaction. However, the fact that Sa Vinhas and Anderson (2008) collected information from manufacturers may prove noteworthy. Principals may have expressed overly optimistic views about IMRs' reactions to the presence of house accounts inside "their" territories.

The use of house territories and house accounts apparently imposed divergent effects on IMRs' perceptions of some constructs. Any positive residual effects that arose from working with manufacturers who operate house territories are apparently attenuated when manufacturers establish house accounts inside IMRs' territories. The concerns of IMRs negatively affected their perceptions of sales controls and psychological climate alike. Manufacturing principals clearly should evaluate the financial and nonfinancial costs and benefits associated with operating these three "competing" distribution systems.

Researchers have explored the use of double compensation programs. Their studies exclusively adopted the perspective of principals. Double compensation programs exist when in-house salespeople and IMRs who operate in the same territory receive joint compensation for all territory sales (Beersma et al. 2003; Sa Vinhas and Anderson 2008). Compensating both sales channels through an agreed-upon shared percentage promoted greater cohesiveness, trust, and mutually supportive behavior between IMRs and house salespeople (Beersma et al. 2003). The current study did not investigate manufacturers' use of double compensation programs. Yet, the future assessment of such data should prove practically and theoretically useful. The strategic use of double compensation potentially could improve IMRs' perceptions of several psychological climate constructs employed in this study, such as cohesion, fairness, and trust.

The potential value that might accrue to principals who strategically recognize IMRs' performance as they also operate house accounts represents another opportunity for principals. Recognition-based incentives cost far less than compensation-based incentives. Meanwhile, manufacturers' willingness and ability to strategically leverage recognition apparently may alleviate negative IMR perceptions of "principals as competitors" that otherwise will likely arise when manufacturers initiate sales activities inside IMRs' territories.

IMR's perceptions of principal's products (i.e., high sales growth and/or high or relatively high price) was also impacted by the principal's implementation of house accounts and house territories. The positive impact that these dimensions may exercise on IMR satisfaction with the principal disappeared when the principal operated an in-house salesforce. This may be explained by the principal's in-house salespeople reducing the sales growth potential for the IMR. Sa Vinhas and Anderson (2005) found that manufacturers are more likely to use dual distribution strategies in high growth markets, or those thought to have the potential for high growth. Research should be conducted to better understand how these double compensation plans impact the IMR's perception of sales growth potential in territories where the principal operates house accounts.

Limitations and implications for future research

This was the first empirical study of dual distribution sales and sales management programs to adopt the perspective of IMRs. Despite limitations, the study was operationalized successfully. These limitations, however, may represent opportunities that future research in this domain might pursue.

One limitation associated with this study is that it offers only a snapshot of IMRs' perceptions of relationships with their most important principals. Following these relationships over time, using longitudinal data, could yield insights into downstream effects, such as moral hazard or shirking where agents purposely withhold effort (Griesinger 1990; Masten 1988; Rousseau 1995) or refrain from performing agreed-on actions (Goetz and Scott 1981).

A second limitation associated with the current study follows from the fact that it only included relationships between IMRs and their most important principals. Exploring relationships between IMRs and principals considered as "less important" may yield different results. One important question: does the introduction of dual distribution, over time, make the IMR look for ways to become less dependent on the principal? An interesting extension of this research would be to conduct dyadic research, obtaining the views of both IMRs and their principals to reveal both parties' perspectives on sales controls, psychological climate, and satisfaction with the partner in specific dyads. However, obtaining such data would be challenging because it would not allow the same level of anonymity that the current research promised participants to collect data perceived as sensitive by both parties.

The implications of the current findings could be materially elaborated in ways that generate theoretical and managerial value by integrating satisfaction, performance, and commitment constructs into future investigations of the current relationships. What are the implications of the demonstrated positive (negative) impact on IMRs' satisfaction with house territory systems (house account systems) on their performance (sales or market shares) and their commitment to stay in the relationship or exit? The current study used a single measure construct for satisfaction. Future research could incorporate intrinsic and extrinsic components of satisfaction.

Data on territory size was not collected in the current research; this condition exists as a limitation. However, such an investigation might be an interesting extension of existing research in this domain. Do IMRs working in larger territories react less negatively to house accounts inside their territory than IMRs working in smaller territories?

Training imposed a negative total effect on climate in the house account model and a positive total effect on climate in the house territory model but demonstrated no significant effect on satisfaction with the most important principal in either model. These weaker effects should be interpreted in light of the IMR's more than 33 years of experience in our sample. Theorists could explore the effects of training among less experienced IMRs in order to address this limitation.

Additional light on the obviously complex relationships between sales controls, psychological climate, and downstream impacts on satisfaction, performance, or commitment, likely would be generated through the inclusion of moderators, such as perceptions of self-efficacy, into future studies.

This study provides practical implications of the use of house accounts. Results indicate that the use of house accounts, even though driven by the manufacturer's intention to create an efficient sales organization, are likely to have serious negative impacts on IMRs' levels of satisfaction. This, in turn, may yield serious negative downstream consequences for IMR-principal relationships and IMRs' performance, challenging the intended efficiency of these systems.

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Declaration of interest

No potential conflict of interest was reported by the authors.

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Sound-symbolic signaling of online retailer sizes: The moderating effect of shopping goals

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ABSTRACT

Sound symbolism – the ability of certain phonemes to evoke automatic, implicit associations or meanings – has been documented for a variety of consonants and vowels. However, to date, the literature has not documented shopping-related moderators of sound symbolism, and the role of sound symbolism in online retailing remains understudied. Thus, the present investigation extends the sound symbolism literature into the online retailing domain by investigating size-sound symbolism of online retailers' names and introduces a consumer's given shopping goal (searching versus browsing) as a key moderator of size-sound symbolic effects. The findings of four studies indicate that for names of online retailers, back vowels and voiced consonants lead to greater size perceptions of those retailers than front vowels and voiceless consonants. Further, the findings reveal that, compared to browsers, searchers utilize size-sound symbolism as a filtering heuristic, but the effect does not hold for browsers. Additionally, the findings show that size-sound symbolic effects can influence downstream consumer responses by linking size perceptions as a mediator to patronage intentions. Several implications for theory and practice emerge from the findings.

1. Introduction

Names are unique representations of brands, retailers, manufacturers, and locations that inform consumers of what to expect from these entities. Names have powerful signaling properties, from indications of ownership and clear inherent meaning to more subtle influences of symbolism and sensory representation (Krishna, 2012; Krishna et al., 2017; Moller and Herm, 2013). It is no wonder that companies devote significant time, research, and resources to the development and selection of the 'right' names.

The signaling properties of sensory information have received recent academic attention. For example, research has investigated the signaling properties of color in package designs (Mai et al., 2016), visual design features in an online context (Kahn, 2016), and olfactory cues (Herrmann et al., 2012). Additionally, prior literature has investigated the sound symbolic sensory information of words that signal certain properties, such as size, texture, and shape of target objects (Hinton et al., 1994; Klink, 2000; Lowery and Shrum, 2007; Sapir, 1929; Spence, 2012; Ultan, 1978). As one of the means by which consumers categorize information (Tsur, 2006), sound symbolism – that is, the ability of certain sounds to trigger automatic associated meanings – serves an important function in consumer contexts as a source of information for product and brand evaluation (i.e., Klink, 2000, 2001; Lowery and Shrum, 2007; Yorkston and Menon, 2004).

One important sound-symbolic effect emerging from names is that of size: prior scholars have documented roles of vowels and consonants as size-sound symbolic cues associated with specific target objects, such as products (Hinton et al., 1994; Klink, 2000, 2001; Knoeferle et al., 2017; Preziosi and Coane, 2017; Sapir, 1929; Shinohara and Kawahara, 2010). However, while prior scholars have documented direct effects of size-sound symbolism, scholars have yet to account for shopping situations that may moderate size-sound symbolic effects. For example, when searching for products online, consumers using search engines may be confronted with an array of information and a lengthy list of possible online retailers that they could visit. In such cases, consumers filter information differently depending upon whether their shopping goals are focused on searching or browsing (i.e., Ozkara et al., 2016). Searchers and browsers have distinct ways of employing heuristics to filter sensory information and are thus possibly use the signaling properties of sound-symbolic properties of retailer names differently (Novak et al., 2003; Ozkara et al., 2016). In the online domain, names serve even more important filtering functions than they might otherwise in the

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brick-and-mortar domain – given the reduced number of signals available on online search engine pages when compared to traditional shopping centers, the salience of names is greater for online shoppers.

Given the above, we seek to address the following two research questions:

1. How does size-sound symbolism influence size perceptions of online retailers?
2. How do shopping goals moderate the influence of size-sound symbolism on size perceptions of online retailers?

To address these questions, first, we review the literature on size-sound symbolism. Second, we discuss the importance of sound-symbolic influences for online retailers, finding that place of vowel articulation and consonant voice exert a significant influence on size perceptions of online retailers; however, manner of consonant articulation does not exert a significant influence in the context of online retailers. Third, we argue that the influence of sound symbolism on size perceptions of online retailers depends on consumer shopping goals – that is, the influence holds for searchers, whereas the effect disappears for browsers. Summarily, the findings provide implications for the sound symbolism literature as well as for online retailers.

2. Conceptual background

2.1. An overview of size-sound symbolism

Vowels have enjoyed considerably more attention than consonants in the sound symbolism literature (Baxter and Lowery, 2011; Doyle and Bottomley 2011; Lowery and Shrum, 2007; Pogacar et al., 2015; Sapir, 1929; Shrum and Lowery, 2007; Spears et al., 2016; Yorkston and Menon, 2004; Wu et al., 2013). Scholars have traditionally split vowels along a dichotomy of "frontness" and "backness" based on place of articulation (i.e., Hinton et al., 1994; Maglio et al., 2014). Front vowels are formed toward the front of the mouth, often with tighter lips and lighter tones (i.e., the "ee" sound in *beet*). Meanwhile, back vowels emerge from the back area of the mouth, often manifesting with rounder lips and broader tones (i.e., the "oh" in *boat*). Several symbolic meanings emerge from front and back vowels, including the relationship between smallness (largeness) and front (back) vowels (Gallace et al., 2011; Hinton et al., 1994; Newman, 1933; Sapir, 1929; Spears et al., 2016; Spence, 2012; Ultan, 1978; Yorkston and Menon, 2004).

Like vowels, consonants exhibit size-sound symbolism effects across three potential dimensions: voice, manner of articulation, place of articulation. Because there are up to twenty-one consonants in the English language (while there are up to six vowels, depending on the function of *y*), consonants provide a much broader range of opportunities for the creation of names relative to vowels, offering a broader array of naming options for size-sound symbolic effects. As such, consonants represent a much larger set of sounds than is afforded by vowels.

Several consonants can be classified by voice, such that some consonants are voiced, or pronounced using the vocal cords, while some others are voiceless, or lacking vocal expression in pronunciation. For example, *b, d, m, n, l, g, v*, and *z* are voiced consonants, while *p, t, s,* and *k* are voiceless consonants. Scholars have found that voiced consonants are associated with larger sizes, while voiceless consonants are associated with smaller sizes (Klink, 2000; Knoeferle et al., 2017; Preziosi and Coane, 2017; Shinohara and Kawahara, 2010).

Manner of articulation includes stops, which are made with an abrupt cessation of airflow (*p, b, t, k,* and *g* are examples), and fricatives, which are made with partial obstruction of airflow (*s, f, v,* and *z* are examples). As with voice, manner of articulation carries associations of size-sound symbolism, with fricatives linked to smallness and stops to largeness (Hinton et al., 1994; Klink, 2000; Shrum and Lowery, 2007).

Much like the classification of vowels as "front" or "back," consonants are often divided by frontness and backness. Namely, consonants in the labial and coronal classes are considered "front" consonants (i.e., *b, m, p*), while the guttural class is considered the set of "back" consonants (i.e., hard *g, h, k*). As with the documented relationship between place of articulation of vowels (i.e., front versus back) and size, Ultan (1978) found that frontal articulation of consonants carried smaller size associations. Thus, consonants that are articulated toward the back of the mouth may be symbolically larger, while consonants articulated at the front of the mouth are likely symbolically smaller. However, most consonants appear to exist in the front category, so the applicability of a front/back consonantal dichotomy to size-sound symbolism may be limited in operation. As such, we focus the remainder of our investigation on place of vowel articulation, consonant voice, and manner of consonant articulation as offering the most potential for widespread application in online retailers' names.

2.2. Applying size-sound symbolism in names to the domain of online retailing

The size of a retailer is a major factor in a consumer's decision to visit the retailer: larger retailers offer larger assortments, which afford consumers with more alternatives and a greater likelihood of finding desired products (Borle et al., 2005; Kahn, 2016). Consumers' size perceptions of retailers are, therefore, important in guiding initial outlet selection when shopping due to the greater possibility of larger assortments to contain ideal or suitable products. Importantly, when consumers perceive that a retailer is large enough to offer possibly satisfactory product options, consumers are more likely to patronize that retailer. This importance is just as applicable in the online domain, where many retailers vie for consumers' attention, and assortments can vary widely in size. However, a key difference exists between brick-and-mortar and online outlets in relation to perceived size: whereas brick-and-mortar retailers are observable in their physical characteristics, including overall assortment sizes, the sizes of online retailers are largely obscured in the initial outlet selection phase. Thus, when consumers utilize search engines to find possible online outlets, other cues, such as retailers' names, take on more importance than they otherwise might in the physical domain.

Given the documented size-sound symbolic relationships listed above, we anticipate that the effects of sound-symbolic letters on single, isolated objects would apply to perceptions of online retailers as whole entities. However, this effect needs to be documented empirically given the current lack of application of size-sound symbolism to the online retailing domain. Because size-sound symbolism emerges automatically from words – including names – online retailers need to understand how their names might influence their perceived sizes among consumers. This understanding is especially important in the online domain because, as we indicate above, consumers cannot easily ascertain the size of an online retailer before visiting. While brick-and-mortar retail locations offer building sizes and designs, presentation of inventory on a physical sales floor, visible associates, and observable customer traffic, online retailers are represented on search engine landing pages and other sources as links or web addresses. As such, online retailers must rely on other, more subtle means to signal their sizes, which makes size-sound symbolism of names much more salient for online retailers.

While extending documentation of size-sound symbolic effects to the context of online retailers does not constitute a major contribution alone, it is important to establish how size-sound symbolic effects operate for the broader digital spaces on online retailers, which are conceptually and functionally different from single, physical objects. Thus, we propose the following:

H_1: a) Place of vowel articulation, b) consonant voice, and c) manner of consonant articulation affect size perceptions on an online retailer, such that size perceptions are larger (smaller) for back (front) vowels, voiced (voiceless) consonants, and stops (fricatives).

2.3. The moderating effect of shopping goal: searching versus browsing

When consumers engage in shopping activities, they often do so with one of two goals in mind: searching, in which consumers engage in a focused, information-based process to find an optimal alternative, and browsing, in which consumers engage in an exploratory, feelings-based process to entertain themselves (Schlosser, 2003). Thus, searchers are focused on their shopping and locate what they want in efficient ways, seeking knowledge and facts in the acquisition process and maintaining a performance, task, and outcome-based orientation. Meanwhile, browsers do not have specific outcomes in mind. Their shopping behavior is more focused on the experience rather than the outcome, thus making their behaviors and experiences more personal and hedonically driven. As such, searching and browsing largely reflect utilitarian and hedonic motivations, respectively, in shopping (i.e., Childers et al., 2001; Schlosser, 2003; Schlosser et al., 2006).

As stated above, searchers and browsers navigate online information differently (i.e., Ozkara et al., 2016). For searchers, online shopping and information searching are focused, with their specific end goals driving the search behavior. Because searchers are characterized more by utilitarian than by hedonic motivations (Novak et al., 2003), searchers focus navigational strategies on information that assists in the purchase goal (Moe, 2003). As searchers typically grow frustrated when the online search process becomes too cumbersome (i.e., Banerji and Magarkar, 2012), searchers would be motivated to filter out extraneous information as immaterial to the immediate goal.

Prior research suggests that in order to filter out irrelevant information, consumers engaged in search-oriented behavior tend to use heuristics to minimize risk and maximize efficiency in the search process (i.e., Liu et al., 2017). This is especially true for searchers, who often employ filtering heuristics, such as brand or retailer names or thoughtful combinations of search terms, to increase the efficiency of the search (i.e., Rowley, 2000). Because the size of an online retailer could signal availability and likelihood of desirable product options, searchers should be focused on signals of online retailer size, which include sound-symbolic properties of retailer names. Thus, sound symbolism in the names of online retailers may serve as a piece of information that can make searching more efficient: namely, the pursuit of a searching goal may activate the sound symbolic properties of online retailers' names as a filtering heuristic within searchers' minds. Therefore, the heightened focus of searchers on signals of size should result in significant sound symbolism effects of retailer names on size perceptions of online retailers.

Meanwhile, consumers engaged in browsing are not as focused in their shopping behavior. Therefore, efficiency-oriented filtering heuristics are not as important because browsers' shopping is not necessarily driven by a goal of finality – rather, browsers fulfill their shopping goals simply through the process of shopping. Thus, size-sound symbolism serves a less important purpose for browsers, who may place less emphasis on functional signals from retailer names (such as signals of size). Rather, browsers' attention is focused on elements such as online atmospherics, aesthetics, and initial arousal levels from the information gathering experience (i.e., Menon and Kahn, 2002; Wang et al., 2011). As such, for browsers, size-sound symbolic effects should exert a non-significant influence on size perceptions of online retailers because signals of retailer size are not as important to the browsing goal. Stated formally:

H_2: Shopping goal moderates the effect of size-sound symbolism on the perceived size of an online retailer, such that when the consumer is searching, a) back vowels, b) voiced consonants, and c) stops lead to larger size perceptions than front vowels, voiceless consonants, and fricatives, respectively. Meanwhile, when the consumer is browsing, size-sound symbolism leads to size perceptions that do not significantly differ.

2.4. Downstream effects on patronage intentions

In order to bolster the practical relevance of the hypothesized relationships above, patronage intentions were selected for examination as the key outcome variable. Generally, intentions, such as the intention to shop and patronize a retail store, are consumer responses that occur at a more actionable stage than variables such as perceptions or attitudes (Bagozzi, 1981; Fishbein and Azjen, 1975; Triandis, 1977). Indeed, Eagly and Chaiken (1993) contend that intentions are "the person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior" (p. 168). Thus, we argue that patronage intentions are a consumer's deliberate plan to make a behavioral effort to patronize a retail store.

It is important to note that when consumers perceive that an online retailer's assortment size is larger, consumers should develop stronger patronage intentions toward the retailer for the reasons mentioned above – namely, that larger assortment sizes offer greater probabilities of finding products that meet consumers' needs (Borle et al., 2005; Kahn, 2016). Thus, we expect that when the perceived size of an online retailer is larger as a result of sound symbolism, patronage intentions will also be higher.

H_3: The effect of the sound-symbolism x shopping goal interaction on size perceptions will lead to a direct effect on patronage intentions.

3. Overview of studies

Three studies assess the predictions above. Study 1 follows prior literature (i.e., Shinohara and Kawahara, 2010) to assess the effect of sound symbolism in a series of names on size perceptions of online retailers, which establishes the basic effects predicted in H_1. Studies 2 and 3 assess H_2 through manipulations of names and of shopping goals to test the moderation of shopping goals on size perceptions of online retailers. While study 2 demonstrates the immediate effect of the interaction of sound symbolism and shopping goals on size perceptions of an online retailer, study 3 replicates the results of study 2 and extends the findings to patronage intentions, linking the process to managerially relevant consumer outcomes.

For studies 2 and 3, we chose to test the effect in the context of shoes. Shoes represent a universally appealing product context with a wide array of applications to consumers' goals and desires. Consumers also typically have criteria in mind when searching for shoes but can enjoy browsing shoes for fun, as well, making shoes an ideal context for the manipulation of shopping goals. Additionally, shoes offer both utilitarian and hedonic benefits, which are often reflected in the attributes which consumers seek when buying shoes. Further, the overall product involvement level of shoes is middling, necessitating some search and time investments but not to the extent of major purchases such as automobiles, homes, computers, or televisions. Finally, given the largely standardized system of sizing for shoes unlike the sizing systems of many other apparel categories, we did not anticipate significant concerns with size information asymmetry.

Finally, study 4 expands external validity by testing vowel articulation in a different product context, groceries. This context was selected given the steady rise of online grocery shopping options, such as Instacart for home delivery and curbside pickup available at many major grocery retailers, and the ubiquity of groceries in the lives of consumers. Further, while this study only examines vowel articulation and does not address consonant voice, we expect that the pattern of results should hold for consonant voice, given the results from the prior studies of this investigation. Thus, we examine only vowel articulation as an illustration of replication.

4. Study 1

The goal of study 1 is to test the effects of sound symbolic cues in online retailer names – namely, front versus back vowels, voiced versus voiceless consonants, and fricative versus stop consonants – on size perceptions of those retailers' assortments (H_1).

4.1. Procedure

One hundred undergraduate students (male = 43; mean age = 27) from a large Southeastern university participated in this study in exchange for course credit. Following Shinohara and Kawahara (2010), participants began the procedure with a screen informing them that they would see a list of suggested names (mainly nonwords) for a retailer and would be indicating the store size they felt aligned with each suggested name on a seven-point semantic-differential scale (1 – small to 7 – large). Participants then saw a list of names, each composed of two matching syllables, in randomized order. The list represented a variety of structures encompassing consonant voice, manner of consonant articulation, and place of vowel articulation, which have all been identified as potentially important to perceptions of size (see Table 1) .

4.2. Results

Ratings were separately averaged for the three sets of voiceless versus voiced consonants, fricatives versus stops, and front versus back vowels. A series of paired samples t-tests confirmed that the suggested names in the back vowel set (M = 3.54) had significantly higher size ratings than the names in the front vowel set (M = 3.32: $t(1, 99) = -3.596$; $p = .001$). Likewise, the names in the voiced consonant set received higher ratings overall (M = 3.64) than the names in the voiceless consonant set (M = 3.26; $t(1, 99) = -6.005$; $p < .001$). However, the difference in size ratings between the fricative set (M = 3.48) and the stop set (M = 3.39) was directional yet not significant ($t(1, 99) = 1.594$; NS).

4.3. Discussion

These results confirm that the influence of vowel articulation and consonant voice on size perceptions emerges within the context of online retailers, in support of $H_{1a/b}$. However, the non-significant effect between fricatives and stops suggests that the manner of consonant articulation does not exert as strong an influence on size perceptions of online retailers, failing to support H_{1c}. This could be due to the relative strength of embodiment of consonant voice and place of vowel articulation, which involve activation of vocal cords and broader mouth movements than the manner of consonant articulation. Thus, in the following studies, we seek to document the moderation of shopping goal on size-sound symbolism with place of vowel articulation and consonant voice, leaving off manner of vowel articulation due to the non-significant effect in study 1.

Table 1
List of suggested retailer names tested in study 1.

Place of Vowel Articulation	Manner of Consonant Articulation	Consonant Voice	
		Voiceless	**Voiced**
Front Vowel	Fricative	Fefe	Veve
		Fifi	Vivi
		Sese	Zeze
		Sisi	Zizi
	Stop	Tete	Bebe
		Titi	Bibi
		Keke	Gege
		Kiki	Gigi
		Pepe	
		Pipi	
Back Vowel	Fricative	Fofo	Vovo
		Fufu	Vuvu
		Soso	Zozo
		Susu	Zuzu
	Stop	Toto	Bobo
		Tutu	Bubu
		Koko	Gogo
		Kuku	Gugu
		Popo	
		Pupu	

5. Study 2

Study 2 is designed to test the effects of front and back vowels on size perceptions predicted in H_{1a} and H_{2a}, partially validating the findings of H_1.

5.1. Procedure

In exchange for monetary compensation, 197 MTurk panelists (female = 100; mean age = 37) participated in a 2 (vowels: front versus back) X 2 (shopping goal: searching versus browsing) between-subjects experiment. Participants were informed that they were shopping online for shoes with one of two randomly-assigned goals. One group, assigned to the searching condition, was informed that they were specifically searching for a new pair of shoes. As an adaptation of the procedure of Schlosser (2003), participants in the searching group then listed five attributes for which they look when assessing shoes. Meanwhile, participants in the browsing group were also informed that they were looking for shoes but that they were simply looking around for whatever they found interesting or entertaining. Participants were then informed that they came across a listing for an online retailer named either Bepin ("beh-pinn; " front vowels) or Bopan ("boh-pann; " back vowels); the voice of the consonants was kept the same between conditions to avoid any vowel-related confounding influences, and each name was accompanied by a pronunciation guide to avoid differences across participant interpretations of the names' likely pronunciations.

Participants then responded to seven seven-point bipolar items, similar to those from study 3, to assess size perceptions (little/much inventory, a few/many options, a few/many sizes, a few/many services, few/many units of each product, small/large pages, and few/many support staff; $\alpha = 0.918$). Additionally, participants indicated their liking of the name with one seven-point Likert-type item ("I like the name of this retailer"), which served as a covariate. To verify that the shopping goal manipulation worked, participants responded to two seven-point Likert-type items ("I was specifically searching for a certain type of shoes" and "I was just browsing shoes with no particular criteria in mind"). Finally, participants responded to demographics items before ending the procedure.

5.2. Results

5.2.1. Manipulation check

Participants in the searching condition (M = 4.94) indicated a stronger emphasis on searching for a specific type of shoes than participants in the browsing condition (M = 2.57; $F(1, 194) = 91.659$; $p < .001$). Further, participants in the browsing condition (M = 5.76) indicated a stronger emphasis on looking around without any specific criteria in mind than participants in the searching condition (M = 3.28; $F(1, 194) = 34.956$; $p < .001$).

5.2.2. Main effects and interaction

ANCOVA confirmed that the main effects of both shopping goal ($M_{Searching} = 3.82$ versus $M_{Browsing} = 3.81$; $F(1, 191) = 0.282$; NS) and vowel articulation ($M_{Front} = 3.74$ versus $M_{Back} = 3.89$; $F(1, 191) = 1.462$; NS) were not significant, with liking of the name as a significant covariate ($p < .001$). Further, the interaction of shopping goal and vowel articulation was significant ($F(1, 191) = 4.735$; $p = .031$). For the searching condition, the back-vowel condition (M = 4.08) led to significantly higher size perceptions than the front-vowel condition (M = 3.57; $F(1, 87) = 5.071$; $p = .027$). However, for the browsing condition, the difference between the front vowel (M = 3.89) and back vowel (M = 3.73) conditions was not significant (F (1, 103) = 0.518; NS) (Fig. 1).

5.3. Discussion

Study 2 confirmed that shopping goal moderates the effect of sound symbolism on size perceptions of online retailers, such that the effect of back versus front vowels is not significant for browsers but is significant for searchers. Study 2 thus provides initial and partial support for H_2.

6. Study 3

Study 3 assesses the predictions of H_{1b} and H_{2b}, this time assessing voiced and voiceless consonants. Additionally, study 3 links the effects on size perceptions to patronage intentions (H_3) to demonstrate how the results affect downstream consumer outcomes relevant to managers.

6.1. Procedure

In exchange for monetary compensation, 196 MTurk panelists (male = 101; mean age = 37) participated in a 2 (consonants: voiceless versus voiced) X 2 (shopping goal: searching versus browsing) between-subjects experiment. The procedure was identical to that of study 2 in that participants once again received either a searching or a browsing prompt for shoes. This time, the online retailer's name was either Pocaf (voiceless consonants) or Bodan (voiced consonants); as with study 2, the place of articulation of the vowels was kept constant between conditions. Participants once again responded to size perceptions (α = 0.918), liking of the name, and manipulation check items identical to those in study 2. Additionally, participants indicated patronage intentions using the full five-item, seven-point bipolar scale (never/definitely, definitely do not/definitely intend, very low/very high interest, definitely not/definitely, and probably not/probably; α = 0.967) adapted from Spears and Singh (2004). Finally, participants responded to demographics items.

6.2. Results

6.2.1. Manipulation checks

As with study 2, participants in the searching condition (M = 4.94) indicated a stronger emphasis on searching for a specific type of shoes than participants in the browsing condition (M = 3.21; F (1, 195) = 48.256; p < .001). Likewise, participants in the browsing condition (M = 5.18) indicated a stronger emphasis on looking around without any specific criteria in mind than participants in the searching condition (M = 3.67; F (1, 195) = 34.956; p < .001).

6.2.2. Main effects and interaction

Controlling for liking of the name (p < .001), ANCOVA revealed non-significant effects for both shopping goal ($M_{Searching}$ = 3.55 versus $M_{Browsing}$ = 3.45; F (1, 192) = 0.521; NS) and consonant voice ($M_{Voiceless}$ = 3.15 versus M_{Voiced} = 3.87; F (1, 192) = 0.803; NS). However, a significant two-way interaction emerged (F (1, 192) = 9.294; p = .003). In the searching condition, the voiced consonant (M = 4.13) led to significantly higher patronage intentions than the voiceless consonant (M = 3.01; F (1, 94) = 7.997; p = .006). However, in the browsing condition, the main effect of consonant voice was, though directional, not significant ($M_{Voiceless}$ = 3.29 versus M_{Voiced} = 3.62; F (1, 97) = 2.537; NS) (Fig. 2).

6.2.3. Mediation

PROCESS Model 8 (95% CI, 5000 bootstrapped samples; Hayes, 2013) assessed consonant voice as the independent variable, shopping goal as the moderator, size perceptions as the mediator, patronage intentions as the dependent variable, and liking of the name as a covariate. The results confirmed significant moderated mediation (index = −0.20; CI = −0.50 to −0.01), such that the interaction of consonant voice and shopping goal significantly predicted size perceptions (effect = −0.62; CI = −1.22 to −0.03), which significantly and positively predicted patronage intentions (effect = 0.33; CI = 0.17 to 0.48).

To probe further into the mediating role of size perceptions, ANCOVA was run with consonant voice and shopping goal as independent variables, size perceptions as the dependent variable, and liking of the name as a covariate, confirming a significant interaction (F (1, 192)

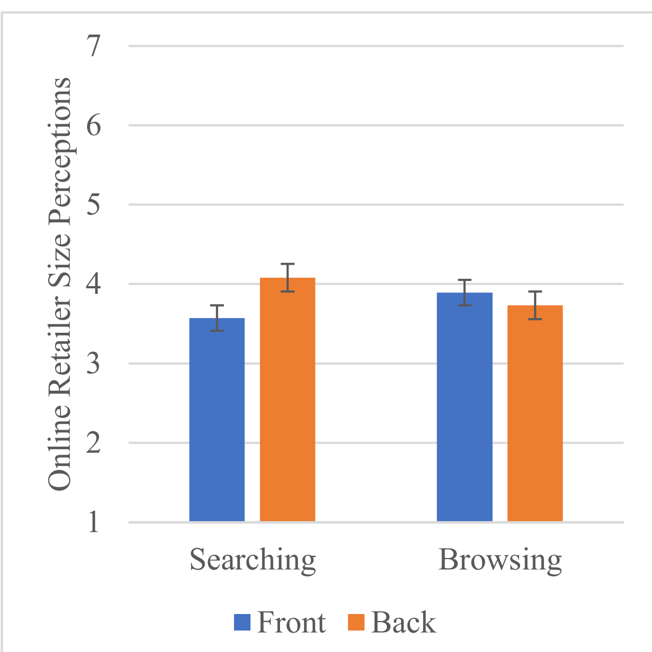

Fig. 1. Interaction of shopping goal and vowel articulation on online retailer size perceptions (study 2).

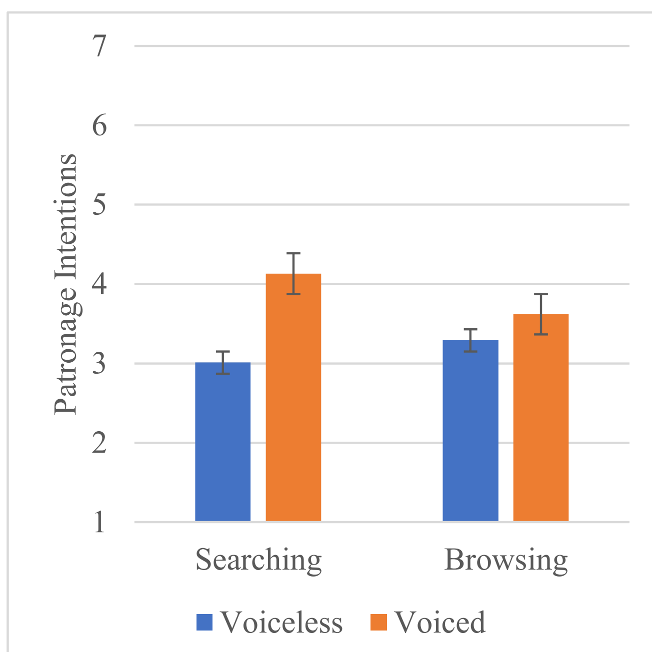

Fig. 2. Interaction of shopping goal and consonant voice on patronage intentions (study 3).

= 4.735; p = .031). Namely, for the searching condition, the voiced consonant (M = 4.23) led to higher size perceptions than the voiceless consonant (M = 3.54; F (1, 94) = 3.120; p = .081), whereas for the browsing condition, the voiced (M = 3.84) and voiceless (M = 3.61) consonants did not significantly differ in size perceptions (F (1, 97) = 0.456; NS) (Fig. 3).

6.3. Discussion

Study 3 replicates and extends the findings of study 2, demonstrating that, as with back vowels and front vowels, voiced consonants lead to higher size perceptions of online retailers than voiceless consonants for searchers, but the effect is non-significant for browsers. Additionally, study 3 extends the findings to a consumer outcome variable, patronage intentions, to show that sound-symbolic effects of names can influence consumers' decisions related to selection of online retailers while shopping (H_3). Taken together, the findings of study 2 and study 3 support $H_{2a/b}$ and demonstrate the moderation of shopping goal on the effect of sound symbolism on size perceptions of online retailers (H_{2c} was not tested given the non-significant effect of fricatives versus stops in study 1).

7. Study 4

Study 4 seeks to provide evidence of replication of the effects above in a different product context (groceries).

7.1. Procedure

One hundred eighty-five MTurk panelists (male = 113; mean age = 39) participated in a 2 (vowels: front versus back) X 2 (shopping goal: searching versus browsing) between-subjects experiment similar to prior designs. However, in this study, the names were Lefi ("leh-fee; " front vowels) or Lofa ("loh-fah; " back vowels), and the provided context was an online grocery retailer. Participants first were given the same searching or browsing prompt, updated to reflect the grocery context, before proceeding to view the name and its pronunciation. Then, participants responded to the same items from prior studies for patronage intentions (α = 0.960), perceived size of the retailer (α = 0.949), liking of the name, and shopping goal manipulation checks as well as demographics items before exiting the procedure.

7.2. Results

7.2.1. Manipulation checks

Again, those in the searching condition (M = 5.21) indicated that they were searching with specific attributes in mind to a significantly greater extent compared to those in the browsing condition (M = 2.52; F (1, 183) = 137.263; p < .001), while those in the browsing condition (M = 5.87) indicated that they were browsing without specific attributes in mind to a significantly greater extent than those in the searching condition (M = 3.37; F (1, 183) = 106.791; p < .001).

7.2.2. Main effects and interaction

Liking of the name was again a significant covariate (p < .001). ANCOVA revealed no significant main effects for either shopping goal ($M_{Searching}$ = 3.85 versus $M_{Browsing}$ = 3.76; F (1, 180) = 1.055; NS) or vowel articulation (M_{Front} = 3.63 versus M_{Back} = 3.99; F (1, 180) = 1.209; NS) but yielded a significant two-way interaction (F (1, 180) = 4.251; p = .041). Those in the searching condition exhibited higher patronage intentions for the back vowel (M = 4.36) than for the front vowel (M = 3.34; F (1, 89) = 6.879; p = .01), whereas those in the browsing condition did not differ significantly between the front (M = 3.90) and back (M = 3.62; F (1, 90) = 0.361; NS) vowel conditions (Fig. 4).

7.2.3. Mediation

PROCESS Model 8 (95% CI, 5000 bootstrapped samples; Hayes, 2013) again tested moderated mediation in similar fashion to study 3, this time for vowel articulation. The result was significant (index = −0.21; CI = −0.46 to −0.03). Namely, the interaction of shopping goal and vowel articulation significantly affected size perceptions (effect = −0.85; CI = −1.54 to −0.16), and size perceptions significantly and positively predicted patronage intentions (effect = 0.25; CI = 0.11 to 0.39).

Further investigation with ANCOVA confirmed the significant

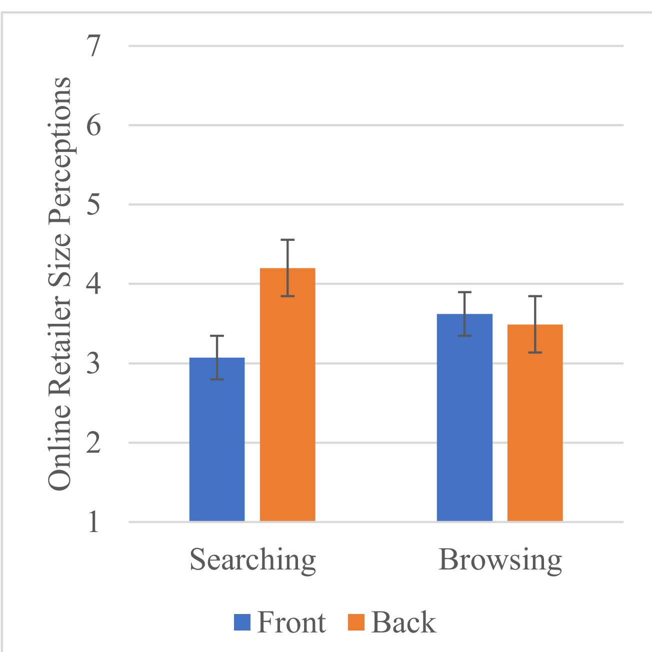

Fig. 3. Interaction of shopping goal and consonant voice on online retailer size perceptions (study 3).

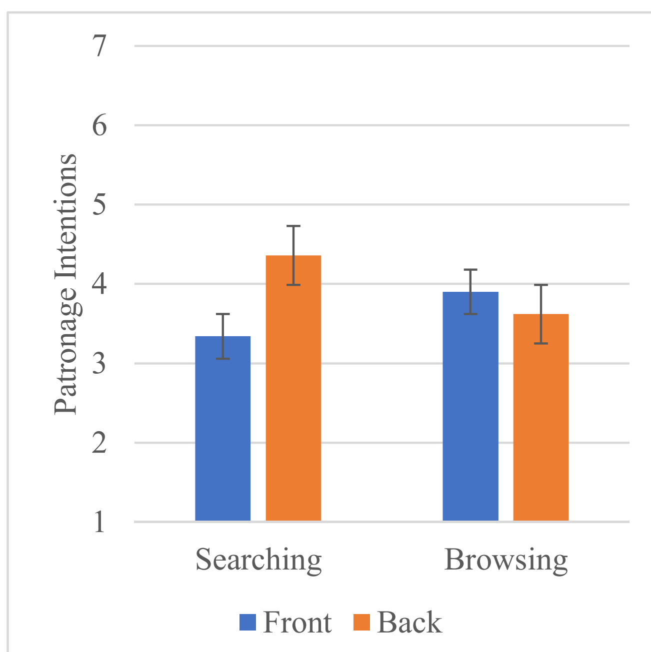

Fig. 4. Interaction of shopping goal and vowel articulation on patronage intentions (study 4).

interaction on size perceptions (F (1, 180) = 5.946; p = .016), wherein the searching condition led to significantly higher size perceptions for the back vowel (M = 4.20) than for the front vowel (M = 3.07; F (1, 89) = 10.852; p = .001), while the browsing condition exhibited no significant difference between the front (M = 3.62) and back (M = 3.49; F (1, 90) = 0.017; NS) vowel conditions (Fig. 5).

7.3. Discussion

Study 4 replicated the findings of prior studies in a different product context (groceries), enhancing external validity and providing additional support for our predictions in H_1 through H_3. While the study focused on vowel articulation, we anticipate that the results would be similar for consonant voice, as well.

8. General discussion

Given that consumers interpret information in shopping environments differently depending on searching versus browsing goals (Novak et al., 2003; Ozkara et al., 2016), it is important to ascertain how searchers and browsers might utilize heuristics such as sound symbolism in retailer names to make outlet selection decisions. Namely, searchers are more prone to employ heuristics in shopping as their shopping behavior is more targeted, focused, and organized than that of browsers. Such an investigation is especially important in e-commerce contexts, where physical spaces and assortment sizes are not readily observable from cursory scans of the shopping environment, making names more important to initial outlet selection.

Four studies reveal that size-sound symbolism of online retailers' names influences consumers' size perceptions of online retailers, such that names of spaces with back vowels and voiced consonants lead to larger size perceptions of those retailers. Namely, consumers rely on these signals to develop impressions of the size of the retailer, which are based on relevant attributes (inventory size, depth, breadth, and availability; number and size of support staff; etc.). However, consumers' shopping goals moderate these effects, such that sound symbolism has no effect on browsers' perceptions of online retailers' sizes. Several implications follow (Table 2).

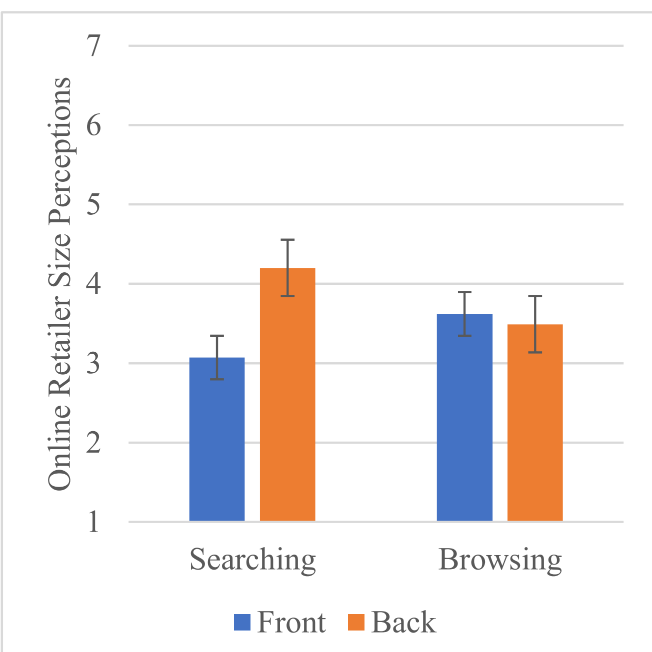

Fig. 5. Interaction of shopping goal and vowel articulation on online retailer size perceptions (study 4).

Table 2
Summary of results.

Study	Hypothesis(es) Tested	Product Context	Hypothesis(es) Supported?
1	$H_{1a\text{-}c}$	N/A	$H_{1a/b}$: Yes H_{1c}: No
2	H_{1a} H_{2a}	Shoes	Yes
3	H_{1b} H_{2b} H_3	Shoes	Yes
4	H_{1a} H_{2a} H_3	Groceries	Yes

8.1. Theoretical and managerial implications

First, we extend the sound symbolism literature to the domain of online retailing, showing that size-sound symbolism emerges from the names of online retailers. Namely, because we measured several size-related items that related to objects and people within online retailing – the size and availability of inventory, including available options and sizes, as well as numbers of employees – we empirically demonstrate that sound symbolism in the name of an online retailer signals both overall size and specific size-related characteristics of the retailer's features. This finding furnishes important evidence that sound symbolic properties of names apply not only to specific objects but also to broader entities, such as online retail stores.

Second, we also contribute to the sound symbolism literature by introducing an important moderator of size-sound symbolism: the consumer's shopping goal. For searchers, size-sound symbolism effects hold. This effect possibly occurs because searchers seek efficient ways of navigating online search results, employing heuristics that filter out irrelevant information. Our work finds that one such heuristic is size-sound symbolism within the names of online retailers, which can assist searchers in making more efficient online shopping decisions.

Meanwhile, size perceptions of online retailers do not differ between sound symbolic consonant voice or place of vowel articulation conditions for browsers, possibly due to browsers' focus on experience and enjoyment rather than on efficient and directed search. Thus, size-sound symbolism in online retailers' names is diminished in importance for browsers, who potentially focus their attention on other cues. To the authors' knowledge, this is the first work to document a shopping-related moderator of the effects of sound symbolism on consumer behavior, which will hopefully ignite a stream of inquiry into other moderators of sound symbolism.

Third, we link size-sound symbolic effects in the online retailing domain and the related moderating influence of shopping goal to consumer outcomes, demonstrating that size perceptions of online retailers mediate the sound symbolism x shopping goal interaction and patronage intentions. Thus, size-sound symbolic properties of online retailer names affect downstream consumer responses, leading to important implications for scholars as well as for managers.

Managers can utilize sound symbolic phonemes in names to signal aspects about online retailer size. For managers of retailers who want consumers to perceive these spaces as large – for example, department stores or general merchandise retailers – names should employ back vowels and voiced consonants. Meanwhile, if managers desire smaller size perceptions among consumers (i.e., an exclusive or highly specialized boutique), front vowels and voiceless consonants should be prominent in names. This allows managers of new or rebranded online retailers to capitalize on sound symbolism as a signaling tool. For more established online retailers, managers have one of two broad routes. Spaces with names that align with size-related sound symbolism should seek to maintain perceptions of that associated size. Ensuring maintenance of this relationship will help managers maximize on the matching effects of retailer size and sound symbolism in names. Meanwhile, online retailers with sound-symbolic names that are contradictory to their sizes will need to work to overcome the associations among consumers. This could be done with extensive promotion of large inventories and many amenities, taglines that feature several larger symbolic phonemes, or phrasing that explicitly emphasizes large sizes.

Managers may also elect to rebrand along the naming route, although drastic changes to the name could derail positioning and damage brand equity. One easier way than creating an entirely new name is to encourage shortened versions that then alter the overall pronunciation of the name in a way that shifts sound symbolism. Similarly, designing logos with features that increase perceived size, such as high saturation of color (Hagtvedt and Brasel, 2017) and low comparative visual complexity (Ketron, 2018), may override the emphasis on the pronunciation of the name, thereby suppressing the influence of sound symbolism in names themselves.

We also encourage managers of well-established brands to carefully weigh their current positioning with the potential shift in online retailer size perceptions that may result from changes to sound symbolism in names. We would be remiss to encourage established brands to launch expensive and risky renaming or rebranding efforts based on sound symbolism of names. Rather, we expect the findings above to be useful for new or ill-known consumer spaces as subtle information signals of what consumers can expect from these spaces. This is especially important for new online spaces – as competition in the world of e-commerce continues to grow, new online retailers will need to select compelling names that will resonate with consumers. The use of sound symbolic phonemes could be an important factor in the selection of those names.

Additionally, managers must consider shopping goals when ascertaining the importance of size-sound symbolism in naming conventions or strategies. For online retailers in which searching goals are likely to be prominent – for example, retailers with a high assortment ratio of functional products – size-sound symbolism of retailer names will be more important to size perceptions and patronage decisions than for online retailers with a higher percentage of customers engaged in browsing (i.e., retailers focused on experiential products or experiences themselves). Additionally, managers could frame communications to emphasize searching- or browsing-related aspects of shopping, which could nudge consumers toward one goal more than another and affect the salience of the name itself as a filtering heuristic.

8.2. Conditions and constraints

Although our hypotheses were supported, it is important to specify that we expect the effects to exist under certain conditions. First, the effects should appear when consumers are sifting through a list of outlets with the goal of initially selecting an online retailer for further shopping. This behavior corresponds to the initial phase of selecting a retailer or set of retailers from which possible purchases may be made. Second, the effects should be present when the retailer name is unknown. Because consumers often already hold associations for well-known retailers – including associations with assortment size – sound-symbolic signals are unlikely to exert significant effects on size perceptions. Although this appears to limit the scope of the effects, it is important to note that new or largely unknown online retailers could realize competitive advantage by utilizing sound-symbolic effects. Thus, while the effects may only apply under certain conditions, those conditions still apply to a wide range of shopping situations.

8.3. Limitations and future research directions

As with several prior sound symbolism studies, a key limitation of this study is the lack of the use of real names of online retailers. While experimental manipulation of sound symbolism requires the use of words without strong associations of meaning, names of consumer spaces often feature notable people, owners of the retailer, or words with established meanings, all of which may have associations of size. Therefore, future research should examine how sound symbolism within real names of online retailers influences size perceptions. Similarly, does having an established brand or reputation alter or even override the effects of sound symbolism on size perceptions?

Second, the studies above lack auditory manipulations. However, as argued above, the use of print-only names is believable and generalizable – consumers typically read signs, advertisements, and other messages that include consumer space names without speaking aloud, and in the context of online retailing, search results pages are listed as text. Further, it may be that spoken names intensify the effects observed above, which would indicate that written manipulations are a more conservative test of effects. In any case, this line of inquiry should be investigated in order to establish (or clarify) the effects across both visual and auditory modalities.

Third, studies 2 and 3 concentrate on a single product context, shoes. While shoes are a nearly universal product category for all consumers, the effects should be replicated in other product contexts to build generalizability. We have taken the first step in doing so with study 4 by examining groceries, but additional validation across other product contexts would further enhance external validity.

Further, we acknowledge that well-established retailers with known assortment sizes may not realize as much of a benefit from sound-symbolism regarding size as their lesser-known counterparts. However, it could be that well-known retailers with names that are congruent in sound symbolism with their actual assortments might realize a boost, however slight, from that congruency. Thus, future research should investigate such potential congruency effects.

Given the significance of liking of the name as a covariate in the observed effects on size perceptions, a potentially interesting relationship emerges – does liking of a retailer name or, by extension, any other object increase its perceived size? The relationship between size perceptions and attention (i.e., Hagtvedt and Brasel, 2017; Ketron, 2018) offers an important clue in this vein – namely, it could be that liking increases attention, which subsequently affects perceived size. Future research could explore this avenue further, especially as liking relates to shopping goals.

Further, our work focuses on online retailer names only. As such, our work may be limited in an additional way: namely, we do not consider other marketing domains in the online context. Thus, future research could examine how sound symbolism affects size perceptions for other kinds of websites.

Additionally, scholars should investigate potential effects of the number of sound-symbolic phonemes in names. Simple observation confirms that most names of consumer spaces, especially retailers, tend to be shorter due to the positive influence of pronunciation ease on consumer responses (i.e., Maheswaran et al., 1992; Irmak et al., 2011; Song and Schwarz, 2009). Nevertheless, some names are composed of multiple words that exceed three syllables while also retaining ease of pronunciation (for example, the New York Metropolitan Museum of Art contains twelve syllables but remains easy to remember and pronounce). Similarly, many retailers feature taglines or slogans. Can these associated phrases affect the influence of sound symbolic effects from the name alone, or would slogans and taglines be perceived as parenthetical or secondary to the name? This question is especially relevant for phrases with strong representations of sound-symbolic consonants and vowels.

Further, investigation is warranted into potential ordering effects. For example, does order of sound-symbolic phonemes matter when the ratio of voiceless to voiced consonants and/or front to back vowels is uneven (i.e., two voiceless consonants vs. one voiced consonant or one front vowel versus two back vowels)? Theoretically, the greater number of phonemes may carry greater weight in the overall sound-symbolic effect of a name due to reinforcement of the major phoneme. However, it could be that the initial or final phoneme sways perceptions despite being outnumbered by the remaining phonemes. The recent findings on articulation by Rossi et al. (2017) and Topolinski (2017) indicate that such anchoring effects of the first or last phoneme may be contextual (i.e., the relationship between direction of articulation and food consumption). Additionally, what other symbolic effects might consonant voice have on consumer space perceptions beyond online retailers? Borrowing from vowel and consonant articulation, this could be based on shape, femininity, lightness, and other characteristics beyond size.

Finally, future research should investigate congruity between signaled size and size desirability. That is, when smaller spaces are more desirable, are consumer responses higher when sound symbolic phonemes signaling smallness are in the name? There may be few cases in which smaller spaces are more desirable – such spaces have less to offer in terms of amenities or options and would become more easily crowded, or small spaces may signal exclusivity and high-end status. However, one potential positive reaction may come from thrifty consumers through the employment of small-sounding phonemes in pricing.

In terms of shopping goals, there are several avenues for future research. For example, it is important to note that while larger assortments generally provide greater chances for finding desired products, assortments that are too large can induce choice overload and actually reduce consumer responses (i.e., Chernev et al., 2015; Kahn, 2016). Thus, future research could account for individual differences in size preferences for choice sets (Mathmann et al., 2017), which may be higher for consumers engaged in browsing goals given the more emotional motivations of browsers (i.e., Spassova and Isen, 2013). Additionally, variety seeking behavior could moderate the interaction of shopping goals and size-sound symbolism. Namely, when browsers are engaged in variety seeking behavior as a means of entertainment or pleasure, because variety seeking can be better satisfied by larger assortments, would sound symbolic effects become salient for browsers?

Similarly, given that browsers tend to engage in more impulse buying behavior (i.e., Zhang et al., 2018), what effects, if any, might sound symbolism have on impulse purchases? Could front versus back vowels or voiceless versus voiced consonants lead to different processing styles around impulsivity, and if so, how do shopping goals moderate such effects? Additionally, how might product category influence the results, since product categories tend to skew the nature of search activities in the online domain (Bhatnagar and Ghose, 2004)?

Future research could also examine outcomes of sound symbolism that are not related to size yet are influenced by shopping goals. For example, given that size is a functional characteristic, would experiential or emotional outcomes differ for browsers and not for searchers? Finally, how might perceptions of sound symbolism in names differ in the context of shopping in virtual reality, which does not necessarily replicate brick-and-mortar effects (Vrechopoulos et al., 2004)?

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jretconser.2020.102245.

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How does promotion mix affect brand equity? Insights from a mixed-methods study of low involvement products

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ABSTRACT

Research on promotion mix and brand equity remains fragmented and piecemeal. Moreover, a joint study of the two marketing concepts in a low involvement product setting is non-existent. This study addresses this gap by adopting: (1) established theoretical lenses—Kotler's promotion mix (advertising, sponsorship, sales promotions, and public relations), Aaker's consumer-based brand equity (brand awareness, brand associations, perceived quality, and brand loyalty), and the theory of purchase involvement; (2) a mixed-methods approach—in-depth and focus group interviews and a survey; and (3) a low involvement product context—soft drinks. This research contributes by: (1) reconciling marketing scales of constructs with measurement items (advertising, sales promotions, brand awareness, brand associations, perceived quality, and brand loyalty); (2) developing new scales for constructs without measurement items (sponsorship and public relations); and (3) analyzing the relationships among them in a low involvement product context. Implications, limitations, and future research directions conclude the research.

1. Introduction

Brand equity has been a prominent marketing concept for decades (Oh et al., 2020), as it is a source of competitive advantage, global recognition, and high net worth (Aaker, 1991). Interbrand (2021) indicates that the three highest-valued brands in 2020 were Apple ($322.999 billion), Amazon ($200.667 billion), and Microsoft ($166.001 billion)—three organizations that have reaped the rewards of marketing strategies designed to enhance and sustain brand equity. Existing research suggests that brand equity can be strengthened by leveraging marketing strategies based on the promotion mix (Kotler & Armstrong, 2010). Although numerous studies have investigated the effects of promotion mix on brand equity (e.g., Buil et al., 2013; Cobb-Walgren et al., 1995; Nikabadi et al., 2015; Palazón-Vidal & Delgado-Ballester, 2005; Sinha & Verma, 2018; Valette-Florence et al., 2011; Villarejo-Ramos & Sanchez-Franco, 2005; Yoo et al., 2000), a number of issues persist and require additional investigation.

First, brand equity is a complex, multidimensional concept that is often examined either selectively (i.e., some but not all dimensions) or as a simplified, unidimensional concept (Hsieh & Li, 2008; Yoo et al., 2000). These alternative approaches create a piecemeal, if not distorted, understanding of brand equity when taken together with other marketing concepts. Hence, this research adopts and examines Aaker's (1991) consumer-based brand equity model—brand awareness, brand associations, perceived quality, and brand loyalty—in its entirety. This choice is based on: (1) the fact that a consumer perspective is appropriate for consumer marketing studies (Darestani & Najafi, 2014); and (2) the model is widely accepted in academia and industry (Atilgan et al., 2005).

Second, there has been little effort to examine the promotion mix in

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its entirety given the partial approach many scholars have adopted when analyzing its effects on marketing concepts such as brand equity (e.g., Boulding et al., 1994; Chaudhuri et al., 2018; Nguyen & Nguyen, 2011; Santini et al., 2016). Hence, adopting Kotler and Armstrong's (2010) model—advertising, sales promotions, sponsorship, and public relationships—this research examines the effects of the promotion mix in its entirety on brand equity, extending previous research.

Third, the measurements for several elements of the promotion mix—sponsorship and public relations—are yet to be established according to our extensive search across academic databases (e.g., EBSCO, Ingenta, ScienceDirect), indices (e.g., Web of Science, Scopus), and publishers (e.g., Emerald, Sage, Springer, Taylor & Francis). Conversely, other promotion mix elements—advertising and sales promotions—have established measurements (Nguyen & Nguyen, 2011; Sinha & Verma, 2018; Villarejo-Ramos & Sanchez-Franco, 2005; Yoo et al., 2000). We argue that measures for all elements are necessary to progress to a holistic examination of their effects on other marketing concepts, such as brand equity.

Fourth, although previous research sheds light on the effects of promotion mix on brand equity (Chaudhuri et al., 2018; Yoo et al., 2000), and promotion campaigns in practice have applied a combination of promotion mix elements (Keller & Lehmann, 2006), our understanding of the relationship between these two concepts remains limited. Previous studies do not fully consider the effects of each element of the promotion mix on each dimension of brand equity. We argue that research on these effects is important to deepen the understanding of the two concepts, and help marketers accurately identify the promotion elements they need to leverage to boost their chance of achieving the desired return on any specific aspect of brand equity they wish to enhance.

Finally, although many studies have investigated the relationship between promotion mix and brand equity, few efforts to date have scrutinized this relationship from a purchase involvement perspective (Beatty et al., 1988; Kassarjian, 1981; Kim & Sung, 2009; Prendergast et al., 2010). Most studies have concentrated on high purchase involvement, given that high involvement products often assume a premium positioning (e.g., expensive, high net worth), wherein greater effort is required to justify both consumer and marketing investment. Nevertheless, we argue that research in low purchase involvement settings is required, given the equally significant returns due to economies of scale. Furthermore, consumer behavior in low purchase involvement settings typically relies on very little information gathering and limited thought due to low priced products carrying low costs of failure (Adhikari, 2019; Ndubisi & Moi, 2006; Prendergast et al., 2010). Moreover, consumers in low involvement settings often react impulsively when making purchase decisions (Akbari, 2015; Beatty et al., 1988; Kassarjian, 1981). Thus, the deployment of the promotion mix and the way in which brand equity is acquired are likely to differ between low and high involvement products. Research in the context of low involvement products should therefore extend our understanding of the promotion mix–brand equity relationship.

This research examines the effects of Kotler and Armstrong's (2010) elements of the promotion mix on Aaker's (1991) dimensions of consumer-based brand equity in a low involvement context using soft drinks as a product, following a mixed-methods approach. The paper contributes to theory by unraveling the complexities that entail among promotion mix, brand equity, and purchase involvement, and to practice by recommending research-informed marketing strategies that marketers can leverage to activate the right elements of the promotion mix depending on the dimensions of brand equity they wish to strengthen.

The paper is organized as follows. First, each marketing concept under study—promotion mix (and its elements), brand equity (and its dimensions), and purchase involvement—is explained. Next, the conceptual framework, hypotheses, method, and results are presented. The paper concludes by discussing its findings, implications for theory and practice, limitations, and future research opportunities.

2. Theoretical background

2.1. Promotion mix

While the marketing mix and its ensuing variants, such as the 4Ps and 7Ps, served as the cornerstone of marketing in the mid-twentieth century, marketing theories emerging in the twenty-first century have concentrated on the unique peculiarities underpinning each element of the marketing mix (Luck & Moffatt, 2009). This evolution was the result of the growing challenges in designing and implementing marketing communications (Keller, 2001a). In the era of customer-oriented marketing, integrated marketing communication (IMC) "emerged as a natural evolution in marketing communications, brought about by drastic changes in at least three main areas: the marketplace, media and communications, and the consumer" (Kliatchko, 2005, p. 7). The implementation of IMC is based on marketing communications channels, referred to as the promotion mix (Kliatchko, 2005), which this research focuses on.

The promotion mix, as the vehicle for IMC, encapsulates four elements—advertising, sponsorship, sales promotions, and public relations—that organizations can use to communicate customer value and build customer relationships persuasively (Kotler & Armstrong, 2010). Alternative promotion mix models exist, for example, Keller's (2001a) model with nine elements—media advertising, direct response and interactive advertising, place advertising, point-of-purchase advertising, trade promotions, consumer promotions, event marketing and sponsorship, public relations, and personal selling. However, we argue that this alternative is repetitive (e.g., multiple forms of advertising and sales promotion) and may be too broad yet rigid for a single investigation. Moreover, in the case of low involvement products, such as soft drinks, alternative promotion mix elements such as personal selling and direct marketing are less significant and, perhaps, irrelevant. This research thus adopts Kotler and Armstrong's (2010) promotion mix of advertising, sponsorship, sales promotions, and public relations due to its conceptual clarity, operational conciseness, and contextual relevance.

2.1.1. Advertising

Advertising refers to "any paid form of non-personal presentation and promotion of ideas, goods, or services by an identified sponsor" (Kotler & Armstrong, 2010, p. 408). As an element in the promotional mix, advertising attracts customer attention and creates emotional responses, but may be costly and intrusive (Keller, 2001a). Moreover, advertising is a tool that many marketers use to create awareness of their corporate and product brands in consumers' minds in the pursuit of convincing them to make a purchase decision (Boulding et al., 1994). Advertising has a meaningful impact on enhancing brand equity (Boulding et al., 1994; Yoo et al., 2000). However, its effect is conditional on inputs, such as the budget invested (Mantrala, 2002) and the types of messages communicated (Martínez et al., 2009), and potentially outputs, such as the dimensions of brand equity, as we later discuss.

2.1.2. Sponsorship

Sponsorship refers to the "investment, in cash or in-kind, in a given activity, in return for access to exploitable commercial potential associated with that activity" (Meenaghan, 1991, p. 36). Sponsorship-linked marketing is "the orchestration and implementation of marketing activities for building and communicating an association to a sponsorship" (Cornwell, 1995, p. 15). Sponsorship is a commerce-driven activity that can maximize value for sponsorship partners (Johnston & Spais, 2015). It entails marketing exchanges between a sponsor and a sponsee, whereby the sponsee receives a fee and the sponsor receives the right to associate itself with the sponsee's activities (O'Reilly & Horning, 2013). Compared to other elements in the promotion mix, sponsorship typically requires high investments, promotes at the corporate brand level, but rarely conveys product brand statements explicitly (Keller, 2001b). Sponsorship is often measured indirectly in the form of sponsorship awareness, publicity, and performance (Meenaghan, 2013; Meenaghan & O'Sullivan, 2013). This research argues that given that the main goal of sponsorship is to make the brand known to a wide range of customers (Cornwell, 1995; Cornwell et al., 2001; Keller, 2001b), the customer perspective is important to measure its effects on marketing concepts such as brand equity, which we cover herein.

2.1.3. Sales promotions

Sales promotions refer to "a diverse collection of incentive tools, mostly short term, designed to stimulate greater and quicker purchases among target customers" (Kotler & Armstrong, 2010, p. 408). This promotional mix element is often activated when marketing organizations intend to generate immediate customer attention and impulse purchases (Keller, 2001b). Sales promotions are a promotional tool that motivates consumers to take action and shepherds them from potential to actual customers (Belch & Belch, 2004), thus being a crucial element of the promotion mix that affects brand equity (Valette-Florence et al., 2011). Nevertheless, the effect of sales promotions is mixed. For example, there is a differential effect of monetary (e.g., price discounts, coupons) and non-monetary (e.g., gifts, free samples) sales promotions on brand equity (Buil et al., 2013). Similarly, their effect on brand equity depends on the extent of customer loyalty (Joseph et al., 2020) and type of sales promotion; namely consumer franchise building (CFB) promotion and non-CFB promotion (Belch & Belch, 2004). However, the comparison of sales promotions against other elements in the promotion mix has not been made and thus takes center stage in this paper—as opposed to detailed scrutiny of the different types of sales promotion (Buil et al., 2013; Joseph et al., 2020).

2.1.4. Public relations

Public relations refer to "the management function that identifies, establishes, and maintains mutually beneficial relationships between an organization and the publics on whom its success or its failure depends" (Broom et al., 1994, p. 2). Public relations build "good relationships with the marketing organization's various publics by obtaining favorable publicity, building up a good corporate image, and handling or heading off unfavorable rumors, stories, and events" (Kotler & Armstrong, 2010, p. 408). Therefore, public relations can be considered under two perspectives: the traditional view, as a form of communication activity, and the modern view, as a form of relationship management (Ledingham & Bruning, 1998). Public relations are often regarded as a highly effective element of the promotion mix that can be activated and used to build beneficial relationships between the organization, its target customers, and, to a greater extent, its publics, which speaks to the essence of "exchange," "relationship," and "stakeholders" in marketing theory (Huang & Zhang, 2013). Of particular interest to this research is the consumer perspective of public relations, given their influence on consumer perceptions and relationships with the marketing organization (Bruning & Ledingham, 2000). Along with the qualitative study performed, we adapt Hon and Grunig's (1999) six core areas for evaluating public relations from the (consumer) relationship management perspective—control mutuality, trust, satisfaction, commitment, exchange relationship, and communal relationship—to operationalize public relations.

2.2. Brand equity

Brand equity is one of marketing's most important concepts (Oh et al., 2020). Organizations strive to acquire high brand equity (or a strong and powerful brand) because of the advantages it brings (Swaminathan et al., 2020), such as more substantial bargaining power over suppliers, competitive advantages over competitors, and higher asset valuation of brand value, among others (Kotler & Armstrong, 2010). Brand equity has been defined in numerous ways: as a set of brand assets and liabilities that add or subtract value (Aaker, 1991); the differential effect of brand knowledge on consumer response to the marketing of a brand (Keller, 1993); the difference in consumer choice between similar branded and unbranded products (Yoo et al., 2000); the incremental utility or value a brand adds to a product (Yoo & Donthu, 2001); and the utility consumers link to a brand's use and consumption (Vázquez et al., 2002), among others. Notwithstanding the various definitions of brand equity, brand equity's evolution (Ding et al., 2020; Veloutsou & Guzmán, 2017), and recent research that questions the traditional approaches to analyze and measure brand equity (Baalbaki & Guzmán, 2016; Chatzipanagiotou et al., 2016; Christodoulides et al., 2015), we argue that it is important to rely on a definition that can be easily operationalized and thus adopt Aaker's (1991) definition and model. Brand equity is "a set of brand assets and liabilities linked to a brand, its name, and symbols that add to or subtract from the value provided by a product or service to a company and or to that company's customers" (Aaker, 1991, p. 15). Aaker's model spells out the dimensions of brand equity needed to operationalize the construct, and has been used in a food industry context (Darestani & Najafi, 2014), in line with the context of this research—soft drinks.

Aaker's (1991) brand equity model consists of four dimensions: brand awareness, brand associations, perceived quality, and brand loyalty. Brand awareness refers to the buyers' ability to recognize or recall a brand as a member of a certain product category. Brand associations refer to the mental associations linked to a brand that help customers process information (Aaker, 1996). Perceived quality refers to the perception of overall quality of a good or service (Zeithaml, 1988) that helps customers differentiate a brand against its competitors. Brand loyalty refers to the attachment customers have to a brand that helps marketing organizations gain recurring customers, maintain sales, and increase the return of investment in marketing expenditure (Aaker, 1996; Chaudhuri & Holbrook, 2001).

2.3. Purchase involvement

Purchase involvement has a profound role in marketing (Beatty et al., 1988; Kassarjian, 1981; Kim & Sung, 2009; Prendergast et al., 2010). It is defined as an encapsulation of "an individual's interaction with the product and the purchase situation" (Beatty et al., 1988, p. 150). There are two types of purchase involvement: high and low purchase involvement. High purchase involvement is associated with products that are often unique, important, costly, risky, and value-expressive, whereas low purchase involvement is associated with products that tend to be identical, less vital, inexpensive, less risky, and less impactful on one's lifestyle (Kassarjian, 1981; Kotler & Armstrong, 2010; Ndubisi & Moi, 2006; Prendergast et al., 2010). In other words, customers tend to make more effort and invest more resources for high involvement products that tend to be purchased occasionally, as opposed to low involvement products that they tend to purchase more frequently and effortlessly due to the lower investment required and less risky outcomes in case the purchase was a mistake (Sengupta et al., 1997).

In relation to promotion mix, low involvement products tend to be "more responsive to promotional tools" than high involvement products (Ndubisi & Moi, 2006, p. 29). For example, the effect of sales promotions in shaping consumer perceptions of value and brand equity is mixed across different product categories (Table 1). Therefore, the differences in the purchase of high and low involvement products require the curation of different marketing strategies to manage their promotion (Kassarjian, 1981). In the case of low involvement products, which represent the core focus of this research, previous research finds that customers are likely to be attracted by emotional rather than rational appeals (Akbari, 2015; Beatty et al., 1988). More importantly, previous research suggests that marketers need to rely on a combination of elements in the promotion mix that are carefully designed to appeal to the target market in low involvement purchase settings (Akbari, 2015; Sengupta et al., 1997; Stewart et al., 2019).

Table 1
Key studies on the effect of the promotion mix on brand equity.

Author(s)	Context(s)	Key finding(s)
Yoo, Donthu, & Lee (2000)	• Mixed methods. • Athletic shoes, color television sets, and camera film. • USA.	1. Measurements of brand equity and its dimensions, with brand awareness combined with brand associations. 2. Significant positive effects of advertising on overall brand equity and all its dimensions. 3. Significant negative effects of sales promotion (price deals) on overall brand equity, perceived quality, and brand awareness combined with brand associations. 4. Significant positive effects of all dimensions of brand equity on overall brand equity, with the influence of brand loyalty being the highest. 5. Significant positive effects of price, store image, and distribution intensity on the dimensions of brand equity.
Villarejo-Ramos & Sanchez-Franco (2005)	• Quantitative method. • Washing machine. • Spain.	1. Significant positive effects of advertising on brand awareness, perceived quality, and brand image, but insignificant effects on overall brand equity and brand loyalty. 2. Significant negative effects of sales promotion (price deals) on overall brand equity, but significant positive effects on perceived quality, and insignificant negative effects on brand image. 3. Significant positive effects of brand awareness on brand image.
Bravo, Fraj, & Martinez (2007)	• Quantitative method. • Milk, toothpaste, and olive oil. • Spain.	1. Brand awareness can be combined with brand associations. 2. Significant positive effects of advertising spending on brand awareness combined with brand associations and perceived quality. 3. Insignificant negative effects of sales promotion (price promotion) on perceived quality. 4. Significant positive effects of brand awareness combined with brand associations and insignificant positive effects of perceived quality on brand loyalty. 5. Insignificant positive effects of brand awareness combined with brand associations and perceived quality, but significant positive effects of brand loyalty on brand equity. 6. Significant positive effects of positive brand information (provided by the family) on brand awareness combined with brand associations and perceived quality. 7. Significant positive effects of price on perceived quality.
Sriram, Balachander, & Kalwani (2007)	• Quantitative method. • Toothpaste and dish detergent. • USA.	1. Significant positive effects of advertising on brand equity. 2. Insignificant negative effects of sales promotion on brand equity. 3. Significant positive effects of product innovation on brand equity in the toothpaste category, but insignificant positive effects on the dish detergent category.
Buil, de Chematony, & Martinez (2013)	• Quantitative method. • Sportwear, consumer electronics, and cars. • UK.	1. Significant positive effects of individuals' attitudes toward the advertisements on brand awareness, brand associations, and perceived quality. 2. Significant positive effects of advertising spending on brand awareness, but insignificant effects on brand associations and perceived quality. 3. Significant negative effects of monetary promotions on perceived quality, but insignificant effects on brand associations. 4. Significant positive effects of non-monetary promotions on brand associations and perceived quality. 5. Significant positive effects of brand awareness on brand associations and perceived quality. 6. Significant positive effects of brand associations and significant negative effects of perceived quality on brand loyalty.
Nikabadi, Safui, & Agheshlouei (2015)	• Quantitative method. • Consumer electronics. • Iran.	1. Significant positive effects of advertising spending on brand awareness and insignificant effects on perceived quality and brand associations. 2. Significant positive effects of consumers' attitude toward advertisement on brand awareness and brand associations, but insignificant effects on perceived quality. 3. Insignificant negative effects of monetary and non-monetary promotions on brand associations and perceived quality. 4. Significant positive effects of brand awareness on brand associations and perceived quality. 5. Significant positive effects of brand associations on brand loyalty.

(continued on next page)

Table 1 (*continued*)

Author(s)	Context(s)	Key finding(s)
		6. Insignificant positive effects of perceived quality on brand loyalty.
Sinha & Verma (2018)	• Quantitative method. • Food products (biscuits and chocolates) and personal care products (toothpaste and soap). • India.	1. Significant positive effects of monetary/non-monetary sales promotions on utilitarian/hedonic benefits. 2. Significant positive effects of utilitarian/hedonic benefits of sales promotion on consumer perceived value for both food and personal care product categories. 3. Insignificant moderating effects of product categories (food and personal care products) on relationships between monetary/non-monetary sales promotion and utilitarian/hedonic benefits. 4. Significant moderating effects of product categories on relationships between hedonic/utilitarian benefits and consumer perceived value, whereby food product consumers are more attracted by the hedonic benefit whereas utilitarian benefits are found to generate perceived value more effectively for personal care products.

3. Conceptual framework and hypotheses development

Although a substantial amount of previous research investigates the relationship between promotion mix and brand equity, no studies to date scrutinize this relationship when purchase involvement is considered. Kassarjian (1981) recommended several topics that relate to purchase involvement: advertising (e.g., designs, effects), brand (e.g., choice, preference, and loyalty), sales promotions (e.g., price, packaging), and customer decision making. Therefore, the rationale of purchase involvement can bridge the gaps between marketing stimulus (i.e., promotion mix) and outcomes (i.e., brand equity). Moreover, most, but not all, elements of the promotion mix are relevant to both low and high purchase involvement. This research thus aims to apply the logic of purchase involvement to strengthen our understanding of the relationship between promotion mix and brand equity, with a special focus on low involvement product purchases. The following sections present a set of hypotheses that explain the inherent relationships between the elements of the promotion mix and the dimensions of brand equity (Fig. 1).

3.1. *Advertising and brand equity*

Advertising is a useful promotional tool that stimulates brand awareness (Keller, 2001b). Advertising (Nikabadi et al., 2015), advertising spending (Bravo et al., 2007; Cobb-Walgren et al., 1995; Villarejo & Sánchez, 2005; Yoo et al., 2000), and consumers' attitudes toward advertisements (Cobb-Walgren et al., 1995; Keller & Lehmann, 2006; Sriram et al., 2007) have positive effects on brand equity and its dimensions. When done frequently, advertising can enhance brand awareness (Bravo et al., 2007; Buil et al., 2013; Chu & Keh, 2006; Villarejo-Ramos & Sanchez-Franco, 2005; Yoo et al., 2000), brand associations (Bravo et al., 2007; Buil et al., 2013; Cobb-Walgren et al., 1995; Yoo et al., 2000), perceived quality (Bravo et al., 2007; Buil et al., 2013; Nikabadi et al., 2015; Yoo et al., 2000), and brand loyalty (Arora et al., 2015; Mantrala, 2002; Yoo et al., 2000). This is likely to remain

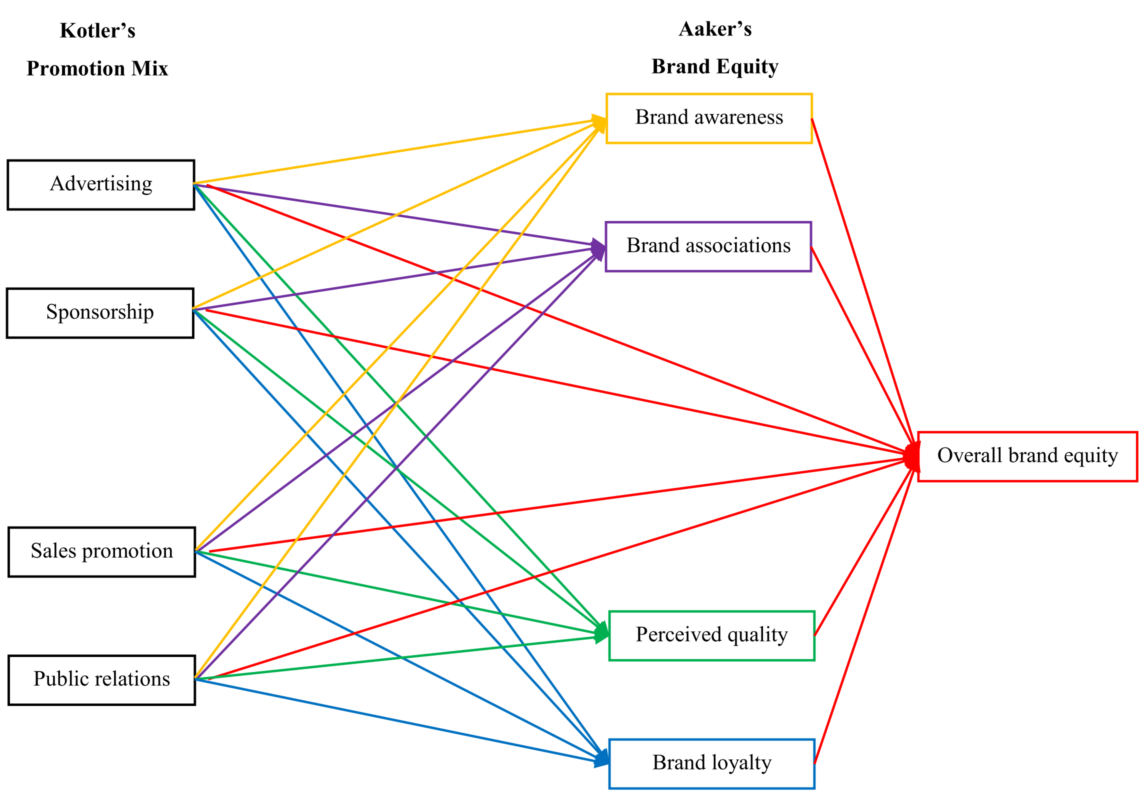

Fig. 1. The conceptual model.

true in the context of low involvement products, as consumers tend to purchase them with little concern and effort and, thus, may change brands (Kassarjian, 1981) when they encounter advertisements that are stimulating. We thus propose:

H1. Advertising has a positive effect on (a) overall brand equity, and specifically, on (b) brand awareness, (c) brand associations, (d) perceived quality, and (e) brand loyalty.

3.2. *Sponsorship and brand equity*

Sponsorship creates brand awareness and fosters brand associations among consumers (Keller, 2001b). The characteristics of low involvement products make sponsorship highly suitable to promote them. In particular, low involvement products are often omnipresent in the marketplace—for example, soft drinks available in eateries, convenience stores, supermarkets, and vending machines. In many instances, low involvement products target a wide range of consumers in the market, making sponsorship, which aims to create high visibility of the brand, a highly effective promotion tool. Nevertheless, most sponsorship research examines high involvement products (Woodside & Summers, 2012). The positive effects of sponsorship on brand equity are shown by previous scholars, wherein sponsorship positively influences brand awareness (Becker-Olsen & Hill, 2006; Chadwick & Thwaites, 2004; Cornwell, 1995; Cornwell et al., 2001; Herrmann et al., 2016), perceived quality (Cornwell et al., 2001), brand associations (Thomas, 2015), and brand loyalty (Mazodier & Merunka, 2012). We thus propose:

H2. Sponsorship has a positive effect on (a) overall brand equity, and specifically, on (b) brand awareness, (c) brand associations, (d) perceived quality, and (e) brand loyalty.

3.3. *Sales promotions and brand equity*

Sales promotions are a promotional tool that marketing organizations often rely on to stimulate interest and generate sales in the short term (Keller, 2001b). However, their effects on brand equity proved conflicting in previous studies. On one hand, sales promotions normally reduce the product price, leading to the consumers' negative impression on brand equity dimensions such as brand associations, brand awareness, perceived quality, and brand loyalty (Buil et al., 2013; Montaner & Pina, 2008; Winer, 1986; Yoo et al., 2000; Zeithaml, 1988). Furthermore, sales promotions negatively affect overall brand equity (Mantrala, 2002; Mela et al., 1997; Valette-Florence et al., 2011; Villarejo-Ramos & Sanchez-Franco, 2005; Yoo et al., 2000), and specific dimensions of brand equity, most noticeably perceived quality (Chaudhuri et al., 2018; Yoo et al., 2000). On the other, sales promotions might help consumers stick with the product brand because of monetary savings and benefits. For example, they have a positive impact on perceived quality (Villarejo-Ramos & Sanchez-Franco, 2005), perceived value (Sinha & Verma, 2018), and brand loyalty (Santini et al., 2016). Moreover, the positive impact of non-monetary promotions is also evidenced in overall brand equity (Chu & Keh, 2006; Palazón-Vidal & Delgado-Ballester, 2005), and specific dimensions such as brand associations and perceived quality (Buil et al., 2013). We align with the former given the short-term switching behavior that entails when sales promotions occur. Specifically, in the context of soft drinks, both monetary (e.g., price discount, coupons) and non-monetary (e.g., gifts, sampling, in-store activities) promotions are applied to stimulate immediate purchase intention, wherein consumers are likely to switch their attention between competitor brands, benefiting the organization running the sales promotions campaign in the short term. We thus posit that the switching behavior does not bode well for brands and predict that sales promotions may produce negative effects on the dimensions of brand equity, which are built over time. Therefore, we propose:

H3. Sales promotions have a negative effect on (a) overall brand equity, and specifically, on (b) brand awareness, (c) brand associations, (d) perceived quality, and (e) brand loyalty.

3.4. *Public relations and brand equity*

Public relations enable reciprocal interactions that help forge and maintain social relationships between the organization and its target market and stakeholders (Smith, 2012). Public relations can therefore help organizations strengthen brand awareness and associations among their target customers. The positive impact of public relations on the dimensions of brand equity—brand awareness (Ratnatunga & Ewing, 2005), brand associations (Hon & Grunig, 1999; Nguyen & Nguyen, 2011; Xie et al., 2015), and perceived quality (Nguyen & Nguyen, 2011)—is demonstrated in previous studies. When applied to low involvement products (e.g., soft drinks), we posit that public relations could create brand recall, brand recognition, and brand associations, useful to enhance brand equity. We concur that consumers might neglect behaviors contributing to brand equity during the purchase process but contend that public relations offer the opportunity to marketing organizations to communicate and develop brand equity. We thus propose:

H4. Public relations have a positive effect on (a) overall brand equity, and specifically, on (b) brand awareness, (c) brand associations, (d) perceived quality, and (e) brand loyalty.

3.5. *Brand equity and its dimensions*

Brand equity is widely sought among marketing organizations (Kotler & Armstrong, 2010; Swaminathan et al., 2020). Aaker's (1991) model of brand equity suggests that brand equity consists of four dimensions, namely brand awareness, brand associations, perceived quality, and brand loyalty. Yoo et al. (2000) extended Aaker's (1991) conceptualization and operationalization of brand equity from a methodological perspective by introducing "overall brand equity" as a higher-order construct to ascertain the contribution of each brand equity dimension (i.e., brand awareness, brand associations, perceived quality, and brand loyalty as lower-order constructs) toward overall brand equity. Nonetheless, neither Aaker (1991) nor Yoo et al. (2000) considered brand equity from a purchase involvement perspective. In this regard, we seek to build on Yoo et al.'s (2000) extension of Aaker (1991) by investigating the relationship between *brand equity dimensions* and *overall brand equity* through a low purchase involvement lens that remains untested. We thus propose:

H5. Brand awareness (a), brand associations (b), perceived quality (c), and brand loyalty (d) positively affect overall brand equity.

The conceptual model, which summarizes all hypotheses, is presented in Fig. 1.

4. Methodology

4.1. *Mixed-methods approach*

This research employed a mixed-methods design that combined qualitative and quantitative studies (Fig. 2). Given the piecemeal approach of previous studies on promotion mix and brand equity, the absence of detailed scrutiny among the two marketing concepts' elements and dimensions indicates a gap that needs to be addressed. Moreover, not every component in the promotion mix has measurement items, namely sponsorship and public relations. Therefore, an exploratory sequential design was best suited for this study's objective (Creswell & Clark, 2017).

The first study included a series of qualitative interviews and focus groups. In-depth interviews with two senior marketing academics and a focus group with six marketing managers were conducted to explore what the promotion mix (with a particular focus on what sponsorship and public relations) and brand equity meant to them, and how they would describe the use of these promotional tools in marketing. These participants were selected to establish the content validity of the themes transposed into measurement items. More importantly, the initial study helped specify the promotion mix elements in practice and develop the

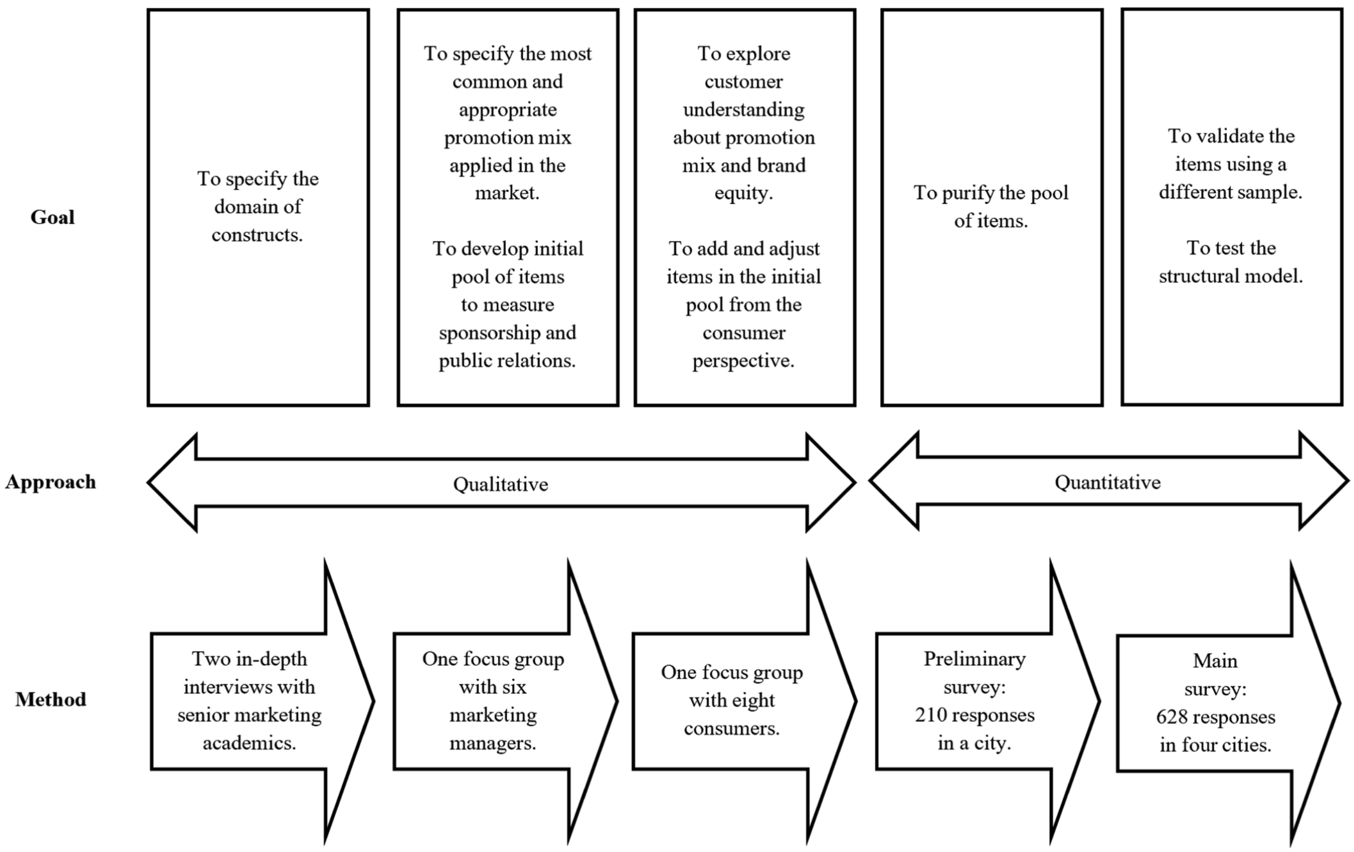

Fig. 2. The study design.

first pool of measurement items for these constructs. A second focus group with eight soft drinks' consumers who recently encountered promotions for soft drinks (e.g., advertising, sponsorship, sales promotions, public relations) was then conducted. After explaining what the promotion mix and brand equity entailed, participants were asked to read, assess, and suggest improvements to all constructs' measurement items. We also requested that they discussed how each element of the promotion mix affected their brand perception and added, removed, or refined the items presented.

The second study included two surveys to purify the measurement items and examine the relationships between the promotion mix elements and the brand equity dimensions. The first served to purify the items, whereas the second served to validate the items and test the hypotheses. SPSS 20 and SPSS AMOS 20 were used for data analyses. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted to purify the items before conducting an internal consistency (or reliability) test on the retained items using Cronbach's alpha. Structural equation modeling (SEM) was applied to examine the relationships postulated through our hypotheses (as depicted in Fig. 1), with the bootstrap method applied to check the estimates' stability.

4.2. Sampling and analysis procedure

For the qualitative study, two senior lecturers in charge of marketing courses in two prominent universities in Ho Chi Minh City, Vietnam, were invited to conduct in-depth interviews. Both, who had at least 25 years of experience delivering marketing knowledge to students, helped clarify our conceptualization and operationalization of the promotion mix elements and the brand equity dimensions based on their academic and industry experience in Vietnam. Further, based on one of the author's networks, who was a senior marketing adviser for several large brands, a focus group discussion among six marketing managers was organized to gather practitioners' opinions about the promotion mix and brand equity. The selection of practitioners was based on several criteria: (1) having at least 10 years of experience in marketing management; (2) the brands they managed frequently carried out marketing and brand promotion campaigns; and (3) previous experience in designing, implementing, and evaluating the promotional campaigns of their brands. Data from the in-depth interviews and the focus group discussion were open coded and classified into themes representing the promotion mix elements and the brand equity dimensions. The outcomes guided the focus group discussion with soft drinks' consumers. The discussion with the consumer group was transcribed and followed an open coding–selective coding process to classify and refine the discussion themes on the promotion mix elements and the brand equity dimensions, including those relating to the measurement items.

For the quantitative study, data were collected from university students, who represent a key segment of soft drinks' consumers. This approach is supported by market research companies and previous empirical studies (Atilgan et al., 2005; Yoo et al., 2000). The sample was collected using a systematic sampling technique that applied a sampling interval of $k = 4$ to a list of students supplied by universities. The students selected were informed in advance and, upon their consent, were asked to complete the questionnaire after their classes before the day ended. This probability sampling method allowed for a more representative sample. In total, two rounds of the survey were conducted—the first to help purify the items and the second to help test our proposed relationships. The first round collected 210 responses in Ho Chi Minh City, whereas the second round collected 628 responses across four large cities in Vietnam—Ho Chi Minh, Ha Noi, Da Nang, and Can Tho. In terms of sampling adequacy, the sample size should be at least five times larger than the number of estimated parameters in EFA (Hair et al., 2010), 10 times larger than those in CFA (Kline, 2011), and at least of 200 for SEM (Hair et al., 2010; Kline, 2011; Weston & Gore, 2006). Thus, the data collected was adequate for the conducted analyses.

Following Yoo et al. (2000), Yoo and Donthu (2001), Netemeyer et al. (2004), and Buil et al. (2013), we first designed a standard questionnaire with "brand X" and then developed versions with specific soft drinks' brands. Two criteria determined the selection of the low involvement product categories and brands. First, the product categories and brands had to be widely available and popular among Vietnamese consumers, to ensure respondents would have the necessary product and brand knowledge to provide valid and reliable responses. Second, the product categories had to entail a broad range of product brands to improve generalizability. Accordingly, we reviewed data concerning soft drinks in Vietnam from Euromonitor International (2019). The leading brands in three key product categories were used for the first survey (Coca-Cola and Pepsi for carbonated soft drinks, Khong Do and C2 for bottled green tea, and Sting and Number One for energy drinks). The leading brands in five key product categories were used for the second survey (Coca-Cola and Pepsi for carbonated soft drinks, Khong Do and C2 for bottled green tea, Sting and Number One for energy drinks, Aquafina and LaVie for bottled water, and Twister and Vfresh for fruit juice drinks). All brands selected were widely available, frequently advertised, and well-known to Vietnamese consumers.

Before proceeding to the survey, respondents were asked whether they had bought and drank soft drinks during the last six months and whether this purchase represented a big investment to them (e.g., effort, time, money), and were only allowed to complete the survey if they answered "yes" to the former and "no" to the latter. The survey had an additional filter question designed to exclude people who worked for any soft drinks' retailer, agent, or distributors, any market research or advertising agency, or any magazine, newspaper, or television agency. Respondents were randomly assigned to a product category and brand. A direct-interview technique was used to collect data; thus, the response rate was close to 100%, which is not unusual in Vietnam (World Bank, 2000).

4.3. Measurement items

Given that previous studies proposed different measures for the dimensions of brand equity and for several, but not all, elements of the promotion mix across different types of products, we argue that the measurements would benefit from a fresh revalidation through a mixed-methods study. Additionally, given that measurement items for sponsorship and public relations, particularly in low purchase involvement settings, are absent in the existing literature, new measurement items were developed.

Overall brand equity was measured using a four-item scale; brand awareness, brand associations, and brand loyalty were measured using three-item scales; and perceived quality was measured using a six-item scale (Yoo et al., 2000). Additional items for brand awareness (Buil et al., 2013) and perceived quality (Nguyen & Nguyen, 2011) were included. The initial measures for sales promotion were adapted from Yoo et al. (2000) and Sinha and Verma (2018), whereas the initial measures for advertising were adapted from Nguyen and Nguyen (2011) and Yoo et al. (2000).

The scales for sponsorship and public relations were newly developed following Churchill's (1979) rigorous eight-stage scale development process: (1) specification of the domain of constructs; (2) generation of a sample of items; (3) initial data collection; (4) purification of items; (5) subsequent data collection; (6) reliability assessment; (7) validity assessment; and (8) norms development, wherein the multitrait–multimethod approach was replaced with EFA and CFA, as suggested by MacKenzie et al. (2011). The process, which is widely adopted in the marketing discipline (e.g., Yoo & Donthu, 2001; Dessart et al., 2016), was adapted within a mixed-method design for this research (Fig. 2). Specifically, the conceptual definitions of these constructs were adopted from Hon and Grunig (1999) and Kotler and Armstrong (2010), adapted to fit the context of the soft drinks' industry for the interviews with senior marketing academics, refined with a group discussion with marketing managers, and further refined in a group discussion with consumers. The items were then purified in the first survey and subsequently validated in the second survey. All items were measured on a five-point Likert scale (1 = "strongly disagree" and 5 = "strongly agree").

5. Findings

5.1. Findings from the qualitative study

5.1.1. Promotion mix from the practitioner's perspective

The group discussion with field experts lasted about 2.5 h. Six practitioners consisting of three marketing managers from the food industry—soft drinks (Tan Hiep Phat), milk (Nutifood), and food (Nestle) (coded as Practitioners 1, 2, and 3)—and three marketing managers from other industries—porcelain (Nam Minh Long), textile (Thai Tuan), and tourism (Ben Thanh Tourist) (coded as Practitioners 4, 5, and 6)—participated in the discussion. Five practitioners held a Master's degree and one, a Bachelor's degree. All had at least 15 years of experience in marketing and 10 years as a marketing manager. All reported that their brands frequently communicated with customers via promotional channels. They typically allocated a budget for "*several planned marketing campaigns such as advertising, sponsorship, and public relations*" (Practitioner 1). Most understood the differences among the types and goals of the promotion mix. For low involvement products, they applied a mix of promotional tools to obtain specific objectives. For example, Practitioner 3 stated that "*the advertising team needs to work frequently because I need new advertising messages to attract customers' attention… sales promotion is also useful to stimulate customers' consumption… we fund some public events occasionally.*"

In a high involvement context, such as tourism, only direct sales, advertising, and public relations were used to promote the brand: "*We gather profiles of potential customers, put them into the data systems, and several salespersons can contact and try to persuade by their trained skills… only advertising and public relations activities are useful… sales promotion? Nonsense! We try to keep the price rather than break the rule*" (Practitioner 6).

The effects of the promotion mix on brand perception were signaled as most practitioners agreed that they implemented a promotion mix for sales in the short term and "*for brand development*" (Practitioner 1). It is noteworthy that practitioners found difficulty in assessing the individual impact of each promotional tool on brand recognition because "*brand recognition [was] obtained as the mix effects of all activities*" (Practitioner 2). For the question regarding items used to describe the concepts of sponsorship and public relations, the first pool of items was generated and is presented in Table 2. Sponsorship was proposed with 20 items, whereas 31 items described public relations.

Table 2
Item pool.

Constructs	Number of items		
	From the literature	Initiated by experts	Refined by consumers
Overall brand equity (BE)	4		5 (BE1–BE5)
Brand awareness (BA)	3		7 (BA1–BA7)
Brand associations (AS)	3		12 (AS1–AS12)
Perceived quality (PQ)	6		17 (PQ1–PQ17)
Brand loyalty (BL)	3		16 (BL1–BL16)
Advertising (AD)	3		10 (AD1–AD10)
Sales promotion (PD)	3		7 (PD1–PD7)
Sponsorship (SP)	Not available	20	15 (SP1–SP15)
Public relations (PR)	Not available	31	25 (PR1–PR25)

5.1.2. Promotion mix and brand equity from the consumer perspective

The group discussion with consumers lasted about two hours. Eight students (coded as Students 1 to 8) were invited from three universities in different districts of Ho Chi Minh City, Vietnam. The age of the respondents ranged from 18 to 22 years old. All respondents reported that they frequently used (i.e., purchased and consumed three to five times per week) and were familiar with the promotion mix of soft drinks' brands. Of the eight respondents, only two said they always choose a specific type of soft drink, but were willing to try a new flavor if offered. Six respondents said that they were flexible when selecting brands. All of the respondents were familiar with advertising, sales promotion, and public relations of soft drinks' brands. One respondent did not distinguish sponsorship from public relations, while four respondents indicated they experienced brand sponsorships in several public events at their universities.

To refine the measurement items of all constructs, respondents were invited to discuss three questions: (1) "*do you understand the following statements about the promotion and brand of soft drinks*"; (2) "*do you have any suggestions to refine the statements (word, sentence) about the promotion and brand of soft drinks*"; and (3) "*do you have any statements to suggest how to describe the promotion and brand of soft drinks.*" From this discussion, more items were gathered regarding overall brand equity and its four dimensions, as well as advertising and sales promotion. Regarding sponsorship and public relations, the discussion helped add and refine the statements. The number of each construct's refined items are presented in Table 2. For example, the statement "*Customers believe that brands that are interested in community development activities will also be interested in customers' benefits*" was refined as "*I believe that brands that are interested in community development activities will also be interested in my benefits.*" "*Brands that are interested in community development activities will have business ethics*" was refined as "*I think that brands that are interested in community development activities will have business ethics*." Additionally, the items generated from the consumer discussion described relevant constructs in line with the academics' initial definitions—e.g., some items of public relations related to community development activities (Huang, 2004), and the dimensions of trust and communal relationship of public relations (Hon & Grunig, 1999). Thus, these were deemed suitable items to measure the public relations construct. Similarly, some statements that related to perceived quality (Zeithaml, 1988) were refined. For example, "*I believe that brands that are interested in community development activities will listen to my feedback*," "*I believe that brands that are interested in community development activities will always implement the commitments with me*," "*I prioritize buying soft drinks' brands that are interested in community development activities*." These statements, which were refined by a professional editor, were then used to develop the preliminary survey used to purify items before validating the scales in the main survey.

The provision of a large number of items to develop a refined set of items is necessary because, first, items in the literature might be applied to various contexts (i.e., different industries and cultural backgrounds). Therefore, it was necessary to adapt the items to the context of soft drinks in Vietnam. Second, several items for sponsorship and public relations were identified via the discussion with six practitioners, but needed adjustments in order to resonate with consumers. Third, the existing scales were developed in developed markets, not an emerging market.

Regarding the effects of promotion mix on brand perception, six students agreed that they "*select products with a price discount*" (Student 3) because they can save money. Once the price discount is frequent, respondents question the quality and expiration date (Student 1 and 2). Regarding the advertising of soft drinks' brands, most respondents felt impressed, attracted, and interested. The respondents stated that they "*can imitate the message voice in that advertising*" (Student 5), and "*looked at the product and immediately remembered the advertising*" (Student 6). Regarding public relations activities, respondents highly appreciated the brands' contributions to the community, which was considered as the ethical "extra-role" expected of brands. Similarly, respondents appreciated sponsorship activities because they experienced the friendliness of a brand during the events.

5.2. Findings from the quantitative study

5.2.1. Participant profile

Both samples' characteristics are presented in Table 3. It is worth noting that the sample distribution was equal from four of Vietnam's most prominent cities (around 25% each) across the 10 brands and five categories analyzed (around 10% each). The proportion of local Vietnamese brands analyzed was 30% (Khong Do, Number One, and Vfresh). Although predominantly female (>70% for both samples) given the student body composition that study social sciences and economics at the universities where the data were collected, the sample was suitable for a significant part of analyzed brands, which target female consumers (e.g., Sting, Vfresh, or Aquafina). Additionally, the age group of most respondents (18 to 23 years) was deemed reasonable because most soft drinks' brands in Vietnam target young people, and almost 40% of Vietnam's population is under 24 years old (BBGV, 2019). Moreover, university students understand and have enough information to answer questionnaires reliably. In short, the sample had adequate representation to supply reliable data from Vietnam.

5.2.2. Common method bias

To avoid common method bias (CMB), first, the mix methods design enabled the building and triangulating of the findings across multiple data points and target respondents. Second, Harman's single-factor test was employed to statistically evaluate CMB (Podsakoff & Organ, 1986). Third, CMB was also estimated by the common latent factor (CLF) approach to add rigor to our CMB evaluation (Podsakoff et al., 2003). Principal axis factoring was performed on all items. The results show that the cumulative percentage of variance of a single construct is 25.9%, well below the 50% threshold (Harman, 1976). Moreover, the CLF test results indicate that all differences are below the 0.20 cutoff, with the highest being 0.15. Therefore, both the Harman's single-factor test and the CLF test indicate that CMB is not a concern in this research.

5.2.3. Measurement model analysis

The first (preliminary) survey with 210 respondents aimed to purify the pool of items. Cronbach's alphas (α) were assessed and an EFA (PCA/Varimax) was conducted twice: the first analysis tested every construct; the second analysis evaluated the brand equity dimensions and then the promotion mix elements. The reliability of all scale items is confirmed ($\alpha \geq 0.6$, item-total correlations ≥ 0.3) (Hair et al., 2010). The EFA was conducted with an eigenvalue of one, resulting in an average variance

Table 3
Profile of participants.

Characteristics	Preliminary survey ($n = 210$)	Main survey ($n = 628$)
Region	One city: Ho Chi Minh (100%).	Four cities: Ho Chi Minh (25.5%), Ha Noi (25.5%), Da Nang (25.8%), and Can Tho (23.2%).
Brand	Six brands: Coca-Cola (15.2%), Pepsi (17.1%), Khong Do (16.7%), C2 (16.2%) Sting (16.7%), and Number One (18.1%).	10 brands: Coca-Cola (10.5%), Pepsi (9.9%), Khong Do (10.0%), C2 (10.0%), Sting (9.9%), Number One (9.9%), Aquafina (9.9%), LaVie (9.9%), Twister (10.2%), and Vfresh (9.9%).
Brand' s origin	Local brands (34.8%) and international brands (65.2%).	Local brands (29.8%) and international brands (70.2%).
Gender	Female (72.9%) and male (27.1%).	Female (71.3%) and male (28.7%).
Age	18 to 22 years (91.9%) and 23 years or more (8.1%).	18 to 23 years (99.2%) and 24 years or more (0.8%).

extracted (AVE) that is>50%, item loadings that are>0.5 (Hair et al., 2010), and variances between loadings that are<0.3 (Jabnoun & Al-Tamimi, 2003), all of which meet the recommended thresholds. The result of the purified scales is presented in Table 4.

For the second (main) survey with 628 respondents, EFA (PAF/Promax), Cronbach's alpha (α), and CFA were assessed. EFA was conducted for all constructs in the structural model. Ten factors were extracted; public relations had two factors but was later confirmed as a single factor using CFA. The CFA reveals that four public relations, three brand loyalty, and one advertising item did not meet statistical thresholds and hindered the scales' unidimensional and convergent validity and thus were removed. The results show that all goodness of fit indices are valid without adjustable solutions ($\chi 2$ = 1318.508, df = 666, p = 0.000, $\chi 2$/df = 1.980, CFI = 0.946, GFI = 0.902, TLI = 0.940, and RMSEA = 0.040); thus, the measures are confirmed to be unidimensional (MacKenzie et al., 2011; Steenkamp & Van Trijp, 1991). Table 5 shows the measures' reliability (CR > 0.6, AVE > 0.5, and $\alpha \geq 0.7$), convergent validity ($\lambda > 0.5$), and discriminant validity (correlations significantly different than one) (Hair et al., 2010; MacKenzie et al., 2011). Moreover, all AVE values are>0.5 (the lowest being 0.506 for brand loyalty). Thus, convergent validity of all measures is established (Fornell & Larcker, 1981). The maximum shared variance (MSV) values for all constructs is also less than their corresponding AVE values (the highest being 0.484 for brand loyalty; see Appendix—Table A1). Hence, discriminant validity of all measures is supported (Hu & Bentler, 1999). The results of the heterotrait–monotrait (HTMT) analysis show all that values are lower than the 0.85 thresholds (Appendix—Table A2). Therefore, all scales possess suitable discriminant validity (Henseler et al., 2015).

5.2.4. Structural model analysis

The overall fit indices, presented in Table 6, indicate a good model ($\chi 2$ = 1386.316, df = 672, p = 0.000, $\chi 2$/df = 2.063, CFI = 0.941, GFI = 0.898, TLI = 0.935, and RMSEA = 0.041). The structural model was also tested for the hypothesized relationships and bootstrap results, which examined the stability of the structural results. The model provides support for H_{1a} and H_{2a}, which indicate that the direct effects of advertising and sponsorship on overall brand equity are significant, with sponsorship producing a greater influence than advertising (0.171 vs. 0.141). However, the results show that the direct effects of sales promotion and public relations on overall brand equity (H_{3a}, H_{4a}) are not significant.

Furthermore, advertising and public relations have direct positive effects on brand awareness, brand loyalty, and perceived quality—with advertising having a larger effect (0.316/0.255; 0.276/0.195; 0.333/0.194). Thus, H_{1b}, H_{4b}, H_{1d}, H_{4d}, H_{1e}, and H_{4e} are supported. However, not all promotion mix elements have a significant direct effect on brand associations. Therefore, H_{1c}, H_{2c}, H_{3c}, and H_{4c} are not supported. In addition, sponsorship only has a significant positive effect on brand loyalty (0.201), supporting H_{2d}, but not H_{2b}, H_{2c}, and H_{2e}. Moreover, sales promotion has a significant negative effect on brand awareness (H_{3b}), but no significant direct effect on brand associations (H_{3c}), brand loyalty (H_{3d}), and perceived quality (H_{3e}).

The results also reveal significantly positive effects of brand awareness, perceived quality, and brand loyalty on overall brand equity; thus, H_{5a}, H_{5c}, and H_{5d} are supported. Conversely, brand associations do not significantly affect overall brand equity, thus H_{5b} is not supported. The implications of these findings are discussed in the next sections.

6. Discussion

6.1. Influence of promotion mix elements on overall brand equity and its components

This study provides several noteworthy findings for discussion.

First, the study reveals mixed influences of the promotion mix on overall brand equity. The direct effect of advertising on overall brand equity was positive (p < 0.05), supporting the findings of Yoo et al. (2000) and Nikabadi et al. (2015). Similarly, sponsorship had a direct positive effect on overall brand equity (p < 0.00). Furthermore, the effect of sponsorship on overall brand equity was greater than advertising's influence (0.171 vs. 0.141). Conversely, the results showed that the influence of public relations (p = 0.188) and sales promotions (p = 0.756) on overall brand equity were not statistically significant, accentuating the importance of sponsorship and advertising to build brand equity of low involvement products.

While several previous studies found a negative effect of sales promotions on brand equity (Cobb-Walgren et al., 1995; Mantrala, 2002; Mela et al., 1997; Valette-Florence et al., 2011; Villarejo-Ramos & Sanchez-Franco, 2005; Yoo et al., 2000; Zeithaml, 1988), others found a positive effect of non-monetary promotions (Chu & Keh, 2006; Montaner & Pina, 2008; Palazón-Vidal & Delgado-Ballester, 2005) across specific segments (Valette-Florence et al., 2011). Albeit insignificant, we found a negative effect, similar to Sriram et al. (2007) who found an insignificant negative effect of sales promotions on brand equity in the toothpaste and dish detergent industries, which are also low involvement, fast-moving consumer goods. Therefore, although not all sales promotions damage overall brand equity (Mantrala, 2002; Palazón-Vidal and Delgado-Ballester, 2005), sales promotion might not be the most desirable way to enhance brand equity (Aaker, 1991) and should be implemented with caution.

The effect of public relations on brand equity was quite surprising. Instead of having a direct impact as expected, public relations had a significant indirect positive effect on overall brand equity through various dimensions, such as brand awareness, brand loyalty, and perceived quality. In short, to enhance overall brand equity, practitioners could use communication campaigns related to advertising, sponsorship, and public relations, but how they are prioritized depends on the context and the desired goals.

Second, this study showed a mixed impact of the four promotion mix elements on Aaker's four dimensions of brand equity. Advertising had the most impact, with its highest effect on perceived quality (0.333),

Table 4
Item purification and verification.

Constructs	Number of items in preliminary survey				Number of items in main survey		
	First EFA	First Alpha	SecondEFA	First Alpha	EFA	Alpha	CFA
Overall brand equity (BE)	5	5	5	5	3	3	3
Brand awareness (BA)	6	6	5	4	4	4	4
Brand associations (AS)	11	9	6	6	4	4	4
Perceived quality (PQ)	15	12	6	5	3	3	3
Brand loyalty (BL)	14	9	9	9	9	9	6
Advertising (AD)	9	8	6	6	6	6	5
Sales promotion (PD)	6	5	5	5	4	4	4
Sponsorship (SP)	15	11	7	6	6	6	6
Public relations (PR)	25	11	11	11	8	8	4

Notes: Alpha = Cronbach's alpha. EFA = Exploratory Factor Analysis. CFA = Confirmatory Factor Analysis.

Table 5
Item reliability and validity.

Constructs and items		λ	CR	AVE	α	Sources
Brand awareness			0.870	0.628	0.866	* adapted from Buil et al. (2013) and Yoo et al. (2000). ** self-developed from the qualitative study.
BA2	*I can recognize X among other competing soft drinks products* *	0.733				
BA3	*I am aware of X brand* *	0.870				
BA4	*I know X brand* *	0.828				
BA6	*I can recognize X easily in other soft drinks* **	0.730				
Brand associations			0.867	0.622	0.864	* adapted from Yoo et al. (2000). ** self-developed from the qualitative study.
AS1	*X's characteristics come to my mind quickly* *	0.763				
AS4	*X is continuously renewed to satisfy my demand* **	0.682				
AS11	*I can remember and recognize X's logo easily* *	0.904				
AS12	*In general, I can image X easily when reminding it* *	0.791				
Perceived quality			0.782	0.545	0.776	** self-developed from the qualitative study.
PQ10	*X has an attractive flavor* **	0.702				
PQ11	*X has a reasonable flavor* **	0.810				
PQ12	*X has the delicious taste* **	0.698				
Brand loyalty			0.860	0.506	0.833	* adapted from Yoo et al. (2000). ** self-developed from the qualitative study.
BL5	*I will continue to rebuy X* *	0.712				
BL7	*I will recommend X to other consumers* *	0.698				
BL8	*I still buy X although others have the same function* **	0.674				
BL9	*I still buy X although others are good like it* **					
BL14	*If having a chance to choose again, I still choose X* **	0.728				
AS8	*X has characteristic enough to persuade me to buy it* **	0.725				
Overall brand equity			0.500	0.655	0.846	** self-developed from the qualitative study.
OBE1	*X is a very racy soft drinks brand* **	0.724				
OBE2	*X is a very attractive soft drinks brand* **	0.855				
OBE3	*X is a very good soft drinks brand* **	0.841				
Advertising			0.847	0.531	0.843	* adapted from Nguyen & Nguyen (2011) based on the initial scale proposed by Yoo et al. (2000). ** self-developed from the qualitative study.
AD6	*X's advertising is very attractive* *	0.814				
AD7	*I like X' advertising very much* *	0.831				
AD2	*In general, I think X' advertising is effective* **	0.605				
AD5	*X's advertising appears frequently* **	0.569				
AD8	*I am impressed by X's advertising* **	0.785				
Sponsorship			0.895	0.588	0.895	** self-developed from the qualitative study.
SP1	*I have sympathy for X due to its sponsorship activities* **	0.754				
SP2	*X's sponsorship activities affect my search about it positively* **	0.755				
SP3	*I like X due to its sponsorship activities* **	0.843				
SP4	*I have a good image with X due to its sponsorship activities* **	0.803				
SP9	*I have goodwill to buy X due to its sponsorship programs' effect* **	0.698				
SP10	*I like to buy X due to its sponsorships activities* **	0.740				
Sales promotion			0.844	0.578	0.840	* adapted from Sinha & Verma (2018) based on the initial scale proposed by Yoo et al. (2000).
PD2	*I like X's sales promotions* *	0.689				
PD4	*I see X's sales promotion is more frequent than competitors'* *	0.698				
PD5	*X's sales promotions are often attractive to me* *	0.862				
PD6	*I like joining X's sales promotions very much* *	0.778				
Public relations			0.807	0.511	0.806	** self-developed from the qualitative study.
PR4	*X is interested in my benefit because it is interested in community development activities* **	0.692				
PR5	*X has real business capacity because it is interested in community development activities* **	0.735				
PR6	*X has business ethics because it is interested in community development activities* **	0.750				
PR8	*X listens to my feedback because it is interested in community development activities* **	0.678				

Notes: X = replaced by specific soft drink brands when designing questionnaires for interviewing respondents. λ = Loading. CR = Composite reliability. AVE = Average variance extracted. α = Cronbach's alpha.

Table 6
Structural model results.

Hypothesis				Structural modeling results				Bootstrap results (n = 1000)			Hypothesis Testing
				Std. β	Unstd. β	S.E.	p	Mean	Bias	SE Bias	
H1a	Advertising	→	Overall brand equity	0.141	0.176	0.069	**	0.140	−0.002	0.002	Supported
H1b	Advertising	→	Brand awareness	0.316	0.384	0.079	***	0.315	0.000	0.002	Supported
H1c	Advertising	→	Brand associations	0.040	0.063	0.100	ns	0.041	0.001	0.002	Not supported
H1d	Advertising	→	Brand loyalty	0.276	0.356	0.077	***	0.272	−0.004	0.002	Supported
H1e	Advertising	→	Perceived quality	0.333	0.432	0.088	***	0.332	0.000	0.002	Supported
H2a	Sponsorship	→	Overall brand equity	0.171	0.146	0.042	***	0.168	−0.003	0.002	Supported
H2b	Sponsorship	→	Brand awareness	−0.071	−0.059	0.051	ns	−0.069	0.002	0.002	Not supported
H2c	Sponsorship	→	Brand associations	−0.032	−0.034	0.067	ns	−0.027	0.004	0.002	Not supported
H2d	Sponsorship	→	Brand loyalty	0.201	0.177	0.050	***	0.204	0.003	0.002	Supported
H2e	Sponsorship	→	Perceived quality	0.062	0.055	0.055	ns	0.062	0.001	0.002	Not supported
H3a	Sales promotion	→	Overall brand equity	−0.016	−0.012	0.040	ns	−0.015	0.001	0.002	Not supported
H3b	Sales promotion	→	Brand awareness	−0.186	−0.140	0.049	**	−0.186	−0.000	0.002	Supported
H3c	Sales promotion	→	Brand associations	−0.029	−0.028	0.065	ns	−0.032	−0.003	0.002	Not supported
H3d	Sales promotion	→	Brand loyalty	0.021	0.017	0.048	ns	0.018	−0.002	0.002	Not supported
H3e	Sales promotion	→	Perceived quality	−0.063	−0.050	0.053	ns	−0.063	−0.001	0.003	Not supported
H4a	Public relations	→	Overall brand equity	−0.063	−0.063	0.048	ns	−0.062	0.001	0.002	Not supported
H4b	Public relations	→	Brand awareness	0.255	0.249	0.057	***	0.254	−0.002	0.002	Supported
H4c	Public relations	→	Brand associations	0.091	0.114	0.073	ns	0.087	−0.004	0.002	Not supported
H4d	Public relations	→	Brand loyalty	0.195	0.201	0.054	***	0.198	0.003	0.002	Supported
H4e	Public relations	→	Perceived quality	0.194	0.202	0.061	***	0.194	−0.001	0.002	Supported
H5a	Brand awareness	→	Overall brand equity	0.222	0.228	0.040	***	0.221	−0.001	0.001	Supported
H5b	Brand associations	→	Overall brand equity	0.050	0.040	0.027	ns	0.049	−0.001	0.001	Not supported
H5c	Perceived quality	→	Overall brand equity	0.115	0.111	0.040	**	0.116	0.001	0.001	Supported
H5d	Brand loyalty	→	Overall brand equity	0.502	0.486	0.050	***	0.504	0.002	0.002	Supported

Notes: *, **, *** = significant at levels of 10%, 5%, 1%. ns = non-significant.

Table A1
Reliability, validity statistics, and correlations.

	CR	AVE	MSV	MaxR(H)	SP	BL	AD	BA	AS	PR	PD	PQ	BE
SP	0.895	0.588	0.328	0.901	**0.767†**								
BL	0.860	0.506	0.484	0.861	0.450***	**0.712†**							
AD	0.847	0.531	0.371	0.872	0.512***	0.460***	**0.729†**						
BA	0.870	0.628	0.128	0.884	0.111*	0.159***	0.270***	**0.793†**					
AS	0.867	0.622	0.007	0.893	0.018	0.065	0.048	0.015	**0.789†**				
PR	0.807	0.511	0.249	0.809	0.499***	0.406***	0.417***	0.273***	0.084†	**0.715†**			
PD	0.844	0.578	0.371	0.863	0.573***	0.387***	0.609***	0.070	0.013	0.407***	**0.760†**		
PQ	0.782	0.545	0.275	0.792	0.288***	0.524***	0.396***	0.190***	−0.068	0.322***	0.257***	**0.738†**	
BE	0.850	0.655	0.484	0.862	0.482***	0.696***	0.527***	0.357***	0.081†	0.377***	0.378***	0.468***	**0.809†**

Notes: CR = composite reliability. AVE = average variance extracted. MSV = maximum shared variance. MaxR(H) = maximum reliability. † = square root of AVE. AD = advertising. SP = sponsorship. PD = sales promotion. PR = public relations. BA = brand awareness. AS = brand associations. PQ = perceived quality. BL = brand loyalty. BE = overall brand equity. *, **, *** = significant at levels of 10%, 5%, 1%.

Table A2
HTMT statistics.

	SP	BL	AD	BA	AS	PR	PD	PQ	BE
SP									
BL	0.453								
AD	0.527	0.459							
BA	0.129	0.183	0.308						
AS	0.017	0.063	0.045	0.026					
PR	0.505	0.411	0.451	0.293	0.079				
PD	0.579	0.394	0.648	0.088	0.009	0.424			
PQ	0.285	0.540	0.407	0.211	0.065	0.323	0.268		
BE	0.492	0.703	0.540	0.389	0.101	0.399	0.397	0.473	

Notes: AD = advertising. SP = sponsorship. PD = sales promotion. PR = public relations. BA = brand awareness. AS = brand associations. PQ = perceived quality. BL = brand loyalty. BE = overall brand equity.

then brand awareness (0.316), and lastly, brand loyalty (0.276). These results align with previous studies, for example, the positive effect of advertising on brand awareness (Bravo et al., 2007; Buil et al., 2013; Chu & Keh, 2006; Nikabadi et al., 2015; Villarejo-Ramos & Sanchez-Franco, 2005; Yoo et al., 2000), perceived quality (Bravo et al., 2007; Nikabadi et al., 2015; Yoo et al., 2000), and brand loyalty (Arora et al., 2015; Mantrala, 2002; Yoo et al., 2000). However, this study did not find a significant positive relationship between advertising and brand associations (p = 0.528), contrary to the findings of Yoo et al. (2000) and Villarejo-Ramos and Sanchez-Franco (2005) in a high involvement product context, and Bravo et al. (2007) in a low involvement product context (Table 1). This result might be explained given that the effect of advertising depends on both the amount invested and the types of messages communicated (Martínez et al., 2009), the relationship between individuals' attitudes toward the advertising and brand associations (Buil et al., 2013), or the context of researched product types

(Adhikari, 2019; Ndubisi & Moi, 2006; Prendergast et al., 2010). In Vietnam, although leading brands (such as Coca-Cola, Pepsi, Khong Do, C2, Sting, Number One, Aquafina, LaVie, Twister, and Vfresh) frequently implement advertising campaigns, their advertising content becomes part of a vast pool of messages and thus individuals may not make specific associations with the advertised brands.

Sponsorship directly and positively influenced brand loyalty (0.201), confirming previous findings (Mazodier & Merunka, 2012), but had no impact on any other brand equity dimension. Previous sponsorship research (e.g., Cornwell et al., 2001) found a direct positive effect of sponsorship on many dimensions of brand equity, including brand awareness (Becker-Olsen & Hill, 2006; Chadwick & Thwaites, 2004; Cornwell, 1995; Cornwell et al., 2001), brand associations (Thomas, 2015), and perceived quality (Cornwell et al., 2001). However, in a low involvement product context (soft drinks) in an emerging market (Vietnam), brands either sponsor events related to their products and target customers (e.g., water-saving campaigns and student sports competitions) in a limited scope, or sponsor television programs that air for a short duration, so their brand logo is briefly presented during the introduction of an event. This could explain the lack of significant direct relationships between sponsorship and brand awareness, brand associations, and perceived quality. As sponsorships may still allow consumers to develop empathy and an overall positive perception of the sponsoring brand, it is reasonable to suggest that sponsorship is primarily used to positively influence brand loyalty of current customers.

Sales promotions had a negative direct effect on brand awareness (−0.186). Thus, sales promotions may help stimulate customer purchases in the short term (Keller, 2001b) but hinder consumers' recall in the long term. As mentioned previously, the results showing no significant positive relationships between sales promotions and overall brand equity or its other dimensions support previous findings regarding overall brand equity (Sriram et al., 2007), brand associations (Buil et al., 2013), and perceived quality (Bravo et al., 2007; Nikabadi et al., 2015). However, they refute previous research that found significant effects on brand equity (Villarejo-Ramos & Sanchez-Franco, 2005; Yoo et al., 2000), perceived quality (Buil et al., 2013; Villarejo-Ramos & Sanchez-Franco, 2005), brand associations, and combined brand awareness (Yoo et al., 2000). Our findings also contradict Sinha and Verma (2018) regarding the significant positive effects of sales promotions on perceived value as a result of improved associations and perceived quality of a brand. However, they confirmed Winer's (1986) implication that monetary promotions fall short of establishing long-term brand associations and can create uncertainty about brand quality, resulting in more negative brand perceptions. In short, the combined evidence indicates that the frequent use of monetary promotions could cause harmful effects as they lead consumers to think primarily about the promotion (or price) instead of the brand (Yoo et al., 2000). These findings are particularly relevant to the soft drinks' industry in Vietnam, given that bundle promotions (e.g., purchase five or six bottles or boxes and get one more free) for traders and/or consumers are the most popular type of sales promotion and receive a significant marketing budget, followed by scratch card promotions as coupons for a chance to get valued or branded gifts.

Public relations also had a direct positive impact on other dimensions of brand equity. In particular, its effect on brand awareness was highest (0.255), followed by its influence on brand loyalty (0.195) and perceived quality (0.194). These findings supported our focus group studies and confirmed previous results, including the positive effect of public relations on brand awareness (Ratnatunga & Ewing, 2005) and perceived quality (Nguyen & Nguyen, 2011). However, the direct positive effect of public relations on brand association was not supported ($p = 0.119$), contrary to previous results (Hon & Grunig, 1999; Nguyen & Nguyen, 2011; Xie et al., 2015). This lack of a significant relationship could be explained by the essence of public relations (e.g., exchange, relationship) and the way they are implemented by the soft drinks' industry in Vietnam, which focused on identifying, establishing, and maintaining mutually beneficial relationships through communal development rather than brand-related activities. Nevertheless, the results also indicated that public relations could indirectly affect overall brand equity through brand awareness, brand loyalty, and perceived quality.

Finally, this study unpacked the relationships between the dimensions of brand equity and overall brand equity in a low involvement product context. In particular, brand awareness, perceived quality, and brand loyalty had direct positive effects on overall brand equity, supporting Yoo et al. (2000). The contribution of brand loyalty to overall brand equity was the largest (0.502), followed by brand awareness (0.222) and perceived quality (0.115). However, the direct effect of brand associations on overall brand equity was not significant ($p = 0.138$), which can be seen as contrary to the findings of Yoo et al. (2000) in a high involvement product context, with brand associations combined with brand awareness. These results were also contrary to Bravo et al. (2007), who reported insignificant positive effects of brand awareness (incorporating brand associations) and perceived quality on overall brand equity. Taken collectively, these findings suggest that consumers' awareness and positive associations of brands are different in the soft drinks' industry and that brand awareness, perceived quality, and brand loyalty are significant predictors or proxies of overall brand equity.

6.2. Influence of promotion mix elements on brand equity for high versus low involvement products

The most notable differences between this study's findings, in a low involvement context, and those in previous research, in a high involvement context, are the following. The first difference pertains to the positive direct effects of advertising and sponsorship on overall brand equity, which differs from the results in previous studies analyzing cars (Chattopadhyay et al., 2010) and sports products (Cornwell et al., 2001). The second difference relates to the lack of effect of public relations and sales promotions on overall brand equity, and in particular, the noteworthy indirect effect of public relations through brand awareness, brand loyalty, and perceived quality. Third, contrary to previous findings (Villarejo-Ramos & Sanchez-Franco, 2005; Yoo et al., 2000), the lack of a positive relationship between advertising and brand associations that, as previously discussed, could be due to the vast pool of messages that consumers are exposed to. Finally, the fact that brand associations did not directly affect overall brand equity is also contrary to Yoo et al.'s (2000) findings.

7. Conclusion

7.1. Theoretical contributions

This study contributes to theory by providing a deeper understanding of the complex yet vital role of the promotion mix in brand equity creation in a low involvement purchase context, with evidence from soft drinks' products in an emerging market. Its findings ascertain the generalizability of previous studies in a high involvement purchase context. Specifically, the study has six theoretical implications.

First, this study highlights the essential role of advertising in brand equity creation. In particular, the direct positive effects of advertising on overall brand equity and its associated dimensions of brand awareness, brand loyalty, and perceived quality are established, but not on brand associations. This finding implies that advertising may be more effective to inform (i.e., brand awareness) and persuade (i.e., brand loyalty, perceived quality), rather than to remind (i.e., brand associations) customers about low involvement product brands.

Second, this study explains the role of sponsorship in brand equity creation. In particular, sponsorship has a direct positive impact on overall brand equity and brand loyalty, but not on brand awareness, brand associations, and perceived quality. These findings imply that although the elevated image and goodwill of low involvement product brands that engage in sponsorships can help foster brand loyalty, brands may not yield any additional improvements in their awareness, associations, and perceived quality. In other words, sponsorship is an element of the promotion mix that is most useful for low involvement product brands that wish to connect with existing customers or to solidify and strengthen brand communities.

Third, sales promotions, specifically monetary promotions, may damage brand awareness, although they do not have adverse effects on overall brand equity and its other dimensions. These results differ from those of previous studies, as previously discussed. Sales promotions, in a low involvement product context, should only be used in the short term as a sales stimulant, and should not be relied upon to develop brand equity.

Fourth, this study reveals the direct positive effects of public relations on brand awareness, brand loyalty, and perceived quality. However, contrary to expectations, a significant effect on overall brand equity and brand associations was not found. This reaffirms the simplicity and transient nature of low involvement products.

Fifth, this study improves the generalizability of previous studies by investigating the effect of brand equity dimensions on the overall brand equity of low involvement products. A direct positive influence of all dimensions on overall brand equity was found, except for brand associations. The effect of brand loyalty was most prominent. These findings are an important indicator of the roles of each dimension for overall brand equity, and the dubious effect of brand associations on overall brand equity, consistent with past critiques of Aaker's (1991) model (Baalbaki & Guzmán, 2016; Chatzipanagiotou et al., 2016; Christodoulides et al., 2015).

Sixth, this study indicates the magnitude of effects of the promotion mix elements on overall brand equity and its dimensions. In particular, the effects of advertising on brand awareness, brand loyalty, and perceived quality were greater than those of public relations. The direct effect of advertising on perceived quality was highest, followed by brand awareness. The effect of public relations on brand awareness was higher than its effect on brand loyalty and perceived quality. Furthermore, the contribution of brand loyalty to overall brand equity was the most prominent, followed by brand awareness and perceived quality. These findings clarify the role of each element of the promotion mix in influencing the dimensions of brand equity, and they represent essential contributions to the existing knowledge on the topic.

In short, among abundant studies that have researched the influence of promotion mix on brand equity, this study, to the best of our knowledge, is the most integrative and effectively accentuates consumer evaluations in a low involvement purchase context. The findings and newly developed measures of sponsorship and public relations could be effectively used to assess the impact of the promotion mix on brand equity and its dimensions.

7.2. Managerial implications

The findings provide several implications for practice, most of which have already been presented in the discussion section. To summarize, first, brand practitioners should carefully consider the deployment of the promotion mix to enhance brand equity given the mixed impacts of each of its elements on each dimension of brand equity. In particular, advertising and public relations strategies should be applied when a new product brand is launched to enhance brand awareness and perceived quality. For example, advertising (e.g., television commercial, outdoor and indoor banners, and newspaper and website banners) and public relations programs (e.g., famous spokesperson-presented and product superiority-focused articles) were used to launch the Khong Do Green Tea brand (Tan Hiep Phat Beverage Company) into the market in Vietnam. As a result, the brand was able to directly compete with other famous international brands such as Lipton and C2 tea brands and is now one of the two leading brands in Vietnam's bottled green tea market (Euromonitor International, 2019). Conversely, Tops and 100 Green Tea lacked public relations programs, and their results were not good. They were even transferred to another owner (i.e., the 100 Green Tea brand was transferred to Uni-President Corporate from Tribeco Beverage Company). These examples serve as evidence of the effectiveness of advertising and public relations strategies to attract new customers.

Second, sponsorship can be applied to further develop current customers' brand loyalty and consequently grow overall brand equity. For example, the Number One energy drink brand (Tan Hiep Phat Beverage Company) frequently sponsors sports events (e.g., football league, bike racing, and student sports competitions) and television programs. As a result, this brand has become one of the two leading brands in the energy drink market in Vietnam (Euromonitor International, 2019), although it rarely performs other marketing mix programs. Nevertheless, our findings show that sponsorship activities are not necessarily the most effective tool to influence brand equity of low involvement products. Finally, sales promotions should only be applied when brands need to bump up sales in the short term, as frequent sales promotions can hinder brand awareness, an observation that is attributed to shifting consumers' focus to the promotion rather than the brand. In the long term, the brand equity of low involvement products may be affected if sales promotions are used excessively, such as in the case of X2 energy drink and 100 Green Tea brands (Tribeco) that have frequently used sales promotions and have not grown as expected.

7.3. Limitations and future research directions

This study has several limitations that pave the way for future research. First, this study is unable to provide a direct and fair comparison of the relationships under investigation for low against high involvement purchases because of conflicting results in previous studies. In fact, this study is the first to test all elements of Kotler's promotion mix against all dimensions of Aaker's brand equity in a single study, thus providing a starting point for future research including its replication in a high involvement product context. Second, although Aaker's consumer-based brand equity model is widely accepted, validating these findings using more recent brand equity conceptualizations should be pursued. Third, consumer-based measures were developed to fit the soft drinks' category. Future research could further validate these findings using different types of low involvement products, including under new product development concepts such as product brand crossover (Lim et al., 2020). Fourth, there are many kinds of sales promotions, including monetary and non-monetary promotions, or CFB and non-CFB promotions, that have a different nature, but this study only focused on general sales promotions. Future research could examine the effect of specific types of sales promotions on brand equity or its dimensions, including the use of conditional or experimental research designs to establish causality (Lim, 2015, 2021; Lim et al., 2020). Fifth, although appropriate for the study's purpose, this study employed students as participants, hindering the generalization of the findings. Sixth, this study examined the relationships between the promotion mix and brand equity from a consumers' perspective. Differences in the promotion's effectiveness across multiple countries from a retailers' perspective should also be examined (Ailawadi et al., 2009). Future research could thus evaluate the effects of different types of promotion mix, including trade promotion, consumer promotion, and new media and their allocation from a retailers' performance perspective. Finally, customer equity management is an important topic that needs to be studied (Manatrala, 2002). Future research could consider this perspective to extend the findings herein.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix

(See: Tables A1 and A2).

Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jbusres.2021.12.028.

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Analogical reasoning and regulatory focus: using the creative process to enhance consumer-brand outcomes within a co-creation context

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Abstract

Purpose – New product development (NPD) is increasingly being delegated to consumers, yet little research has investigated consumer-centric factors that may influence this delegation. Thus, the purpose of this paper is to uniquely combine regulatory focus and analogical reasoning to investigate new product ideation and downstream consumer-brand responses.

Design/methodology/approach – A series of experiments were undertaken.

Findings – Study 1 revealed that promotion-focused consumers (as opposed to prevention-focused consumers) have significantly greater purchase intentions if given an analogical reasoning task before engaging in new product ideation due to their cognitive flexibility. Study 2 tested the effects of near vs far analogies and found that promotion-focused consumers use analogical thinking to a greater extent and have significantly higher purchase intentions if primed with far analogies because regulatory fit is enhanced. However, analogical thinking and purchase intentions significantly drop if primed with near analogies. In contrast, prevention-focused consumers use analogical thinking to a greater extent and have significantly higher purchase intentions if shown near analogies, compared to far analogies, because of improved regulatory fit. Both studies confirm a serial mediation chain involving task engagement, self-brand connection, and brand sincerity.

Research limitations/implications – This research extends current understanding regarding the role of creative tasks within consumer NPD. It also uniquely links regulatory focus and consumer task engagement in NPD to increase favorable brand responses.

Practical implications – Findings offer managerial insights that can positively increase consumer-brand outcomes during NPD.

Originality/value – This is one of the first studies to demonstrate the importance of analogical thinking and consumer-centric factors (i.e., regulatory focus) during the NPD process. This avenue of research is important, as most studies have neglected ways in which to increase consumer NPD task engagement, leaving resources unutilized.

Keywords Creativity, Consumer Behaviour, New product development, Regulatory fit, Regulatory focus, Co-creation, Analogical reasoning, Consumer psychology

Paper type Research paper

Introduction

Consumers desire creative experiences and expect to have a voice when it comes to the development of new products, which is often expressed in the form of co-creation (Chang and Taylor, 2016; Cui and Wu, 2016). More specifically, co-creation occurs when an

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organization and its stakeholders collaboratively solve problems (Prahalad and Ramaswamy, 2004). These collaborative endeavours often take the form of consumers envisioning, prototyping, and offering up new product ideas. As a result, while new product development (NPD) was once conducted within the boundaries of an organization, emphasis has recently been placed on the merit of involving consumers in the co-creation of ideas (Chang and Taylor, 2016; Cui and Wu, 2016; Luo and Toubia, 2015; Schreier *et al.*, 2012).

These collaborative efforts are likely to have a lasting presence for several reasons. First, with recent breaches in data privacy, consumers have lost trust in companies, and co-creation has been cited as an effective way to rebuild trust, with 86% of respondents stating that they view collaborative brands as being more trustworthy (Bulbshare, 2019; Hootsuite, 2019). Second, younger populations, such as millennials and Gen Z, increasingly desire creative experiences, with 40% of millennials stating they want to co-create products with organizations, and Gen Z asserting that creative endeavours and customization are vital to their individualism (JWT Intelligence and Snap, 2019; Millenial Marketing, 2016). Third, co-creative brands have been shown to outperform non–co-creative brands. For example, the Iris (2019) Participation Brand Index demonstrated that participatory brands not only have a higher employee retention rate but also outperformed the bottom 20 brands with a return of 4 times higher. Lastly, NPD co-creation is growing as a global phenomenon (PTI, 2019; Ugwuede, 2019). This information suggests that the desire to engage in NPD co-creation is not merely a fad but rather likely to increase as companies are placing increased efforts on consumer ideation, and customers are increasingly participating in creative opportunities (Dahl and Moreau, 2007; Hoffman *et al.*, 2010; Mehta and Zhu, 2015; Wu *et al.*, 2015).

Despite the importance and growing popularity of co-creation, the topic has primarily been examined from a strategic perspective, leaving the consumer behavior side relatively unexamined. This oversight has resulted in several gaps. First, some question the organizational benefits of co-creating with consumers (Chang and Taylor, 2016; Kristensson *et al.*, 2004) and have called for additional research regarding the best consumers to collaborate with and how to get the most out of them in regards of maximizing profits and soliciting more creative ideas (Gemser and Perks, 2015; Hoffman *et al.*, 2010). Second, scholars have demonstrated that when soliciting new ideas, creativity can be cultivated through the process of analogical reasoning (Dahl and Moreau, 2002), but research has yet to investigate how such reasoning can be used to enhance co-creation outcomes. Third, given the significance of analogical reasoning (Dahl and Moreau, 2002; Goode *et al.*, 2010), it is important to understand consumer-centric factors that might influence one's ability to engage in this creative thought process and the internal consumer processes that occur when doing so. These factors are particularly important, as scholars have called for further research regarding psychological motivation to engage in co-creation (Hoyer *et al.*, 2010). Furthermore, internal consumer processes often lead to intentions to purchase a brand, and, therefore, hold much managerial importance (Barczak *et al.*, 2009; Dijk *et al.*, 2014; Füller *et al.*, 2009; Gemser and Perks, 2015; O'Hern and Rindfleisch, 2010; Mantovani *et al.*, 2018).

To address these gaps, the present study uniquely combines precepts from analogical reasoning and a consumer-centric motivational factor, regulatory focus, to investigate how a creative task during NPD co-creation can be modified to enhance both creativity and purchase intentions. More specifically, humans are motivated by two fundamental systems – either by one's duties, obligations, and securities, which results in less flexible thought processes, or by achieving one's hopes, aspirations, and dreams, which results in more flexible thought processes. The former is called a prevention focus, and the latter a promotion focus (Baas *et al.*, 2011; Friedman and Förster, 2001, 2002; Higgins, 1997). On the other hand, analogical reasoning is defined as a thought process that relies upon cognitive flexibility to transfer or apply knowledge from a familiar domain to one that is unfamiliar and not only tends to produce exceptionally creative output but also can be easily used by managers (Gick and Holyoak, 1983; Dahl and Moreau, 2002). Furthermore, analogies are well suited for co-creation endeavours as analogies can be easily adapted (i.e., near vs far analogies; Gentner *et al.*, 2001; Gentner and Kurtz, 2006) to fit consumer-centric cognitive flexibility capabilities. We are not aware of another combination of both a motivational theory and a creative approach that jointly handle these features.

Thus, two studies address the previous gaps by using cognitive flexibility to connect regulatory focus and analogical reasoning. Specifically, the following research questions are addressed. First:

Q1. How do regulatory focus and analogical reasoning interact to influence purchase intentions within an NPD co-creation context?

Second:

Q2. What is the underlying psychological processing motivating this interaction?

Third:

Q3. How do analogical reasoning and regulatory focus influence the creativeness of NPD co-created ideas, as judged by a professional?

Findings reveal that when engaging in NPD co-creation, promotion-focused individuals, as opposed to prevention-focused, have significantly greater purchase intentions if first given an analogical reasoning task before new product development ideation. However, adjusting analogical distance can enhance effectiveness for both motivational mindsets. Specifically, prevention-focused consumers, who are often considered creatively impaired (Baas *et al.*, 2011), can also be creative and experience enhanced purchase intentions if primed with images having common ground (near analogies) as inspiration, compared to promotion individuals who need images with less common ground (far analogies). In both studies, individual task engagement, self-brand connection, and brand sincerity mediate these processes. Additionally, Study 1 found that providing an analogical reasoning task produced ideas that were significantly more creative, whereas Study 2 extended these findings to show that far visual analogies produced ideas that were the most creative. Furthermore, post hoc analysis demonstrated that promotion (prevention)-focused consumers are more engaged when analytical (imagery) based analogies are used.

Conceptual development

Creativity and analogical reasoning

Creativity has become an inherent part of consumer-brand interactions, especially with the growing desire to co-create products and services (Chang and Taylor, 2016; Luo and Toubia, 2015). When it comes to the creative process, scholars are in general agreement that creativity is an ability and not merely a trait (Burroughs and Mick, 2004; Moreau and Dahl, 2005) and can be cultivated through a variety of cognitive methods. From a new product development perspective, such methods include brainstorming (Gordon, 1961), benchmarking (Ulrich, 2003), lateral thinking (De Bono, 1971), user observation (Leonard and Rayport, 1997), mind mapping (Goldenberg and Mazursky, 2002), lead user analysis (Von Hippel, 1986), problem inventory analysis (Tauber, 1975), reverse engineering (Altschuler, 1984), morphological analysis (Tauber, 1972) and analogical reasoning (Gick and Holyoak, 1983). Despite the abundance of techniques, analogical reasoning is generally considered to be the foundation of truly creative and innovative output (Chan *et al.*, 2011; Dahl and Moreau, 2002; Goode *et al.*, 2010; Gick and Holyoak, 1983; Martins *et al.*, 2015), as discussed in more detail below.

Analogical reasoning occurs when an individual accesses, retrieves and transfers semantic knowledge from a familiar domain (the base) to an unfamiliar and unknown domain (the target) (Gick and Holyoak, 1983). The base and target domain often share commonalities but are physically dissimilar. For example, if a designer is given a creative task such as creating furniture that resembles elements of nature, he/she may first gather inspiring images of nature, such as the seven world wonders, and explore how these landmarks could then be recreated as furniture pieces. In the previous example, the seven wonders serve as the base domain (i.e., familiar information), whereas the outcome of furniture serves as the target domain (i.e., unfamiliar information).

Connecting a base and a target domain is a common theme in creativity, and this idea is supported by prior scholarship that links analogical reasoning with the creative process. For example, analogical reasoning is the foundation of many creativity theories such as associative learning theory (Mednick, 1962) and the theory of inventive problem-solving (Altshuller and Altov, 1996). It has also been linked to innovative output and problem-solving (Chan *et al.*, 2011; Martins *et al.*, 2015)) and scientific breakthroughs (Gentner *et al.*, 2001). More importantly, analogical reasoning is well-suited for situations involving consumers because the process of connecting a familiar domain with an unfamiliar involves a personal element (i.e., emotional, sensory and cognitively) that can help focus attention to the creative task and form positive product–brand associations (Goode *et al.*, 2010).

Despite the importance of analogical reasoning to the creative process, scholars have generally disregarded the importance of consumer-centric motivational factors that influence one's ability to engage in analogical thinking. This oversight is particularly surprising, as prominent conceptual frameworks suggest these consumer-centric factors are critical antecedents to co-creation and new product development and ultimately have the power to influence key firm and customer outcomes such as creativity and purchase intentions. More specifically, Hoyer *et al.* (2010) propose that consumer motivation to engage in co-creation can be classified into four dimensions – financial, social, technological, and psychological.

The first three dimensions have received considerable attention. However, psychological motivation to engage in co-creation has been relatively neglected, despite the abundance of research demonstrating that internal psychological processes often lead to intentions to purchase a brand and therefore hold much managerial importance (Barczak, Griffin, and Kahn, 2009; Dijk *et al.*, 2014; Füller *et al.*, 2009; Gemser and Perks, 2015; O'Hern and Rindfleisch, 2010; Mantovani *et al.*, 2018). With this in mind, there is one consumer-centric motivational factor that has been shown to play a pivotal role in creative endeavours, and by extension, likely has an influence on analogical reasoning, but to date, has been overlooked both within the co-creation and analogical reasoning literature. This factor is an individual's regulatory focus.

Regulatory focus and creativity

According to regulatory focus theory, humans seek to fulfill goals, emotions, feelings, and overall behavioral intentions based upon the motivation to either seek pleasure or avoid pain. The former is called promotion-focused and the latter prevention-focused (Higgins, 1997). More specifically, promotion-focused consumers are most concerned with the achievement of accomplishments, aspirations, and approach-oriented behavior in the hopes of advancing beyond the status quo (i.e., 0 to +1) to achieve positive end states. In contrast, prevention-focused individuals seek to avoid negative end states that could cause them to fall below the status quo (i.e., 0 to −1) and therefore are concerned with their security, duties, and obligations, resulting in avoidance-related behavior (Freitas and Higgins, 2002). It is important to note that regulatory focus can be situationally induced or measured as a chronic trait. The forthcoming discussion refers to regulatory focus as a chronic trait as scholars have demonstrated that past experiences with either promotion or prevention success distinctly influence creative endeavours (Zhou *et al.*, 2017). Furthermore, consumers tend to respond more favorably when their chronic regulatory state (vs situational prime) matches the context at hand, especially in situations involving regulatory fit (Keller and Bless, 2006).

Prior scholarship has provided substantial evidence for the relationship between regulatory focus and creativity (Baas *et al.*, 2011; Förster and Dannenberg, 2010; Friedman and Förster, 2001, 2002), but the connection to analogical reasoning has remained unexamined despite it being likely that promotion and prevention individuals engage in analogical reasoning differently. For example, in their pursuit of advancement, promotion-focused individuals tend to judge their immediate environment as benign, which allows them to focus their attention on the "bigger picture" in hopes of advancing beyond the status quo to achieve their dreams (Higgins, 1997). In turn, the freedom to explore the "bigger picture," often leads promotion-focused consumers (compared to prevention) to engage in exploratory and creative behavior stemming from their ability to be more cognitively flexible (Friedman and Förster, 2001). Cognitive flexibility is defined as the ability to mentally adapt cognitive strategies to form new responses to unexpected situations or challenges by reconfiguring information. (Amabile, 1996; Förster and Dannenberg, 2010; Guilford, 1967). Cognitive flexibility plays a central role in the reasoning process by granting the flexibility to re-represent information to build new relationships (Gentner, 1983).

As a result, the cognitive flexibility of those with a promotion focus enables these individuals to use analogical reasoning to build mental relationships that form out-of-the-ordinary connections. These out-of-the-ordinary connections diverge from those that are predictable and representative of previously formed, familiar mental relationships. For example, a promotion-focused consumer may see a set of old milk crates (readily available information) and imagine a rustic bed frame (information from long-term memory) constructed out of the old crates. Therefore, these connections tend to produce exceptionally creative ideas (Baas *et al.*, 2011).

Unlike those with a promotion focus, prevention-focused consumers have less cognitive flexibility, making it harder for these individuals to be creative (Baas *et al.*, 2011; Friedman and Förster, 2001, 2002). Indeed, in their attempt to maintain the status quo, prevention-focused individuals continually monitor their external environment for threats and thus engage in risk-averse, vigilant processing. These characteristics limit the cognitive resources necessary to engage in the flexible thought process of analogical reasoning, which inhibits creativity (Friedman and Förster, 2001). As a result, prevention-focused consumers are more likely to build connections between easily available and relatable information units to form predictable, familiar, and unchanged connections (Friedman and Förster, 2001). Therefore, these unchanged and familiar connections tend to produce fewer creative ideas compared to a promotion focus. For example, a prevention-focused individual may see a set of old milk crates and make the easy connection that if turned upside down, the crate could make a good side table.

Creating regulatory fit through analogical reasoning

Given the characteristic of analogical thinking described above, marketers may be able to align analogical thinking with consumers' motivational frames during the co-creation process to create positive brand outcomes. One such opportunity lies in the alignment of analogical thinking with regulatory focus to create regulatory fit. According to regulatory fit theory, when an individual accomplishes a task, such as co-creation, in a way that sustains one's regulatory focus, it triggers feelings of "rightness" which increases the value and importance of what the individual is doing (Avnet and Higgins, 2003). In turn, these feelings of "right" and "importance" then transfer to the object and experience that triggered these feelings (Malär *et al.*, 2011).

Regulatory fit is likely to be especially important to the consumer creative process. In general, it can be challenging to encourage creativity amongst consumers, despite the growing desire of customers to be involved in the co-creation of products (Baas *et al.*, 2011). Thus, scholars have called for a greater understanding of the motivation behind (dis) engagement in the creative process and ways to enhance creative task engagement (Zhang and Bartol, 2010). Regulatory fit may be the answer. Indeed, in addition to creating "feelings of rightness" and importance, regulatory fit determines action and engagement. For example, situations of fit lead to greater task engagement, whereas regulatory incongruence creates disengagement. As co-creation is an action process, achieving regulatory fit is likely to be an important component in the co-creation process.

With this in mind, we propose that using analogical reasoning to complete a co-creation task (i.e., product ideation) will create regulatory fit among promotion-focused individuals. We propose this for the following reason. Promotion-focused consumers are more cognitively flexible, and the foundation of analogical reasoning relies upon cognitive flexibility. Thus, if promotion-focused consumers use analogical reasoning to complete a co-creation task, they will be accomplishing the task in such a way that allows them to sustain their regulatory orientation of maintaining a flexible and creative processing style but in an enhanced state. The enhanced ability to engage in analogical reasoning should result in more creative ideas, and the resulting regulatory fit will trigger feelings of "rightness" and importance, which will transfer to the object/experience that triggered these feelings. Within the present context, the experience is co-creating while the object is the brand. These feelings should increase purchase intentions. In support of this, prior scholars have shown that the transference effects from regulatory fit enhance purchase intentions (Higgins, 2005. In contrast, promotion individuals that do not receive an analogical reasoning task will not experience an enhanced state from regulatory fit, and thus there will be no difference in the creativeness of their ideas or purchase intentions.

In contrast, prevention-focused consumers are less cognitively flexible and prefer to maintain vigilant against possible threats. Thus, using analogical reasoning to complete a co-creation task may inhibit their ability to remain vigilant, which creates regulatory incongruence likely leading to disengagement in the creative task. This disengagement should result in there being no difference in the creativeness of their ideas or purchase intentions compared to those who received no task. However, the subsequent sections explore a boundary condition to this assertion and show when prevention consumers could benefit from using analogical reasoning. In summary:

H1. Regulatory focus interacts with analogical reasoning such that promotion-focused consumers will have (a) ideas that are more creative and (b) greater purchase intentions if they use analogical reasoning to complete a co-creation task compared to those who did not use analogical reasoning.

H2. There will be no difference in (a) the creativeness of ideas or (b) purchase intentions for prevention-focused consumers who do not use analogical reasoning to complete a co-creation task compared to those who do.

Enhancing the effectiveness of regulatory fit by varying analogical distance

Building on precepts from regulatory fit and the argument that promotion (prevention) consumers are more (less) cognitively flexible, it is likely that a general approach to analogical reasoning may not be the most effective strategy for maximizing fit effects. Therefore, the process of analogical reasoning should be adapted to better appeal to an individual's regulatory focus to enhance states emerging from regulatory fit. Herein lies the specific importance of analogical reasoning as opposed to other forms of creative thinking, in that analogies can be modified based upon their correspondence to similar or dissimilar domains, formally called near or far analogies (Gentner *et al.*, 2001; Gentner and Kurtz, 2006). In other words, analogical reasoning and regulatory focus align well because analogies can easily be adapted to fit an individual's prevention (i.e., near analogies) or promotion-focused (i.e., far analogies) mindset. Other motivational theories and creative approaches do not handle these features.

Near analogies represent distinctions made between two similar domains, such as designing innovative products by exploring current innovations in the market. In contrast, far analogies represent cognitive mapping between dissimilar domains such as designing innovative products by exploring abstract photos as inspiration (Gentner and Kurtz, 2006). Far analogies result in superior creative output in the form of originality, novelty, and usability, but may also carry drawbacks due to cognitive demands (Chan *et al.*, 2011). For example, it is difficult to form, retrieve, and make far analogical connections, but more advantageous to creative output to do so. Echoing this sentiment, Cai *et al.* (2010) demonstrate that those with less creative experience (opposed to those with more) require considerably different approaches to analogical thinking to inspire creativity, which one would expect true for promotion and prevention co-creators.

Indeed, the cognitive flexibility of a promotion focus should lead these individuals to favor a task that encourages far analogical thinking, as opposed to near, because it allows them to more strongly sustain their regulatory orientation of maintaining a cognitively flexible processing style. This further enhanced state should result in even more creative ideas and greater purchase intentions. In support of this sentiment, it has been suggested that those with more creative experience (i.e., promotion individuals) perform better when encouraged to think more abstractly (i.e., far analogies) compared to less abstract thinking (i.e., near analogies) which can cause fixation, loss of inspiration and a decline in creative output (Cai *et al.*, 2010; Lee *et al.*, 2009).

In contrast, prevention-focused individuals require an analogical reasoning modification that will help them overcome their creative limitation of being less cognitively flexible, which is more aligned with near analogical reasoning. It is important to note that, despite their creative limitations, prevention individuals still desire creative experiences, it is just more difficult for them to be creative (Baas *et al.*, 2011). Thus, encouraging those with a prevention focus to use near analogical reasoning during a co-creation task should create regulatory fit. We propose this for the following reason. Near analogical thinking makes it easier to make connections between concepts, thus allowing prevention consumers to satisfy their desire to be creative while still allowing the cognitive freedom to remain vigilant against threats in the immediate environment. Thus, prevention consumers can complete a task in such a way that allows them to maintain their motivational focus, creating regulatory fit, resulting in an enhanced state that leads to more creative ideas and greater purchase intentions. Formally:

H3. Regulatory focus interacts with analogical reasoning such that promotion-focused consumers will have (a) ideas that are more creative and (b) greater purchase intentions if they use far analogical thinking to complete a co-creation task.

H4. In contrast, prevention-focused consumers will have (a) ideas that are more creative and (b) greater purchase intentions if they use near analogical thinking to complete a co-creation task.

Mediators of the co-creation process: task engagement, self-brand connection, and brand sincerity

Achieving regulatory fit during co-creation is important for the reasons outlined above but also because it is the first step in activating a causal chain that can lead to greater purchase intentions. More specifically, regulatory fit is an activating state that enhances task engagement (Avnet and Higgins, 2003; Lee *et al.*, 2009). Given that co-creating is an active process involving completing a task, regulatory fit is particularly well suited for the present context. While activation is important, enhancing task engagement is particularly significant, as it is a necessary first element toward being creative (Gilson and Shalley, 2004; Shalley, 1991) and also influences consumer-brand co-creation behavior (Hsieh and Chang, 2016). Thus, task engagement is an important first step in influencing downstream responses.

One such downstream response likely to be influenced by enhancing task engagement through regulatory fit is self-brand connection. Self-brand connection occurs when a brand "fits" a consumer's sense of self and can form when brand associations help consumers meet their motivational goals (Chaplin and Roedder John, 2005; Escalas, 2004). Thus, drawing on precepts from regulatory fit theory, as a consumer becomes more engaged in a task, fit should be further enhanced as the task is helping to sustain the individual's regulatory orientation, which is an important component of oneself (Higgins, 1997). Because the brand is part of the task helping to sustain the individual's regulatory orientation, consumers are likely to develop a connection to the brand. Furthermore, the feelings of "rightness" elicited from regulatory fit transfer to the object and experience which triggered these feelings (Malär *et al.*, 2011). In the present context, the brand is part of the engaging task that helped consumers feel "right" about what they are doing, which is likely strengthens one's connection to the brand.

Finally, as self-brand connection deepens, consumers are likely to perceive the brand as being sincere (Swaminathan *et al.*, 2009). According to Aaker (1997), a sincere brand appears to be honest, genuine, and down-to-earth, which appeals to the essential nature of human beings. An important distinction of brand sincerity is that it represents qualities often sought in a connecting relationship with another entity such as a friend or, in the present context, a brand encouraging co-creation (Swaminathan *et al.*, 2009). Therefore, given that regulatory fit enhancing task engagement, which is theorized to deepen self-brand connection, these feelings of connection should result in consumers perceiving the brand as being sincere. In turn, brand sincerity will likely increase purchase intentions. In support of this sentiment, scholars have suggested a link between brand sincerity and purchase intentions (Aaker, 1997; Dijk *et al.*, 2014; Ramaswamy and Ozcan, 2015). Taken together:

H5. (a) Task engagement, (b) self-brand connection, and (c) brand sincerity will mediate the effect of promotion focus during an analogical reasoning task on consumer purchase intentions.

Study 1

Study design

Study 1 employed a 2 (analogical reasoning: task present versus no task) X 2 (regulatory focus: promotion vs prevention) between-subjects design. Regulatory focus was run as a continuous variable by subtracting prevention from promotion and then analyzed at 1 standard deviation above/below the mean, as well as at the mean itself. Authors have noted the advantages of this approach as opposed to a median split or a high/low split that omits the mean (Spiller *et al.*, 2013). Those who are −1 standard deviation below the mean were labeled as predominately prevention-focused, whereas those who are +1 standard deviation above the mean are labeled as predominately promotion-focused. However, for ease of discussion, we refer to those who are predominately promotion-focused as "promotion" and those who are predominately prevention-focused as "prevention." In all, 224 undergraduate students from a large Southwestern university completed the study in exchange for extra credit; however, 12 students were removed for failing an attention check, which resulted in a final sample of 212 usable responses. The sample consisted of 86 males and 126 females, with an average age between 18 and 24 years old.

Participants first answered questions pertaining to their chronic regulatory focus and were then randomly assigned to one of two new product development scenarios. The first scenario served as the control condition in which participants were introduced to a fictitious company named Luca and saw the following:

- *Background*: Luca Company currently specializes in dish wear designs like the cup shown in their advertisement below. Going forward, Luca wants to revamp their brand to be seen as more creative/innovative and needs your help to do so.
- *Task*: Help Luca Co. create **new dishware design ideas**. Please be creative and try to think outside of the box. The products you create should be both original AND useful. When creating new products, design specialists often find it helpful to imagine who will use the product, as well as using it yourself. Please push yourself to be creative. You can list up to 10 ideas.

In the second condition, before seeing the previous scenario, analogical thinking was primed with two tasks. In the first task, participants were presented with a series of ten analogical reasoning questions and asked to select the correct answer. For example, one of the questions asked the following: "Odometer is to mileage as compass is to?" After completing the ten analogies, participants answered the following open-ended question: Now that you are familiar with analogies, how could they be used to imagine and create new products? To the best of the author's knowledge, no prior studies have attempted to prime analogical thinking, and so inspiration was drawn from Chan *et al.* (2011) and Vendetti *et al.* (2014). After answering the open-ended question, participants were then presented with the same scenario as the control group. Finally, all participants answered questions about their task engagement, brand sincerity, brand connection, purchase intentions, and demographics (gender and age). At the end of the survey, participants were debriefed and informed they were participating in a fictitious research study.

Measures

Measurement items consisted of chronic regulatory focus (Haws *et al.*, 2010), task engagement (adapted from Zhang and Bartol, 2010), self-brand-connection (adapted from Escalas, 2004), brand sincerity (Aaker, 1997), and purchase intentions (adopted from Spears and Singh, 2004). Scale items and alphas can be found in Table 1. All items were measured along a seven-point Likert scale with the endpoints "strongly disagree" to "strongly agree,"

Measurement items		
Chronic Regulatory Focus (Haws et al., 2010)		
Promotion Focus		α = 0.68
I feel like I have made progress toward being successful in my life.		
When I see an opportunity for something I like, I get excited right away.		
I frequently imagine how I will achieve my hopes and aspirations.		
I see myself as someone who is primarily striving to reach my "ideal self" – to fulfill my hopes, wishes, and aspirations.		
Prevention Focus		α = 0.74
Not being careful enough has gotten me into trouble at times. (R)		
I often worry about making mistakes.		
I frequently think about how I can prevent failures in my life.		
I see myself as someone who is primarily striving to become the self I "ought" to be – fulfill my duties, responsibilities and obligations		
Task Engagement (Zhang and Bartol, 2010)		α = 0.85
I spent time trying to understand the nature of the task.		
I tried to think about the problem from multiple perspectives.		
I tried to decompose the task into parts to obtain greater understanding.		
I tried to consider diverse sources of information in generating my ideas.		
I tried look for connections with solutions imagined in seeming diverse areas.		
I tried to devise potential solutions that move away from established ways of doing things.		
I tried to spend time shifting through information to help generate new ideas.		
Self-Brand Connection (Escalas, 2004)		α = 0.91
I feel a personal connection to Luca.		
Luca reflects who I am.		
I can identify with Luca.		
Brand Sincerity (Aaker, 1997)		α = 0.89
Down-to-earth	Wholesome	
Family-oriented	Original	
Small-town	Cheerful	
Honest	Sentimental	
Sincere	Friendly	
Real		
Purchase Intentions (Spears and Singh, 2004):		α = 0.95
Definitely do not intend to buy/Definitely intend		
Never/Definitely		
Very low/High purchase interest		
Definitely not buy it/Definitely buy it		
Probably not/Probably buy it		
Mood		α = 0.92
Happy/ Unhappy		
Good/ Bad		

Table 1.
Measurement items and scale reliability

apart from purchase intentions, which was measured along a seven-point semantic-differential scale. Creativity was also measured following the method of Dahl and Moreau (2002). Specifically, two independent coders, blind to the experiment, with over 10+ years of new product design experience, coded the respondent's ideas along three dimensions: creative, original, and innovative. Inter-rater reliability between the two judges was assessed via the interclass correlation coefficient and proved acceptable (α = 0.76). All creativity items were measured along a seven-point Likert-scale with the endpoints being "not at all" and "very." A confirmatory factor analysis (CFA) confirmed satisfactory discriminant and convergent validity (Web Appendix), and observed power was acceptable (0.97).

Manipulation check
Using a subset of items from the task engagement scale, a composite measure was created to check for the manipulation of analogical thinking. Two items ("I tried to consider diverse sources of information in generating my ideas" and "I tried to look for connections with solutions imagined in seeming diverse areas") were averaged. The items capture whether or not analogical reasoning was active during the new product development stage and reflect the idea that analogical reasoning draws from diverse sources to make connections between domains (Holyoak and Thagard, 1996). As expected, the no task (M = 4.87) versus task (M = 5.23) manipulation was significant, $F(1, 211) = 5.36$; $p < 0.05$.

Results
Direct effects showed a significant difference in creativity between conditions, with the analogical reasoning condition (M = 3.33; $F(1, 211) = 5.52$; p = 0.01) producing significantly more creative ideas than the no task condition (M = 2.90). Furthermore, there was a significant positive relationship between creativity and regulatory focus (b = 1.98; p = 0.049). As regulatory focus increased (i.e., promotion focus), design ideas become more creative. Due to the strong direct effects, the interaction between regulatory focus and analogical reasoning on creativity was insignificant ($p > 0.10$ fails to provide support for H1a and H2a).

Next, the interaction between regulatory focus and analogical reasoning on purchase intentions was significant (b = 0.46, t = 2.03, p = 0.04; Figure 1). Consistent with H1b, promotion-focused consumers had significantly greater purchase intentions (b = 0.74, t = 2.9, $p < 0.004$) if they received an analogical reasoning task (M = 4.63) as opposed to those who received no task (3.90). Additionally, these results also proved significant at the mean value of regulatory focus (b = 0.38, t = 2.12, $p < 0.03$; $M_{\text{Analogical Task}}$ 4.47 versus $M_{\text{No Task}}$

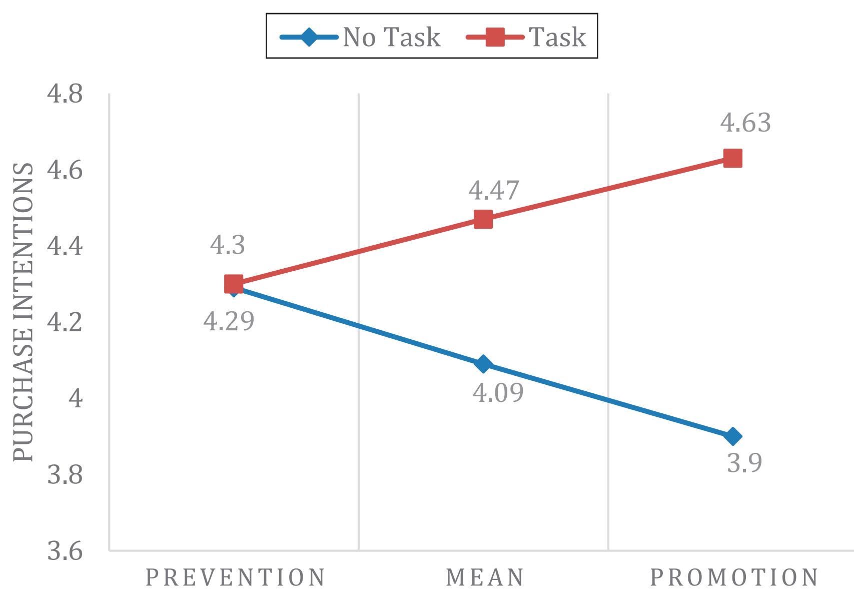


Figure 1.
Interaction between regulatory focus and analogical reasoning task on purchase intentions

4.09). Furthermore, as predicted by H2b, there was no significant difference between purchase intentions for those with a prevention focus (b = 0.01, t = 0.04, $p > 0.05$; $M_{\text{Analogical Task}}$ = 4.30 versus $M_{\text{No Task}}$ = 4.29). There was no direct effect of regulatory focus ($p > 0.05$). However, those in the analogical task condition ($M_{\text{Analogical Task}}$ = 4.48; $F(1, 211)$ = 4.34; p = 0.02) had significantly greater purchase intentions than those in the no task condition ($M_{\text{No Task}}$ = 4.10). Gender and age were controlled for in both analyses but were insignificant ($p > 0.05$).

Mediation analysis

Before testing the proposed serial mediation chain that the effect of regulatory focus is serial mediated by task engagement, self-brand connection, and brand sincerity, an interaction between regulatory focus and condition with task engagement (the first mediating variable) as the dependent variable was run using Process Model 1. The interaction was significant (b = 0.34, t = 2.09, p = 0.04). Specifically, promotion-focused individuals were significantly more engaged in the task within the analogical task condition compared to the no task condition (b = 0.34, t = 2.09, p = 0.04, $M_{\text{Analogical Task}}$ = 5.39, $M_{\text{No Analogical Task}}$ = 4.82). There was no significant difference between conditions for the prevention-focused consumers ($p >$ 0.10, $M_{\text{Analogical Task}}$ = 4.98, $M_{\text{Analogical Task}}$ = 5.00). The previous results provide initial evidence that the first mediating variable of task engagement differs depending upon the level of regulatory focus and condition.

To examine the full serial mediation model (*H5*) and better understand differences, Process Model 6 (Hayes, 2013) was used with 10,000-bootstrap resampling within the analogical task condition. Specifically, the following serial mediation model was explored: regulatory focus served as the focal independent variable, with task engagement as the first mediating variable, self-brand connection as the second mediating variable, brand sincerity as the third mediating variable, and purchase intentions as the dependent variable. The mean indirect effects excluded zero for the multiple mediators, indicating significant serial mediation in support for *H5* (b = 0.005, SE = 0.004, CI_{95}: [0.0008, 0.02]). Furthermore, in the presence of the mediators, the direct effect of the interaction between promotion and analogical reasoning on purchase intentions is no longer significant (b = 0.09, SE = 0.11, CI_{95}: [−0.13, 0.30]), indicating full mediation. More specifically within the analogical condition, as regulatory focus increases consumers become significantly more engaged in the co-creation task (b = 0.23, SE = 0.09, CI_{95}: [0.05, 0.42]). As task engagement increases individuals experience a deeper connection to the brand (b = 0.43, SE = 0.13, CI_{95}: [0.16, 0.69]). This self-brand connection leads to greater perceptions of brand sincerity (b = 0.16, SE = 0.06, CI_{95}: [0.05, 0.27]), which in turn significantly enhance purchase intentions (b = 0.33, SE = 0.13, CI_{95}: [0.07, 0.60]). Figure 2 shows the path coefficients, standard errors, p values, and confidence intervals.

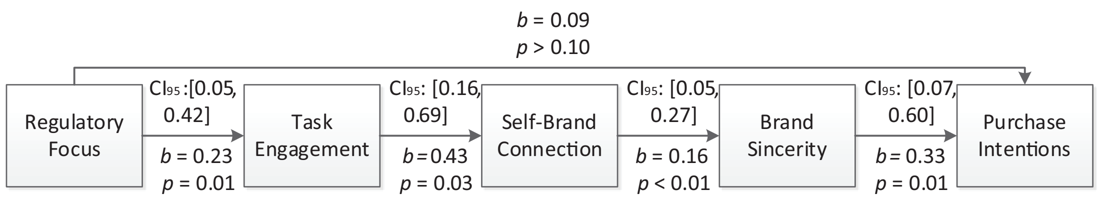


Figure 2.
Underlying process motivating effect of regulatory focus on purchase intentions within the analogical reasoning task condition

Discussion

Study 1 examined the influence of analogical reasoning and regulatory focus on creativity and found a positive relationship between those with a promotion focus and the creativeness of design ideas. In other words, our findings support prior research demonstrating that promotion-focused individuals tend to be more creative (Baas *et al.*, 2011). However, interestingly, results demonstrate that providing an analogical reasoning task produced significantly more creative ideas, regardless of regulatory focus. These results suggest that when engaging customers in NPD ideation, a creative task, such as analogizing, should be incorporated to bolster and improve creative output. Indeed, many have questioned whether or not customer participation in new product development is worth the time and effort (Fang, 2008). In response, this study provides initial evidence that analogical reasoning can produce useful and creative content from consumers that can help give organizations a competitive edge.

Study 1 also provided initial evidence for the interaction effect of regulatory focus and analogical reasoning. More specifically, promotion-focused consumers had greater purchase intentions if they receive an analogical reasoning task before developing new product ideas versus receiving no task. However, there was no significant difference between the two conditions for a prevention focus. These findings provide evidence regarding the importance of matching one's regulatory focus to the task at hand, especially as it concerns promotion-focused consumers. Lastly, study 1 also revealed the psychological process underlying the increase in purchase intentions when given a creative analogical reasoning task. Specifically, it found that regulatory focus is positively associated with task engagement, which in turn leads to self-brand connection, brand sincerity, and ultimately purchase intentions. Study 2 builds upon study 1 by demonstrating the effect of analogical distance on creativity and purchase intentions.

Study 2

The purpose of Study 2 is threefold. First, it seeks to enhance realism by priming analogical thinking using photos as inspiration, which has been noted as a potentially helpful method of encouraging far-thinking and is more managerially useful (Gentner and Kurtz, 2006). Second, Study 2 explores the interplay between analogical distance and regulatory focus on purchase intentions. Lastly, the study concludes by providing further evidence of the proposed underlying psychological serial mediation process.

Study design

Study 2 employed a 2 (regulatory focus: prevention vs promotion) by 3 (analogical reasoning: near vs far vs control) between-subjects design. In all, 220 participants were recruited from Amazon Mechanical Turk in exchange for monetary compensation; however, 26 participants were removed for failing an attention check, which resulted in a final sample of 194 responses. The sample consisted of 109 males and 84 females with an average age between 24 and 34.

Using the same procedure as Study 1, participants first answered questions pertaining to their chronic regulatory focus. Next, analogical distance was primed in one of two ways. The first way, those in the near condition were asked to design innovative products and were inspired by viewing photos of products that were anticipated to have common themes with innovation. The photos were selected based on Internet sources stating that the photos were innovative (Gentner and Kurtz, 2006). Details of the photo selection pretest below. The scenario is as follows:

> Hello! Let me introduce you to Design Lab, a company that specializes in the development of innovative products. Once a year, we fund a crowdsourcing campaign where we ask consumers to come up with new product ideas, and then we pick the top five ideas to create working replicas.
>
> We ask that you please take a moment and come up with three ideas. The ideas can be anything, and our design professionals often find it helpful to draw inspiration from various photos. Therefore, we have provided three photos that we hope will inspire you. Please take a moment and carefully look through each of the photos and provide an idea for each of the three photos. Please push yourself to be creative and imagine that you are a consumer participating in the scenario presented. Design Lab thanks you for your time and effort!

The second way, those in the far condition were asked to design innovative products and were inspired by viewing photos of abstract images that were anticipated to have no common themes with innovation. The photos were selected based on Internet sources stating that the photos were abstract (Genter and Kurtz, 2006). Details of the photo selection pretest below. The scenario is as follows:

> Hello! Let me introduce you to Design Lab, a company that specializes in the development of innovative products. Once a year, we fund a crowdsourcing campaign where we ask consumers to come up with new product ideas, and then we pick the top five ideas to create working replicas. We ask that you please take a moment and come up with three ideas. Please push yourself to be creative. Design Lab thanks you for your time and effort!

Following the manipulation of analogical distance, all participants answered questions about their task engagement, brand sincerity, self-brand connection, purchase intentions, and demographics (gender and age). At the end of the survey, participants were debriefed and informed they were participating in a fictitious research study.

Pretest of photos

The selected photos were pretested to ensure they did not significantly differ with respect to being inspirational, which has been shown to be an important component of using photos to design products (Cai *et al.*, 2010). Specifically, three photos within each condition were selected to represent near vs far visual aids. Next, 103 participants were recruited from Amazon Mechanical Turk and were randomly assigned to see either the near or far photos. Each participant was then asked to rate each of the photos (using a seven-point Likert scale with endpoint strongly agree to strongly disagree) along the three dimensions to capture inspiration (α = 0.97: "I find this photo inspirational," "This photo will help inspire me to imagine new design ideas," and "This photo inspires me to be creative.") An analysis of variance (ANOVA) showed an insignificant difference between the two conditions in regards to inspiration ($F(1, 102) = 0.11$; $p > 0.10$, $M_{\text{Near}} = 4.23$, $M_{\text{Far}} = 4.31$).

Measures

All measures remained the same except for the addition of change in mood (calculated by subtracting the participant's mood at the end of the survey from their mood at the beginning of the survey) and task difficulty ($\propto = 0.87$). Creativity was measured in the same fashion by the same two judges, and the interclass correlation coefficient was acceptable ($\propto = 0.74$). A CFA confirmed satisfactory discriminant and convergent validity (Web Appendix), and observed power was acceptable (0.92).

Manipulation check

To test the effectiveness of the manipulation, participants in the near and far condition were asked four questions ($\alpha = 0.74$): "The items pictured in the photos were related to new products," "The items pictured in the photos reminded me of new product," "It was easy to see the connection between the items pictured in the photos and new product," and "It was easy to see how the items pictured in the photos were related to new products." As expected, those in the analogically near condition perceived the items in the photos as being similar to new products ($F(1, 106) = 8.77$; $p = 0.002$); $M = 2.79$), whereas those in the analogically far condition viewed the items in the photos as being significantly different from new products ($M = 3.69$).

Results

An ANOVA showed a significant direct effect in creativity ($F(2, 193) = 7.55$; $p < 0.001$; $M_{\text{Near}} = 3.33$, $M_{\text{Far}} = 4.33$, $M_{\text{Control}} = 3.16$) between the control and far condition ($p < 0.001$) and between the far and near condition ($p < 0.001$). Specifically, the analogically far condition produced the most creative ideas, followed by the near, and lastly, the control condition. Likewise, there was also a positive direct effect of regulatory focus (i.e., promotion) on creativity ($\beta = 0.279$; $t = 3.08$; $p = 0.002$). The interaction between regulatory focus and analogical reasoning distance on creativity was insignificant ($p > 0.10$ fails to support H3a and H4a).

Next, a univariate GLM with 10,000 bootstrap resampling was used to test the interaction of analogical distance and regulatory focus on purchase intentions and revealed a significant interaction ($F = 2.52$; $p = 0.04$; Figure 3). Specifically, in support of H3b, promotion focus consumers had significantly greater purchase intentions in the far vs near condition ($p = 0.04$, CI_{95}: [0.43, 2.08], $M_{\text{Far}} = 5.89$, $M_{\text{Near}} = 4.86$), in the control vs. near condition ($p = 0.02$, CI_{95}: [0.17, 2.00], $M_{\text{control}} = 5.92$, $M_{\text{Near}} = 4.86$), but not in the control vs far condition ($p > 0.10$, CI_{95}: [−0.81, 0.95], $M_{\text{control}} = 5.92$, $M_{\text{Far}} = 5.89$). There was no

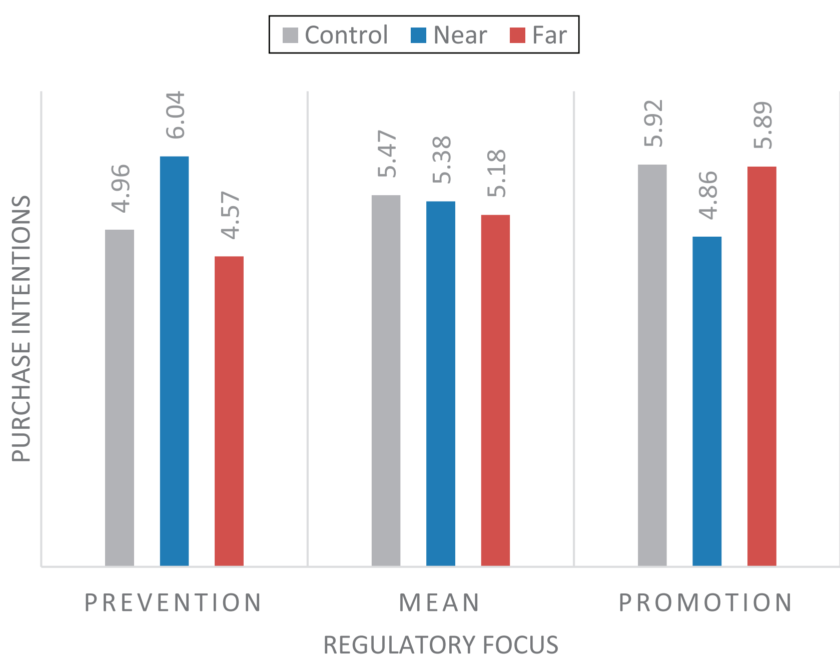


Figure 3.
Interaction of regulatory focus and analogical reasoning distance on purchase intentions

significant difference ($p > 0.05$) at the mean value of regulatory focus ($M_{\text{Far}} = 5.18$, $M_{\text{Near}} = 5.38$; $M_{\text{control}} = 5.47$).

In support of H4b, prevention-focused consumers had significantly greater purchase intentions in the near vs far, ($p = 0.04$, CI_{95}: [0.06, 2.89], $M_{\text{Near}} = 6.04$, $M_{\text{Far}} = 4.57$), in the near vs control condition ($p = 0.04$, CI_{95}: [0.11, 2.26], $M_{\text{Near}} = 6.04$, $M_{\text{control}} = 4.96$), but not in the control vs far condition ($p > 0.10$, CI_{95}: [−1.06, 2.53], $M_{\text{control}} = 4.96$, $M_{\text{Far}} = 4.57$). The direct effect of condition on purchase intentions was insignificant ($F(2, 191) = 0.64$; $p > 0.10$), but the direct effect of regulatory focus on purchase intentions was significant ($b = 0.22$, $t = 3.04$, $p = 0.003$). Change in mood, gender, age and task difficulty were controlled for, but all were insignificant.

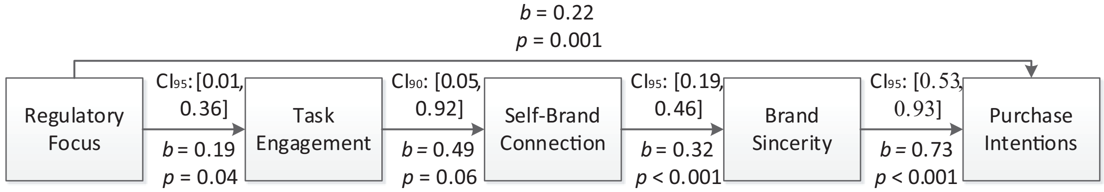
Mediation analysis

Prior to testing the proposed serial mediation chain that the effect of regulatory focus is serial mediated by task engagement, self-brand connection, and brand sincerity, an interaction between regulatory focus and condition with task engagement as the dependent variable was run using a univariate GLM with 10,000-bootstrap resampling. The interaction was significant ($F = 6.78$; $p < 0.001$). Specifically, prevention-focused individuals were more engaged in the creative task within the near analogical condition such that there was a significant difference between the near vs control conditions ($p < 0.01$, CI_{95}: [0.46, 2.71], $M_{\text{Near}} = 6.39$, $M_{\text{control}} = 4.81$), the near vs far conditions ($p = 0.02$, CI_{95}: [0.21, 2.87], $M_{\text{Near1}} = 6.39$, $M_{\text{Far}} = 4.86$), but not the control vs far conditions ($p > 0.10$, CI_{95}: [−1.08, 0.98], $M_{\text{control}} = 4.81$, $M_{\text{Far}} = 5.86$).

In contrast, promotion-focused consumers were most engaged in the creative task in the control and far conditions such that there was no significant difference between the control vs far conditions ($p > 0.10$, CI_{95}: [−0.89, 1.20], $M_{\text{control}} = 5.92$, $M_{\text{Far}} = 5.76$), but there was a significant difference between the control vs near conditions ($p < 0.001$, CI_{95}: [0.77, 2.63], $M_{\text{control}} = 5.92$, $M_{\text{Near}} = 4.22$) and the far vs near conditions ($p < 0.01$, CI_{95}: [0.50, 2.58], $M_{\text{Far}} = 5.76$, $M_{\text{Near}} = 4.22$). The previous results provide initial evidence that the first mediating variable of task engagement differs depending upon the level of regulatory focus and condition.

To examine the full serial mediation model (*H5*) and better understand differences, Process Model 6 (Hayes, 2013) was used with 10,000-bootstrap resampling. There was no difference in purchase intentions between the control and near conditions; therefore, the data were collapsed into one condition, and the proposed causal chain was run within the aggregated condition to test the effect of the serial mediation model on promotion-focused consumers (Figure 4). The mean indirect effects excluded zero for the multiple mediators, indicating significant serial mediation ($b = 0.02$, SE = 0.01, CI_{95}: [0.001, 0.05]). However, in the presence of the mediators, the direct effect of regulatory focus remained significant, indicating partial serial mediation ($b = 0.15$, SE = 0.04, CI_{95}: [0.07, 0.23]). More specifically, within the analogically far condition as regulatory focus increases, consumers become significantly more engaged in the task ($b = 0.13$, SE = 0.06, CI_{95}: [0.02, 0.25]). As task

Figure 4.
Underlying process motivating the effect of regulatory focus on purchase intention within the analogically far condition



engagement increases individuals experience a deeper connection to the brand (b = 0.70, SE = 0.13, CI_{95}: [0.44, 0.95]). This self-brand connection leads to greater perceptions of brand sincerity (b = 0.33, SE = 0.04, CI_{95}: [0.25, 0.41]), which in turn significantly enhance purchase intentions (b = 0.62, SE = 0.07, CI_{95}: [0.47, 0.76]).

Lastly, the same casual chain was run within the near condition to see if prevention individuals had the same underlying psychological response as promotion consumers. In the analogically near condition (Figure 5), the mean indirect effects excluded zero for the multiple mediators, indicating significant serial mediation (b = −0.06, SE = 0.05, CI_{95}: [−0.24, −0.008]). Additionally, in the presence of the mediators, the direct effect of regulatory focus was insignificant indicating full serial mediation (b = 0.03, SE = 0.10, CI_{95}: [−0.19, 0.24]). More specifically, within the analogically near condition, as regulatory focus decreases, consumers become significantly more engaged in the co-creation task (b = −0.48, SE = 0.09, CI_{95}: [−0.66, −0.30]). As task engagement increases, individuals experience a deeper connection to the brand (b = 0.51, SE = 0.24, CI_{95}: [0.02, 0.99]). This self-brand connection leads to greater perceptions of brand sincerity (b = 0.43, SE = 0.07, CI_{95}: [0.29, 0.57]), which in turn significantly enhance purchase intentions (b = 0.60, SE = 0.17, CI_{95}: [0.25, 0.95]). Figures 4 and 5 show the path coefficients, standard errors, p values and confidence intervals. These findings provide additional support for *H5*.

Post hoc analysis 1

A post hoc analysis was conducted to test the effect of analogical distance (near vs far photos) and regulatory focus on level of analogical thinking (measured in the same way as Study 1; $\propto$ = 0.92). Specifically, Process Model 1 was used and showed a significant two-way interaction between analogical distance and regulatory focus (b = 0.59, t = 3.92, p = 0.002; Figure 6). Prevention-focused consumers used analogically thinking significantly more (b = −1.0, t = −3.47, $p < 0.001$) when exposed to near photos (M = 5.67) than far (M = 4.67), whereas promotion-focused consumers engaged in analogical thinking significantly more when viewing far photos (b = 0.61, t = 2.10, p = 0.04, M_{Near} = 5.16 vs M_{Far} = 5.77). There was no significant difference ($p > 0.05$) in analogical thinking between either condition at the mean value of regulatory focus (M_{Near} = 5.41 vs M_{Far} = 5.21). There was no main effect of condition (F(2, 191) = 0.60; $p > 0.10$) or regulatory focus (b = 0.10, t = 1.51, $p > 0.10$) on analogical thinking.

Post hoc analysis 2

An additional post hoc analysis was conducted to further our understanding of differences between promotion vs prevention people, depending upon the type of analogical task. More specifically, in Study 1, analogical thinking was primed using analogies that were more analytical, whereas in Study 2, analogical thinking was primed using visual analogies (i.e., photos). It is possible that prevention and promotion individuals had different responses to the two types of analogical tasks, and this may have influenced their NPD ideation engagement.

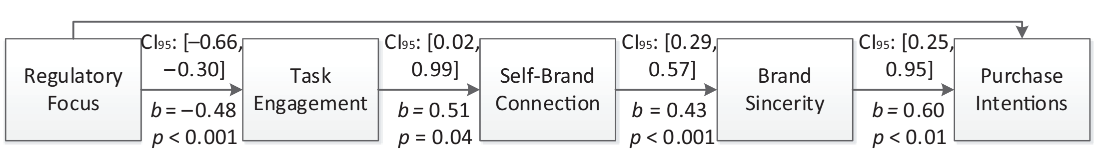


Figure 5. Underlying process motivating the effect of regulatory focus on purchase intention within the analogically near condition

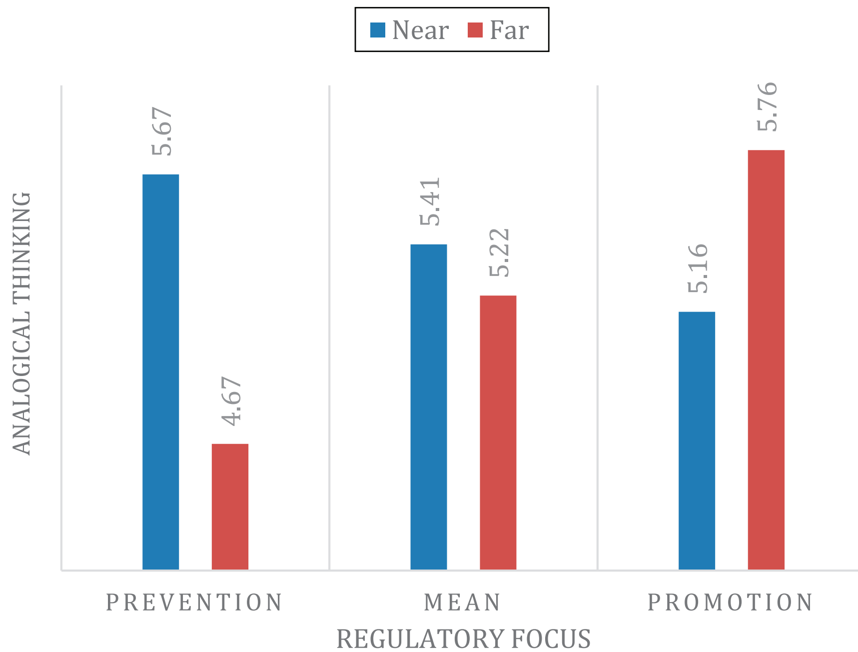


Figure 6.
Interaction between regulatory focus and analogical distance on level of analogical thinking

Engagement was chosen as the dependent variable in this post hoc analysis because it represents the first step in the mediation chain and, therefore, represents a critical first step for enhancing purchase intentions. Thus, data from Studies 1 and 2 were combined (220 responses). Process Model 1 was used to test the interaction effect between regulatory focus (promotion vs prevention) and type of analogical approach (analytical vs visual) on NPD ideation engagement. The two-way interaction was significant ($b = -0.41$, $t = -3.53$, $p < 0.001$; Figure 7) with prevention individuals showing significantly more engagement with the visual analogies ($b = 0.54$, $t = 2.87$, $p < 0.01$; $M = 5.55$) used in Study 2 compared to the analytical ($M = 4.99$) analogies used in Study 1. In contrast, promotion individuals preferred the analytical analogies ($b = -0.43$, $t = -2.19$, $p = 0.03$; $M = 5.52$) as opposed to the visual analogies ($M = 5.09$). There was not a significant difference in task engagement ($p > 0.05$) at the mean value of regulatory focus between either condition ($M_{\text{Analytical Analogies}} = 5.26$, $M_{\text{Visual Analogies}} = 5.31$).

Theoretically, this makes sense, as prevention individuals tend to be less visual and, therefore, may have found the visual analogies more helpful and engaging. In contrast, promotion individuals tend to be less analytical and more creative, which requires greater use of mental imagery (Finke, 1996; Naletelich *et al.*, 2019; Roy and Phau, 2014). Thus, promotion consumers may have found the analytical analogies in Study 1 more helpful and engaging as the analytical analogies helped to compensate for a cognitive shortcoming. These also highlight an additional contribution of the paper in that type of analogical approach matters, but additional research is needed.

Discussion

Adjusting analogical distance is a helpful way for consumers to overcome creative limitations when co-creating products. In support of this assertion, Study 2 shows that visually distant analogies result in ideas that are more creative compared to near or no visual analogies. Furthermore, Study 2 demonstrates that prevention-focused consumers

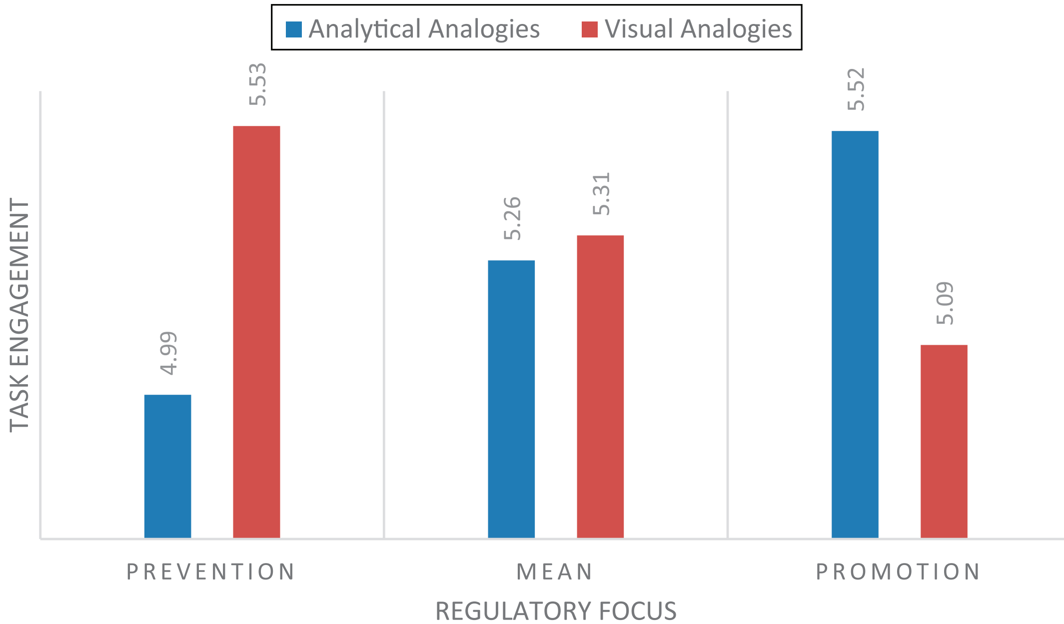


Figure 7. Interaction between regulatory focus and analogical approach on co-creation task engagement

engage in analogical thinking to a greater extent if shown analogically near photos as inspiration, whereas promotion-focused consumers require analogically far photos.

In regards to the interaction between analogical distance and regulatory focus, Study 2 revealed that promotion-focused consumers have greater purchase intentions if primed with far analogies or are left on their own. However, purchase intentions significantly drop if primed with near analogies. On the other hand, prevention-focused consumers have greater purchase intentions if shown near visual analogies, rather than being left alone or being shown far visual analogies. The serial mediation effect was also significant within the far and near conditions, providing further evidence that task engagement, self-brand connection, and brand sincerity mediate the effect of regulatory focus and analogical task on consumer purchase intentions.

Conclusion

The present research makes several noteworthy contributions to the literature on new product development ideation in the domain of consumer behavior. First, the research seeks to propel the recent emphasis on firm benefits of including consumers in the co-creation of ideas (Chang and Taylor, 2016; Cui and Wu, 2016; Luo and Toubia, 2015; Schreier *et al.*, 2012) by investigating regulatory focus as a consumer-centric factor that influences one's ability to reason analogically. Second, findings deepen our understanding of the motivation to engage in co-creation, which has been cited as a critical component of co-creation (Hoyer *et al.*, 2010). Specifically, findings demonstrate how analogical reasoning increases creative ideas and purchase intentions for cognitively flexible promotion-focused consumers, compared to less cognitively flexible prevention-focused consumers. Third, because analogies are capable of being modified (Gentner *et al.*, 2001; Gentner and Kurtz, 2006), the current research investigates how such modifications can be developed to match specific consumer-centric factors, such as regulatory focus. Specifically, a connection between analogical distance (i.e., near vs far) and regulatory focus is established and shown to influence downstream responses. Third, the study builds upon prior scholarship (Barczak *et al.*, 2009; Dijk *et al.*, 2014; Füller *et al.*, 2009; Gemser and Perks, 2015; O'Hern and

Rindfleisch, 2010; Mantovani *et al.*, 2018) by revealing the mediating role of internal processes on the observed effects. Lastly, the research expands our current understanding of how purchase intentions and consumer creativity can be enhanced through creative tasks such as analogizing.

Study 1 revealed that promotion-focused consumers, as opposed to prevention, who receive an analogical reasoning task before a product ideation scenario had significantly higher purchase intentions than those who receive no task. Study 1 also revealed the underlying mechanism driving these results. Specifically, priming a promotion-focused consumer with an analogical reasoning task enhances task engagement, which in turn activates self-brand connection, brand sincerity, and ultimately increases purchase intentions. Findings also showed that stimulating individuals with an analogical reasoning task significantly increases creativity, regardless of regulatory focus.

Study 2 extends the findings of Study 1 by investigating the role of analogical distance, which has been shown as an important component of the creativity and innovation process (Cai *et al.*, 2010; Choi and Kim, 2017). Indeed, scholars have found that analogies are often used to inspire innovative designs but note that analogies differ along many dimensions such as distance and substance (Chan *et al.*, 2011; Dahl and Moreau, 2002). Thus, Study 2 found that consumers who are creatively constrained (i.e., prevention) have higher purchase intentions if inspired by analogically near photos.

However, individuals who are inherently more creative require analogically far photos for the same results to hold. More importantly, Study 2 found that mismatching regulatory focus with analogical distance can potentially decrease purchase intentions. Indeed, promotion-focused individuals had significantly lower purchase intentions if primed with near analogical photos. In contrast, prevention individuals had lower purchase intentions if primed with far analogical photos or received no prime. Study 2 also corroborated the results found in Study 1 for the underlying serial mediation effect motivating the increase in purchase intentions when regulatory state matches analogical distance. Interestingly, Study 2 also revealed that, overall, showing consumers analogically far photos as inspiration produced ideas that were significantly more creative compared to near photos, despite the increased mental effort that far analogies may present.

Theoretical contributions

The present research makes several theoretical contributions. First, we build upon the theoretical framework offered by Hoyer *et al.* (2010) regarding co-creation in new product development. Specifically, consumer motivation has been cited as a key antecedent of NPD co-creation, yet research has failed to address the important role of regulatory focus. In this regard, we provide evidence that the motivational mindset of promotion and prevention individuals influences how these consumers engage in co-creation and how this engagement influences purchase intentions and creative output.

Second, the majority of studies about customer NPD ideation have overlooked the important role of providing a creative task (i.e., analogizing), despite recent calls from scholars to better understand the creative process. For example, Green *et al.* (2012) note that studies focusing on creativity have mostly emphasized novel output without exploring the influence of a reasoning task. The present research answers this call by extending our theoretical knowledge of the interplay between regulatory focus and analogical reasoning in several ways. First, the research demonstrates that while promotion individuals, as opposed to prevention, are more creative, their creative potential may lay dormant unless activated by an analogical task. Furthermore, adjusting analogical distance to accommodate further analogical thinking results in superior creative output and purchase intentions. A task that is too easy acts as a mental deterrent shutting down effort, which adversely affects downstream responses. In contrast, prevention-focused consumers respond more favorably (i.e., increased purchase intentions) when analogical distance in closer in nature. Results suggest that the increased mental effort required to produce creative ideas may diminish their natural state of vigilance, serving as a distraction that takes resources away from monitoring the external environment.

Third, prior scholarship has demonstrated that prevention-focused consumers tend to prefer more analytical information and promotion-focused, more imagery-based information (Finke, 1996; Naletelich *et al.*, 2019; Roy and Phau, 2014). Our research builds upon these findings by showing a boundary condition. Specifically, within a co-creation scenario involving analogical reasoning, promotion-focused individuals favor analytical analogies, whereas prevention-individuals favor analogies that are more visual. These results are illuminating and suggest that the type of analytical approach used may help to overcome cognitive limitations. In other words, because those with a prevention focus tend to be less visual, they may have found visual analogies more helpful and engaging. In contrast, because those with a promotion focus are less analytical, they may have found analytical information more helpful in compensating for this cognitive shortcoming.

Fourth, the study uniquely links regulatory focus and consumer task engagement in new product development. More specifically, brands encouraging consumer task engagement through idea generation and creativity are generally regarded as being more favorable than brands that do not encourage such engagement (Füller *et al.*, 2009). However, studies exploring the cognitive reasons behind this response are non-existence. Extending theory, the two studies demonstrated that when ones' regulatory focus matches the creative task (i.e., analogizing), consumers experience enhanced task engagement, which increases self-brand connection, leads to increased perceptions of brand sincerity and ultimately intensifies purchase intentions.

Fifth, prior research has demonstrated that matching regulatory focus to the correct approach can create regulatory fit (Avnet and Higgins, 2003). While fit effects have been examined across an array of contexts, this is the first paper to demonstrate how fit can be achieved to enhance purchase intentions by connecting regulatory focus and analogical reasoning. This insight is important, as prior scholars have noted the need for additional research that demonstrates how regulatory fit can be achieved through cognitive means (i.e., thinking and reasoning) as opposed to message framing (Cesario *et al.*, 2008).

Managerial contributions

Several managerial implications are apparent. First, organizations are also increasingly relying upon consumers, particularly younger generations such as millennials and Gen Z, to help develop, envision, and design new products (Chang and Taylor, 2016; Millenial Marketing, 2016; Cui and Wu, 2016). Given the increased reliance on consumer ideation and creativity, managers should actively seek participation among the younger generations. For example, companies should use language and graphics tailored to attract this generation for participation in the ideation stage. Companies should also post their collaborative announcements in social media commonly preferred by younger generations, such as Instagram, Snapchat, or TikTok (Benson, 2018).

Second, the present study finds that consumers can be engaged to create better innovations if they are provided with a creative task before engaging in NPD. The creative task can be in the form of analogical reasoning or by providing consumers with images as inspiration. Specifically, promotion-focused consumers tend to be more creative and may seem like the logical candidates, but prevention individuals are likely to engage in creative efforts as well (i.e., Baas, De Dreu, and Nijstad, 2011). The findings of the present investigation help companies identify how best to inspire each type of regulatory focus. Companies could first ask participants what type of career path they are engaged in or are seeking as well as typical activities in which they engage. Then, based on this line of questioning, companies could assign them to different creative tasks. For example, participants who indicate careers/activities that are change-oriented, creative, or exploratory themed should be considered promotion-focused. For these participants, companies should inspire them with photos that do not share common themes with the target innovation task. Comparatively, participants who indicate careers/activities that are not change-oriented, creative, or exploratory themed should be considered prevention-focused. For these participants, companies should inspire them with photos that share common themes with the target innovation task.

Third, companies could use promotion versus prevention language to attract and solicit participation from promotion versus prevention participants in NPD tasks. For example, companies could use more concrete terms and specific terminology to attract prevention-focused participants and more abstract terminology to attract promotion-focused participants. Likewise, they could use terms such as "help us find creative and novel ideas to move innovation forward" to attract promotion-focused participants versus "help us avoid negative product innovations" to attract prevention-focused participants. Finally, research shows that promotion consumers prefer hedonic products and prevention utilitarian (i.e., Arnold and Reynolds, 2009). Thus, for ideation tasks for hedonic products, companies could emphasize the hedonic attributes to inspire promotion-focused participants further. For ideation tasks for utilitarian products, companies could emphasize performance-based attributes to inspire prevention-focused participants further.

Fourth, managers should explore the role of analogical distance to encourage breakthrough innovations. More specifically, the present findings reveal that the more analogically far connections that are made between concepts, the more creative the ideas produced. Thus, organizational resources would be wisely spent on encouraging far-thinking during consumer co-creation, but should also be cautious on the extra mental effort required to engage in this type of design thinking. This form of thinking may prove especially helpful within the domain of crowdsourcing, which is rapidly growing in popularity (Nishikawa *et al.*, 2017). For example, online crowdsourcing platforms (i.e., GE First Build Community, Open IDEO, Lego Ideas) may benefit from engaging consumers through a creative task before beginning the ideation stage. Results indicate that this should be fruitful for both the organization and the consumer.

Finally, by engaging customer participation in NPD, organizations can increase overall purchase intentions. In support of this, findings show that under the right conditions, brands encouraging customer participation and ideation can lead to feelings of self-brand connection and perceptions of brand sincerity. Therefore, this paper demonstrates that despite scholars who question the benefits of customer participation in enhancing creativity (Chang and Taylor, 2016; Kristensson *et al.*, 2004), positive benefits for managers beyond product ideation do indeed exist.

Limitations and future research

Limitations and future research are as follows. First, fictitious brands and scenarios were utilized, which could hinder the generalizability of results. Future research should explore the theorized relationships within a field setting to obtain further insights using non-fictitious brands. In addition to non-fictitious brands, additional research should explore co-creating utilitarian vs hedonic products given the connection to regulatory focus discussed in the prior section. Second, both studies asked participants to help create tangible products, which is potentially limiting. Additional research should explore the role of customer engagement in service co-creation to see if similar results are obtained. More specifically, can service co-creation also engage the self-brand connection to a similar degree as tangible product creation? Third, while study 2 probed the ability of far anagogical thinking to increase creativity, more research is needed within this domain. For example, what is the role of analogical distance to radical innovation, and how can consumers be motivated to engage in far-thinking? Fourth, the current study identified three important serial mediators of the co-creation process, but further research could explore additional mediators such as information processing. Fifth, ideas were judged upon their creativeness, but it would also be interesting to also analyze ideas along a usefulness dimension, as it represents an important component of creativity and co-creation (Amabile, 1996). Along a similar line of inquiry, consumers may be wrong regarding the feasibility of suggested ideas, and future research should explore such scenarios and outcomes.

Finally, in *post hoc* Study 2, data from both the near and far visual conditions were collapsed to make the visual analogy condition. Before collapsing the two conditions, the authors did a cursory visual examination of the interaction between regulatory focus and the three types of analogies. The near and far visual analogies followed a similar pattern; thus, the authors felt comfortable collapsing the near and far photos together in one condition. However, future research should further explore the nuances between different analogical approaches (i.e., visual vs verbal).

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The moderating effects of prior trust on consumer responses to firm failures

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ABSTRACT

Our paper examines how prior trust moderates consumer and firm responses to a firm's failures. We document that relatively high prior trust in a firm can help firms better recover from the negative effects of denying versus accepting failures, but that trust offers greater protection against competence as compared to ethical failures. We also consider the effects of two responses to ethical failures - external attribution and monetary compensation - and demonstrate that these responses may be viable alternatives that yield consumer perceptions that are as favorable as denying ethical failures. Finally, we show that reticence - neither confirming nor disconfirming a failure -elicits the least favorable post-recovery consumer responses. Our findings suggest that it may be possible for a firm to recover from an ethical failure even after accepting the failure, which is an important contribution since little prior research supports a successful recovery from ethical failures.

1. Introduction

Wells Fargo creating millions of fake customer accounts and charging thousands of its customers for auto insurance that they did not need, Apple admitting that it had deliberately slowed down the performance of its older phones when launching newer models, Equifax being aware of system vulnerabilities that eventually allowed hackers to breach the personal information of 145 million US consumers, and then not disclosing the hacking for two months, and Volkswagen fabricating its diesel emissions' data are just a few examples of failures by reputed firms in recent years that have had significant negative financial and social costs. A consideration of these failures suggests that they can vary in terms of being attributable to a firm's incompetence (e.g. Equifax not having the latest security software patch in place, thus allowing data breaches) or a firm's unethical behavior (e.g. Apple slowing down performance of older products), or both. Firm responses to failures can also vary with some firms accepting their failures (e.g. Apple), others denying that an alleged failure occurred (e.g. Ticketmaster denying a breach of its data) or attempting to shift the blame for the failure to some external party (e.g. Ford blaming Firestone for its vehicles' tire failures), some offering monetary compensation for the failure (e.g. Volkswagen) and others adopting reticence and refusing to comment on the alleged failure (e.g. Yahoo's data breach in 2013 was only confirmed by the company in 2017). Since failures can prove to be very expensive for firms both from a financial standpoint (e.g. Wells Fargo was fined $185 million, Volkswagen had to pay $26 billion Euros in fines, Equifax estimated its data breach to cost it $1.4 billion), as well as from a consumer standpoint (e.g. lowered brand attitudes and evaluations), a highly pertinent question that arises concerns the relative effectiveness of different responses by the firm, assuming that there are multiple feasible responses that are possible.

In this regard, prior research has found that the type of failure (e.g. competence or ethical) and the type of response offered by a firm (e.g. accept, deny, or reticence) interact to impact post-recovery consumer perceptions (e.g. Dirks, Kim, Ferrin, & Cooper, 2011; Kim, Dirks, Cooper, & Ferrin, 2006′ Kim, Cooper, Ferrin, & Dirks, 2004). Competence deals with the ability of a firm to produce goods or deliver services in a capable manner, while ethics deals with the moral aspect of conducting business. A general finding in this literature is that accepting competence failures leads to more favorable consumer perceptions than denying such failures, while denying ethical failures elicits significantly better perceptions than accepting such failures. Further, reticence or a "no response" strategy usually elicits significantly worse perceptions than either accepting or denying any type of failure (Bougie, Pieters, & Zeelenberg, 2003).

This paper addresses three issues with past research on product failures. First, little attention has been paid to the moderating role that prior consumer trust in the firm has on consumer perceptions of the firm when it responds to failures. Trust, conceptualized as consumer confidence in a firm's reliability and integrity (Morgan & Hunt, 1994),

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has been shown to be an important variable impacting consumer attitudes, satisfaction, commitment, and behavioral intentions (e.g. Garbarino & Johnson, 1999; Moorman, Deshpande, & Zaltman, 1993; Sengupta, Balaji, & Krishnan, 2015; Sirdeshmukh, Singh, & Sabol, 2002). Further, consumer trust in firms varies with some brands enjoying greater trust than others (e.g. Amazon and Apple had higher trust ratings than Google and Microsoft – Cohn & Wolfe, 2017); therefore, it is an important variable to consider in the context of failures. We address this gap by examining how prior trust moderates consumer perceptions of different firm responses to failures.

Second, a consistent finding in past research is that denying an ethical failure leads to significantly better perceptions than accepting the failure. However, denial is not always an option for firms, particularly when the ethical failure has truly occurred. We therefore examine the effects of two other responses – external attribution and monetary compensation – and demonstrate that these responses, when feasible, can reduce the negative effects of ethical failures. Thus, we document that it may be possible for a firm to recover from an ethical failure even after accepting the failure. This is an important contribution since to the best of our knowledge, prior research has not examined this issue.

Third, while past research has documented the relative effectiveness of different responses to failures, there has been limited examination of the cognitive processes underlying consumer responses to such failures. We address this issue and find that the likelihood of future failures from the firm mediates the effects of failures and responses on post-recovery consumer perceptions of the firm. Thus, our findings enable a better understanding of when and how different responses have differing effects on consumer attitudes, intentions and trust post failure and recovery.

Our paper thus contributes to the literatures on failure (e.g. Sengupta et al., 2015), recovery (e.g. Dirks et al., 2011) and trust (e.g. (Morgan & Hunt, 1994) in multiple ways. We add an important and little considered moderator to the literature in the form of prior trust. While some recent work has considered the effects of brand commitment (e.g. Mattila, 2004) and brand equity (Brady, Cronin, Fox, & Roehm, 2008) on consumer responses to failures, there is limited understanding of how trust in the firm can affect these responses. Prior research has established trust as related to but distinctly different from both commitment and equity (Chaudhuri & Holbrook, 2001; Garbarino & Johnson, 1999), and hence warrants attention. We examine the effects of monetary compensation and external attribution as responses to ethical failures and contrast their effectiveness with other responses. We also distinguish between different types of consumer responses (i.e. attitudes, intentions, post-recovery trust) and document that monetary and external attribution can differentially impact outcomes depending on the perceived likelihood of future failure by the firm. Further, we empirically document the mediating role played by the likelihood of future failure. Finally, by documenting that trust impacts post-failure recovery, we add a previously unconsidered outcome to the literature on trust. We begin by reviewing relevant literatures on failure, recovery, and trust and outline our hypotheses. We then present results from four empirical studies to test our predictions.

2. Literature review

Consumers typically attribute two separate characteristics to firms – competence and ethics (e.g. Brown & Dacin, 1997; Folkes & Kamins, 1999; Votolato & Unnava, 2006). While competence deals with decisions affecting the ability of the firm to produce goods or deliver services in a capable manner, ethics deals with the moral aspect of conducting business. A firm will be perceived as being competent if it is able to deliver consistently on its brand promise, and as being ethical if it is perceived to be conducting its business in a just, honest, and trustworthy manner (Folkes & Kamins, 1999; Votolato & Unnava, 2006). Failures can occur on both dimensions. For example, the use of low-quality raw materials in a product or providing inadequate training for employees will be seen as a competence failure. Alternatively, a hiring policy that discriminates based on gender or a decision to evade taxes will be seen as an ethical failure. In general, ethical failures tend to be perceived as being more severe than competence failures (Frantz & Bennigson, 2005).

Given allegations of failure – whether competence or ethical – a firm can respond differently; e.g. deny the failure, accept responsibility for the failure, or not respond to the failure (e.g. Kellerman, 2006; Reidenbach & Sherrell, 1986; Tybout, Calder, & Sternthal, 1981). Denial suggests that the allegation of failure is false and therefore no additional action is needed by the firm. Acceptance suggests an admission of guilt and is typically accompanied by some type of resolution (e.g. apology, monetary compensation, attribution of the failure). Not responding to the failure or reticence is a noncommittal stance of neither accepting nor denying the failure. Previous research (Kim et al., 2004, 2006) has shown that the type of failure interacts with the type of response to determine attitudes and trust towards the transgressor. Findings demonstrate that accepting a failure of competence (e.g. erroneously filing tax returns due to lack of knowledge about tax laws) results in more favorable responses than denying the failure. On the other hand, denying an ethical failure (e.g. deliberately filing erroneous tax returns to ensure greater gains) results in more favorable responses than accepting ethical failures. Hence, the effect of response type is moderated by the type of failure.

2.1. Inferences from failures and responses

The research on dispositional inferences provides an explanation for this interaction between failure type and response type by finding that people infer information from observed behaviors (Costabile & Madon, 2019; Reeder & Brewer, 1979). That is, observed behaviors can provide information about whether subsequent actions are likely to be consistent (confirmation) or inconsistent with the initially observed behavior. This reasoning allows us to understand why people have behavioral expectations along competence and ethical dimensions. Prior research suggests that it is generally believed that ethical people *always* behave ethically, but unethical people *may* behave ethically or unethically. On the contrary, competent people *may* behave incompetently at times, but incompetent people usually do not behave competently because they lack the ability to do so. Observing an unethical act is more informative than an ethical behavior. However, competent people may behave incompetently at times, but incompetent people simply lack the ability to behave competently. Observing a competent behavior is more helpful than observing an incompetent behavior (Martijn, Spears, Pligt, & Jakobs, 1992; Skowronski & Carlston, 1989). Thus, an implication of these differences in inferences is that an unethical act is seen as being more informative in judging the character of a person (moral inferences) than an ethical act, while a competent act is seen as being more informative in judging the competence of a person than an incompetent act. Therefore, unethical behavior will have greater informational or predictive value and thereby a larger impact on judgment than ethical behavior (negativity effect). On the other hand, competent behavior will have greater informational value and a larger impact on judgment than incompetent behavior (positivity effect).

In the context of failures by firms, these findings suggest that a failure that is attributed to a firms' lack of ethics is likely to be perceived as highly predictive of future ethical failures because an ethical failure is considered to be more informative about future failures, while a failure that is attributed to a firms' incompetence is less likely to be perceived as predictive of future incompetence (for previously competent firms). Thus, consumers are likely to have low expectations for future ethical behavior for a firm which commits an unethical action, i.e. infer a high likelihood of future ethical failures. However, consumers are less likely to expect a firm that commits an incompetent action (tax evasion due to lack of knowledge of tax laws) to continue to behave incompetently, i.e. infer a low likelihood of future failure.

Hence, when a firm accepts responsibility for an ethical failure, the information is highly informative in predicting the firm's future behavior, resulting in a less favorable attitudes toward the firm. However, since denying the ethical failure will make the information less informative, it is less likely to negatively impact the trust and attitudes towards the firm, as compared to accepting the failure (Folkes & Kamins, 1999; Kim et al., 2004; Riordan, Marlin, & Kellogg, 1983). When it comes to allegations of competence failure, even if the firm accepts responsibility for the failure, it does not provide useful information to the consumer about the competence or incompetence of the firm. Since consumers assume that competent firms can at times falter, accepting the failure is less likely to predict the firms' future competence as compared to denial, and therefore less likely to lower consumer trust and attitudes. Further, by accepting the failure and working on a resolution (e.g. apology), the focus of the consumer is likely to be on the resolution and not on the failure (Ohbuchi, Kameda, & Agarie, 1989; Smith, Bolton, & Wagner, 1999). Together, the lack of instructive information about future failures and the focus away from the failure is likely to minimally impact attitudes towards the firm.

On the other hand, when a competence failure is denied, it will limit the association between the alleged failure and the firm, but because competence failures are less informative about future failures, the benefit derived from the denial is limited. However, the denial may signal an unwillingness on the part of the firm to initiate a failure resolution. This is likely to increase the negative emotions associated with the failure (Ohbuchi et al., 1989; Smith & Bolton, 2002). Therefore, the net result is that denying allegations of competence will unfavorably impact attitudes towards the firm.

The research summarized above assumes no difference in the levels of prior trust towards the organization. However, in real life consumers may often hold varying levels of trust in a company. For example, a recent market research study revealed that Apple elicits polarized trust ratings with many consumers holding very low versus very high levels of trust in the brand (Soulmates.AI, 2018). How would such varying levels of trust impact consumers' perceptions of failure and response types? Some prior research has called for an examination of the effects of prior trust on responses to failures, and has suggested that the consequences of failures for mature relationships versus anonymous relationships could be significantly different (e.g. Kim et al., 2006; Schweitzer, Hershey, & Bradlow, 2006). We examine this moderating role of trust in the next section.

2.2. The moderating role of prior trust

Ample research in organizational behavior and marketing has considered the antecedents and consequences of trust (e.g. Kramer & Tyler, 1996). Trust has been conceptualized as existing when consumers have confidence in the firm's reliability and integrity, and some of its key antecedents include perceived honesty, competence, benevolence, and goodwill (Morgan & Hunt, 1994). Similarly, trust has a number of consequences, such as impacting consumer attitudes towards the firm, satisfaction with the firm, loyalty, and intentions towards the firm (Garbarino & Johnson, 1999). Thus, trust is closely related to a number of important outcomes and acknowledged to be an important goal for firms since it confers a variety of beneficial consequences.

As argued earlier, ethical failures are highly informative. However, when consumers already have a low level of trust in the firm to begin with, denying or accepting an ethical failure should not have a considerable impact on how consumers view the firm because the low trust negates any additional information about the future. A similar argument can be made for competence failures that are denied. However, accepting a competence failure may build trust and help consumers view the firm more favorably.

When prior trust is higher, we suggest that this trust will protect the company from competence failures. Since a single instance of failure is less likely to be predictive of future failures in the presence of past instances of satisfying encounters (Doney & Cannon, 1997), and because competence failures are not very predictive of future competence, the high trust will further reduce the informativeness or predictive ability of a single instance of competence failure. High prior trust may also protect the firm from ethical failures, but because the predictive ability of ethical failures is higher than competence failures, we suggest that high prior trust may be less effective at helping consumer attitudes for ethical failures relative to competence failures. Thus, higher levels of prior trust may protect attitudes from ethical failures, but to a lower extent than denied competence failures.

Therefore, we hypothesize a three-way interaction of prior trust, failure type, and response type.

H1:. Under relatively low prior trust, accepting a competence failure will lead to more favorable consumer responses than denying the failure. However, under relatively low prior trust, there will be no significant difference in consumer response between accepting and denying an ethical failure.

H2:. Under relatively high prior trust, denying a competence failure will elicit more favorable consumer responses than under relatively low prior trust. Further, under relatively high prior trust, the magnitude of positive change in consumer responses will be greater in the case of competence failures than ethical failures.

H3:. Perceived future failure likelihood will mediate the effects of prior trust, failure type, and response type on consumer perceptions of the firm.

Our conceptual framework is outlined in Fig. 1.

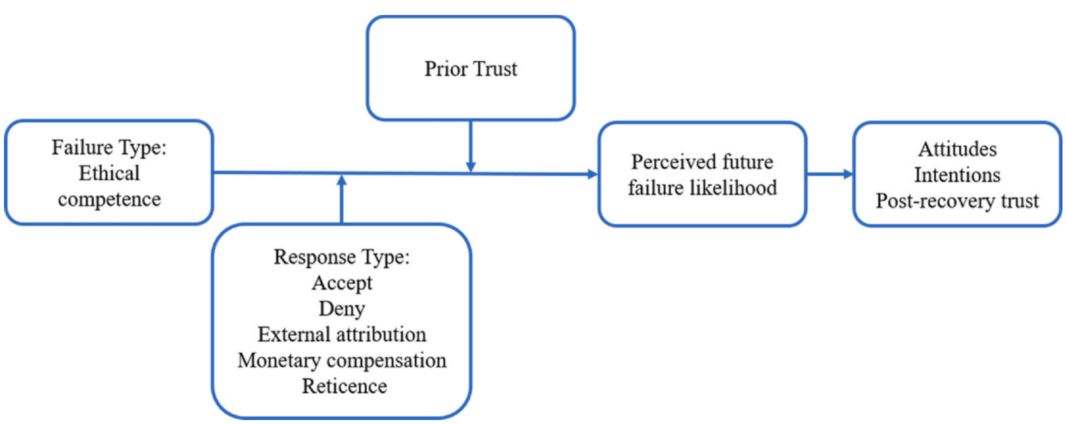

Fig. 1. Conceptual framework.

3. Study 1

The objective of study 1 was to examine the impact of relatively high versus low trust on consumer attitudes to different failure and response types. The study was thus designed to be a 2 (prior trust: high or low) × 2 (failure: ethical or competence) × 2 (response: deny or accept) between-subjects design.

3.1. Procedure

Consistent with past research, scenarios were used to test the hypotheses (e.g., Folkes, 1984; Folkes & Kamins, 1999; Gelbrich, Gäthke, & Grégoire, 2016; Zhou, Tsang, Huang, & Zhou, 2014). The scenarios (Supplementary Material) were selected based on a series of pretests. The pretests were conducted to ensure no differences in perceived failure severity or volition between the ethical and competence failures. An issue with prior research in this area (e.g. Kim et al., 2004) is that the results may have been confounded due to differences in the voluntary nature of the failure. That is, ethical failures were voluntary failures (deliberate actions) while competence failures were involuntary failures (not willful). We avoid such confounding by ensuring equivalent levels of severity and volition across the competence and ethical failures in our studies. The scenario dealt with a bank (a fictitious bank called Infinity Bank) and the failure related to the bank charging a higher interest rate to its car loan customers. In the accept condition, the firm accepted the failure and apologized for the error. Thus, the accept condition in this and subsequent studies is similar to the apology condition used in prior research (e.g. Kim et al., 2004).

The pretests confirmed that the failures were perceived as having occurred due to actions that were deemed equally voluntary in both the ethical and competence situations (*It looks like the error, if committed by X, was intentional*; 1 = *strongly disagree*, 7 = *strongly agree*; $M_{ethical} = 5.12$, $M_{competence} = 4.84$, $p > .1$). Second, perceived severity of the failure was measured using a two-item scale (*I think the allegation about X is very serious; I think that X faces a severe problem*: 1 = *strongly disagree*, 7 = *strongly agree*). Analysis confirmed that the ethical and competence failures were rated as being equally severe ($M_{ethical} = 4.65$, $M_{competence} = 4.56$, $p > .1$). Finally, the response provided by the firm (deny or accept) was rated as normal and appropriate given the situation ($M_{deny} = 4.23$, $M_{accept} = 4.36$, $p > .1$). Details on all measures are provided in Table 1.

A total of 247 students participated in exchange for course credit and were randomly assigned to one of eight experimental conditions. After reading the initial description of the firm (trust manipulation), participants answered questions about their trust in the brand (pre-trust), measured using a five-item scale (1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = 0.87$). The scale items were *I trust X to act in the customer's best interest*, *X generally does what is right*, *I think X does all that it can to put customers first*, *X should be doing more to help customers*, and *X is not concerned with acting in customer's interest* (X was replaced with the name of the company in the study.) The last two items were reverse coded. All questions in the study used seven-point scales. Participants then read the failure scenario and answered the perceived severity of the failure measures using the same scale as the pretest ($\alpha = 0.91$). Next, they read the response to the failure and reported their attitude towards the firm (*Bad: Good*, *Unfavorable: Favorable*, *Undesirable: Desirable*, *Awful: Nice;* $\alpha = 0.96$). To help explain the process underlying the differences in the effects on attitude, participants' expectations about their perceived future failure likelihood by the company after reading about the failure and the response to the failure was measured using four, seven-point scales anchored by strongly disagree and strongly agree (*I believe such errors are very rare for X; I think that the chance that this error will be repeated in the future is low; Making such mistakes is unusual for X; I do not think X will make such a mistake again.*[1]) Since the items had high internal consistency as measured by Cronbach's alpha ($\alpha = 0.75$), a mean score was calculated. The scale was adopted from similar measures in the literature that have measured the predictive ability of information in predicting future behavior (e.g. Ahluwalia & Gürhan-Canli, 2000; Gürhan-Canli & Batra, 2004; Osterhus, 1997; Skowronski & Carlston, 1989). Then, respondents reported their post-recovery trust in the firm using the same trust scale as used to assess initial trust and answered some manipulation checks designed to measure if our failure and response manipulations worked as intended. Specifically, respondents were provided with a number of options for the type of failure (e.g. X was accused of charging its car loan customers a higher interest rate because *of inadequate training of employees/they intentionally charged a higher rate*) and response (e.g. X's response to the allegations was to *admit the error and accept responsibility/deny the accusation completely*), and asked to select the option that they felt best represented the scenario they had read.

3.2. Results

3.2.1. Manipulation checks

As expected, high prior trust condition participants reported a greater level of prior trust in the brand ($M = 6.73$) compared to low prior trust condition participants ($M = 5.31$; F (1, 239) = 204, $p = .001$). None of the other interactions between the independent variables were significant (all p's > 0.1). Since the means for both trust conditions were higher than the midpoint of the scale, it is worth noting that our effects were examined in the context of relative differences in trust, rather than absolute low versus high levels of trust.

There were no main or interactive effects of the independent variables on perceived severity of the failure (p's > 0.1). Thus, the failure was viewed as equally severe across all experimental conditions. Further, manipulation checks indicated that participants correctly identified the failure and response condition they were in (91%), indicating successful manipulation of the independent variables.

3.2.2. Attitudes towards the firm

An analysis of variance with prior trust, failure and response as the independent variables and attitudes towards the firm as the dependent variable revealed marginally significant main effects of failure ($p = .06$) and response ($p = .07$). These main effects were qualified by a significant three-way interaction (F (1, 239) = 11.67, $p = .001$). The interaction was further analyzed to test our predictions (see Table 2 for results of Study 1).

In the low trust condition, as predicted, accepting a competence failure ($M = 4.12$) resulted in more favorable attitudes compared to denying it ($M = 3.53$, $t\,(239) = 1.98$, $p = .05$). However, surprisingly, denying an ethical failure resulted in a more favorable attitude ($M = 4.00$) compared to accepting it ($M = 3.19$, t (239) = -2.83, $p = .005$). Thus, H1 is partly supported. Under high trust, participants reported a more favorable attitude when a competence failure was denied ($M = 4.41$) compared to when it was accepted ($M = 3.69$, t (239) = 2.36, $p = .02$). With ethical failures, the attitude was not statistically different between participants who were in the accept response condition ($M = 3.69$) and those who were in the deny response condition ($M = 3.81$, $t\,(239) = 0.43$, $p > .1$).

In line with H2, denying a competence failure resulted in a more favorable attitude in the high prior trust ($M = 4.41$) compared to the low prior trust condition ($M = 3.53$, t (239) = 2.89, $p = .004$). Accepting an ethical failure when prior trust was high resulted in a marginally more favorable attitude ($M = 3.69$) compared to the low prior trust condition ($M = 3.19$, $t\,(239) = 1.72$, $p = .09$). Further, the magnitude of change was greater in the competence than in the ethical condition ($M = 0.88$ vs. 0.50; t (239) = 2.86, $p = .005$).

[1] The scale was reverse coded such that higher numbers reflect lower likelihood of failures.

Table 1
Dependent measures used in all studies.

Measure	Scale	Studies used
Trust (Pre-failure and Post-recovery)	I trust _ to act in the customer's best interest _ generally does what is right I think _ does all that it can to put customers first _ should be doing more to help customers _ is not concerned with acting in customer's interest	Study 1: α_{pre} = 0.87; α_{post} = 0.82; Study 2: α_{pre} = 0.87; α_{post} = 0.91; Study 3: α_{pre} = 0.94; α_{post} = 0.87; Study 4: α_{pre} = 0.84; α_{post} = 0.86
Failure volition	It looks like the error, if committed by _, was intentional.	
Failure severity	I think the allegations about _ are very serious. I think that _ faces a severe problem.	Study 1: α = 0.91; Study 2: α = 0.92; Study 3: α = 0.93; Study 4: α = 0.80
Attitudes	My overall rating of _ is: Bad-Good Unfavorable-Favorable Undesirable-Desirable Awful-Nice	Study 1: α = 0.96; Study 2: α = 0.94; Study 3: α = 0.96; Study 4: α = 0.97
Intentions	I will use _ services in the future: not probable/probable impossible/possible no chance/certain	Study 2: α = 0.94; Study 3: α = 0.94; Study 4: α = 0.95
Perceived future failure likelihood	I believe such errors are very rare for _ I think that the chance that this error will be repeated in the future is low Making such mistakes is unusual for _ I do not think _ will make such a mistake again.	Study 1: α = 0.75; Study 2: α = 0.81; Study 3: α = 0.89; Study 4: α = 0.90
Examples of manipulation checks: Failure type Response type	Study 1, 2 and 3: In your opinion, what does this accusation bring into question about __? – Primarily its competence in conducting business – Primarily its ethics in conducting business Study 4: Please think back to the information that you read earlier. What was the allegation against Exel? – Environmental damage – Cheated customers – Offering poor quality service – Accounting failures – Tax payment issues Study 1, 2 and 3: We are now interested in your understanding of the situation about X. (Agree-disagree) – X response to the allegations was to admit the error. – X response to the allegations was to deny the accusation Study 4: What was Exel's response to the allegations against the company? (Pick an option) – Admitted that an error had occurred and apologized – Denied the accusation that an error had occurred – Did not admit or deny the allegation – Stated that the error was due to a third-party supplier's fault – Offered to pay monetary compensation for the error	Studies 1–4
Cognitive responses	Please write down all the thoughts that went through your mind as you read the information about Exel on the previous pages. Please list each thought on a separate line and list as many thoughts as you can.	Study 4

Table 2
Results of study 1.

Variable	Low prior trust				High prior trust			
	Ethical failure		Competence failure		Ethical failure		Competence failure	
	Deny	Accept	Deny	Accept	Deny	Accept	Deny	Accept
Prior trust	5.49	5.47	4.82	5.41	6.82	6.67	6.77	6.7
	(0.69)	(0.58)	(1.34)	(0.70)	(0.25)	(0.27)	(0.27)	(0.26)
Mean attitude	4.00	3.19	3.53	4.12	3.81	3.69	4.41	3.69
	(1.19)	(1.24)	(1.20)	(1.02)	(1.17)	(1.09)	(0.94)	(1.29)
Post trust	3.70	2.99	3.36	4.17	3.42	3.17	3.86	3.49
	(1.15)	(1.39)	(1.20)	(1.26)	(1.26)	(1.32)	(1.21)	(1.33)
Future failure likelihood	3.22	3.87	3.66	3.19	3.44	3.23	3.24	3.62
	(0.77)	(0.74)	(1.18)	(0.84)	(0.98)	(1.23)	(0.94)	(0.87)
N	37	28	29	31	31	35	28	28

Numbers in parentheses represent standard deviations.

3.2.3. Post-recovery trust

A similar pattern of results was found for post-recovery trust with a significant three-way interaction between prior trust, failure type and response type F (1, 237) = 6.40, p = .01). Planned contrasts revealed that under low prior trust, accepting a competence failure led to higher post-recovery trust (M = 4.17) as compared to denying the failure (M = 3.35, t (237) = 2.49, p = .01), while denying an ethical failure led to higher post-recovery trust (M = 3.69) as compared to accepting the failure (M = 2.98, t (237) = 2.20, p = .03). On the other hand, there were no differences in post-recovery trust when a competence failure was denied or ethical failure was accepted (p's > 0.1) when prior trust was high.

3.2.4. Perceived future failure likelihood

An analysis of variance with perceived future failure likelihood as the dependent variable and prior trust, failure and response as the independent variables revealed the expected significant three-way interaction ($F(1, 239) = 12.12$, $p = .001$). None of the other main effects or interactions were significant (all p's > 0.1). When low prior trust participants believed that an ethical failure had occurred, they reported significantly higher levels of perceived future failure likelihood when the response was acceptance ($M = 3.87$) compared to denial ($M = 3.22$, $t(239) = 2.71$, $p = .007$). But with competence failures, participants reported marginally higher perceived future failure likelihood when the response was one of denial ($M = 3.66$) than acceptance ($M = 3.19$, $t(239) = 1.89$, $p = .06$).

With high prior trust participants and ethical failures, the perceived future failure likelihood was not significantly different between accepting ($M = 3.23$) and denying ($M = 3.44$, $t(239) = -0.91$, $p > .1$). A similar pattern was found for competence failures ($M_{accept} = 3.62$, $M_{deny} = 3.24$, $t(239) = 1.46$, $p > .1$). Thus, prior trust attenuated the differences in perceived future failure likelihood between accepting and denying competence and ethical failures. However, while denying competence failures was perceived as marginally *less* likely under high prior trust as compared to low prior trust ($t(239) = 1.66$, $p = .10$), the perceived future failure likelihood when the ethical failure was accepted continued to be higher under low prior trust than high prior trust ($t(239) = 2.65$, $p = .009$). Thus, high prior trust attenuated the perceived future failure likelihood to a greater extent for competence failures than ethical failures.

3.2.5. Mediation analysis

Our prediction was that the effect of the interaction of prior trust, type of failure and response on attitude would be mediated by the perceived future failure likelihood. To test this, a mediation analysis was conducted using a bootstrapping approach to identify confidence intervals. The SPSS Process Macro from Preacher and Hayes (2004) was deployed using model 12 (Hayes, 2013) with 10,000 resamples. First, as reported earlier, the output demonstrated that the three-way interaction between prior trust, type of failure, and type of response is a significant predictor of mean attitude ($B = -1.14$, $t(247) = -2.09$, $p = .038$). Next, the three-way interaction term was a significant predictor of perceived future failure likelihood ($B = 1.71$, $t(247) = 3.48$, $p < .001$). Perceived future failure likelihood was a significant predictor of attitude ($B = -0.50$, $t = -7.18$, $p < .001$). Finally, analysis of the indirect effect of the highest order product showed a significant indirect effect of prior trust, type of failure, and response via perceived future failure likelihood on attitude (estimated coefficient $= -0.86$, 95% confidence interval [CI] exclusive of zero [-1.44, -0.39]). Taken together, these results suggest that perceived future failure likelihood partially mediated the interaction of prior trust, failure, and response on mean attitude. Thus, H3 is supported.

3.3. Discussion

When prior trust in the firm was relatively low, accepting competence failures resulted in consumers holding more favorable attitudes, presumably because this response increased the trust in the firm post the response. However, for ethical failures the results indicated that denying such failures had a positive impact on attitudes and post recovery trust. This was different from our expectations that attitudes or post recovery trust would be no different between accepting and denying ethical failures under low trust condition. A closer examination suggests that a possible reason for this unexpected finding may have to do with the level of prior trust. Although the mean low trust ($M = 5.31$) was lower than the high trust condition ($M = 6.73$), it was still high on an absolute basis; well above the mid-point on the scale ($t(124) = 21.7$, $p < .000$). In the following studies, we manipulate the low prior trust condition to be lower on the scale in order to better test our prediction for ethical failures.

Importantly, the results suggest that high prior trust does play a role in buffering the firm against failures. Overall, high prior trust resulted in marginally better attitudes than low prior trust. More specifically, higher levels of trust in the firm negated the less favorable attitudes seen with accepting ethical failures and denying competence failures. These results are consistent with the view that the new information about the failure, given previous trusting experience with the firm was not very predictive about future failures.

This study also expands our understanding by suggesting that consumers' estimates of the future probability of the failure being repeated is an important variable in predicting the response to the type of failure and its response. Thus, perceived future failure likelihood mediated the effects of failure type, response type and prior trust on post-recovery attitudes and trust in the company. This is an important finding since it suggests that the predictive value of response strategies to future failures is a critical consideration while making decisions about possible responses to failures.

4. The competence versus ethical difference

Denial of an ethical failure is not always possible for a firm, especially when the failure has truly occurred. For example, when the unethical behaviors of Wells Fargo employees were reported in the press, denial would have been almost impossible for Wells Fargo due to the substantial empirical evidence showcasing the unethical behaviors. Hence, it is important for firms to examine responses other than denial in order to handle ethical failures.

We examine two responses – monetary compensation and external attribution of the failure. While these two responses are commonly used by firms (e.g. Exxon Mobil's monetary compensation of more than $50 million for the Valdez oil spill, or the attribution to faulty tires supplied by Firestone as the reason for Ford cars' accidents), there has been limited systematic research on these responses, especially monetary compensation (for exceptions see Kim et al., 2006; Gregoire, Tripp, & Legoux, 2009; Roschk & Gelbrich, 2017; Van Gils & Horton, 2018). More importantly, from a theoretical perspective, they differently impact the process by which consumers arrive at judgments about the firm. External attribution reduces the predictive ability of the unethical failure since attributing the failure to an outside party disassociates the failure from the firm. Monetary compensation, on the other hand, attempts to shift the focus away from the failure and its consequences to resolution of the failure, but may not have any effect on the perceived future failure likelihood. It is important to note that both responses include acceptance of the failure, but subsequently differ in either placing the reason for the failure outside of the firm (external attribution) or making recompense for the failure (monetary compensation).

Based on these differences in the processes underlying these two responses, our expectation was that external attribution would be successful in reducing the perceived future failure likelihood and hence would improve consumer attitudes and intentions towards the firm. Monetary compensation, on the other hand, would improve consumer attitudes due to the focus on reparation, but would not reduce perceived future failure likelihood, and therefore not improve post-recovery trust and intentions. Hence, external attribution ought to lead to more favorable outcomes than offering monetary compensation.

We further expected to find that external attribution and monetary compensation would yield these results only when prior trust in the company was relatively high. This is because as noted earlier, high levels of trust are likely to confer an advantage to firms in terms of their ability to recover from failures. Thus, we expect an interaction between prior trust and type of company response such that monetary compensation and external attribution will improve consumer responses as

Table 3
Results of study 2.

Variable	Low prior trust				High prior trust			
	Deny	Accept	Attribution	Money	Deny	Accept	Attribution	Money
Prior trust	4.71	4.71	4.67	4.78	5.35	5.38	5.07	5.30
	(1.01)	(1.04)	(0.92)	(0.97)	(0.94)	(0.91)	(1.36)	(0.99)
Mean attitude	3.43	3.27	3.10	3.62	3.70	2.84	4.02	3.82
	(1.1)	(1.14)	(1.15)	(1.16)	(0.89)	(1.06)	(0.97)	(1.31)
Post trust	3.32	3.27	3.04	2.82	3.87	3.08	3.87	3.51
	(1.06)	(1.28)	(1.04)	(0.89)	(0.91)	(0.99)	(0.98)	(1.08)
Future failure likelihood	4.48	4.55	4.07	4.76	3.61	4.27	3.44	3.96
	(0.20)	(0.22)	(0.19)	(0.21)	(0.21)	(0.21)	(0.21)	(0.23)
Intentions	2.92	3.12	2.78	2.57	3.77	2.58	4.0	3.06
	(0.24)	(0.26)	(0.23)	(0.24)	(0.25)	(0.25)	(0.25)	(0.26)
N	26	22	29	26	25	25	25	22

Numbers in parentheses represent standard deviations.

compared to simply accepting the failure, and that the difference will be greater under high as compared to low prior trust conditions.

H4a. When the failure is attributed externally under high prior trust, consumers' attitude, intentions, and post-recovery trust in the firm will be: (a) comparable to denying the failure and (b) more favorable than accepting the failure.

H4b. When the failure is attributed externally under high prior trust, consumers' belief that the firm will make a similar error in the future will be: (a) comparable to denying the failure and (b) less likely than accepting the failure.

H5a. When monetary compensation is offered under high prior trust, consumers' attitude toward the firm will be: (a) comparable to denying the failure and (b) more favorable than accepting the failure.

H5b. When monetary compensation is offered under high prior trust, consumers' intentions, post-recovery trust, and belief in future failure likelihood will be no different than when the firm accepts the failure.

H6:. Under conditions of low prior trust, there will be no differences in consumer attitude, trust, and intentions towards the firm between accepting, externally attributing, or offering monetary compensation for the failure.

We conducted study 2 to test these hypotheses and to examine whether a lower level of prior trust could explain the ethical failure results (H1) of Study 1. A different scenario from study 1 was used to generalize our findings (Supplementary Material).

5. Study 2

5.1. Design and procedure

The study was designed to test H4 and H5 and was a 2 (prior trust: low versus high) × 4 (responses to failure: deny, accept, external attribution, monetary compensation) between-subjects study. Thus, we focused only on ethical failures in this study. Two hundred undergraduate students participated in the study for course credit. They were informed that the study dealt with consumer perceptions of firms and were randomly assigned to one of the eight experimental conditions. The study used a new scenario that dealt with a fictitious tax preparation company called Highland Inc. Respondents were told that their friend, Chris, worked for this company and had told them either "*what a wonderful place Highland is to work for and how the people there are all young and share a very open, relaxed, but "do-anything-to-get-the-job-done" work culture*" (low trust) or "*what a wonderful place Highland is to work for and how the people there are all young and share a very open, relaxed, and highly ethical work culture*" (high trust). Thus, our trust manipulation directly referenced the ethical culture of the company, which served as a strong manipulation of the ethical dimension of the firm's trustworthiness. The company was accused of errors in filing client returns and participants saw one of the following responses from the company: (1) accept the accusation, (2) deny it, (3) let its clients keep the extra refund amount and offer additional compensation, or (4) attribute the failure to temporary contract employees who were hired during the busy tax season but were no longer with the company.

The dependent measures used were similar to the measures used in study 1, and included perceptions of severity of the failure ($\alpha = 0.92$), pre-failure trust ($\alpha = 0.87$), attitude towards the firm ($\alpha = 0.94$), intentions ($\alpha = 0.94$), post-recovery trust in the firm ($\alpha = 0.91$), and the perceived future failure likelihood by the firm ($\alpha = 0.81$). The behavioral intention measure assessed consumers' intentions to continue banking with the bank, using a three-item scale (*I will use Highland's tax preparation services in the future: not probable/probable; impossible/possible; and no chance/certain*). All variables were measured using 7-point scales. Manipulation checks indicated that participants correctly identified the failure and response condition they were in (86%).

5.2. Results

5.2.1. Manipulation checks

An analysis of variance on the prior level of trust towards the company revealed a main effect of the trust manipulation (F (1, 192) = 14.39, p = .01) with higher prior trust in the high trust conditions (M = 5.27) than the low trust condition (M = 4.72). There were no significant effects of the type of response or a significant interaction between prior trust and responses. Thus, the trust manipulation was successful. There were no main or interactive effects of the independent variables on the perceived severity of the failure (all p's > 0.1) suggesting that the failure was viewed as being equally severe in all conditions.

We found the expected two-way interaction between prior trust and company responses on attitudes (F (3, 192) = 3.0, p = .01), intentions (F (3, 192) = 4.39, p < .002), and a marginally significant interaction for post-recovery trust in the firm (F (3, 192) = 2.29, p = .07). Since we have specific hypotheses for the different trust conditions, we analyze these separately (see Table 3).

5.2.2. High prior trust in the firm

Attitudes towards the firm. Planned contrasts revealed that in support of H4a and H5a, external attribution (M = 4.02) and monetary compensation (M = 3.82) both yielded attitudes that were no different from denying the failure (M = 3.7, p's > 0.1), but were significantly more favorable than accepting the failure (M = 2.84, p's < 0.00). Thus, both externally attributing the failure and offering monetary compensation for the failure improved attitudes towards the firm as compared to only accepting the failure.

Post-recovery trust. In support of H4a, external attribution ($M = 3.93$) yielded post-recovery trust that was no different from denying the failure ($M = 3.87$, $t < 1$), but was significantly higher than accepting the failure ($M = 3.08$, $t\ (192) = -2.86$, $p = .005$). In support of H5b, offering monetary compensation yielded post-recovery trust ($M = 3.06$) that was not significantly different from accepting the failure ($t\ (192) = -1.42$, $p > .1$).

Intentions towards the firm. Externally attributing the failure resulted in intentions that were similar to denying the failure ($M = 4.0$, $t < 1$), but significantly higher than accepting the failure ($M = 2.58$, $t\ (192) = -3.96$, $p = .00$). In support of H5b, offering monetary compensation for the failure did not significantly increase intentions ($M = 3.06$) towards the firm as compared to accepting the failure ($t < 1$) and in fact, significantly reduced intentions as compared to denying the failure ($t\ (192) = -1.93$, $p = .05$). Thus, as expected, externally attributing the failure was better than offering monetary compensation in terms of future intentions.

Perceived future failure likelihood. Externally attributing the failure resulted in lowering the likelihood of making similar errors in the future ($M = 3.44$) such that the likelihood was no different from the likelihood reported when the failure was denied ($M = 3.61$, $t < 1$) but was significantly lower than the likelihood reported when the failure was accepted ($M = 4.27$, $t\ (192) = -2.75$, $p = .005$). On the other hand, offering monetary compensation did not lower the likelihood estimates ($M = 3.96$) as compared to accepting the failure ($t\ (192) = -1.01$, $p > .1$). Thus, both H4b and H5b are supported.

5.2.3. Low prior trust in the firm

As predicted, there were no differences between accepting the failure, externally attributing it, or offering monetary compensation on attitudes, intentions, post-recovery trust in the firm, or the likelihood of making similar errors in the future when prior trust in the firm was low (all p's > 0.1). Thus, offering monetary compensation or externally attributing the failure appear to require a modicum of trust in the firm in order to be successful, supporting H6.

In Study 1, we argued that the relatively high prior trust even in the low trust condition might have explained why accept and deny responses differed from predictions in the low prior trust condition. We examine those conditions again and find that as expected, under low prior trust conditions, denying or accepting an ethical failure does not result in more favorable outcomes (all p's < 1). This provides support for H1.

5.3. Discussion

The results of the study indicate that external attribution of an ethical failure leads to post-recovery attitudes, intentions, trust, and likelihood levels that are similar to denying the failure when initial trust is high. This response appears to be successful because it lowers the likelihood estimate of the firm making similar errors in the future. Thus, it is possible to elicit more favorable consumer responses even after accepting an ethical failure, if the failure is accepted but attributed externally. This is an important result in light of the findings from past research which suggests that denying an ethical failure may lead to the most favorable attitudes, as compared to accepting the failure. However, external attribution is not always an option for firms because it is only possible when an external party is responsible for the error.

Interestingly, offering monetary compensation for the failure improved attitudes towards the firm, but did not change intentions, perceived likelihood estimates, or post-recovery trust levels in the firm as compared to accepting the failure. Thus, offering monetary compensation appears to have limited effects on consumer responses. This is perhaps because offering such compensation does not change the likelihood of the firm encountering similar failures in the future and hence does not impact the predictive ability of the current failure. Our results are particularly intriguing since firms often offer such financial compensation for their failures. One possibility is that when the nature of the failure is rare or uncommon, then perhaps offering monetary compensation and externally attributing the failure would both yield equivalent responses. Our scenario in study 2 used a failure that potentially easily recurs in the future (i.e. underreporting taxes). Therefore, we conducted study 3 using a failure that was rarer (toxic material spill) and examined whether the nature of the failure attenuated the difference between external attribution and monetary compensation.

6. Study 3

The study was designed as a 2 (prior trust: low versus high) × 4 (responses type: deny, accept, external attribution, monetary compensation) between-subjects study to test H4, H5, and H6. One hundred and ninety-three undergraduate students participated in the study for course credit. The scenario dealt with a fictitious energy firm (Inpex) engaged in oil exploration, which was accused of spilling toxic materials. The company accepted the failure, attributed the failure to the supplier of faulty pipes that leaked, agreed to bear the total cost of cleaning up the damage, or denied the failure.

The dependent measures included perceived pre-failure trust, severity of the failure, attitudes towards the firm, intentions, perceived future failure likelihood by the firm and post-recovery trust in the firm in that order (all measures identical to study 2). Manipulation checks indicated that participants correctly identified the failure and response condition they were in (89%).

6.1. Results

6.1.1. Manipulation checks

An analysis of variance on the prior level of trust towards the company ($\alpha = 0.94$) revealed a main effect of the trust manipulation ($F\ (1, 185) = 332$, $p = .001$) with higher prior trust in the high trust conditions ($M = 5.63$) than the low trust condition ($M = 3.25$). There were no significant effects of response type or interaction between prior trust and response type (p's > 0.1). Thus, the trust manipulation was successful. There were no main or interactive effects of trust and response type on perceived severity of the failure (all p's > 0.1).

There was a main effect of initial trust on perceived future failure likelihood ($F\,(1, 185) = 29$, $p = .00$), such that the likelihood was rated as being lower under high trust ($M = 3.37$) when compared to low trust ($M = 4.61$). All other effects were not significant (p's > 0.1).

6.1.2. Attitudes towards the firm

Significant main effects of response type ($F\ (1, 185) = 6.75$, $p = .00$) and prior trust ($F\,(1, 185) = 15.74$, $p = .00$) were qualified by a significant two-way interaction between prior trust and response type on attitude towards the firm ($F\ (3, 185) = 2.85$, $p = .03$).

For high prior trust condition participants, consistent with the results found in study 2, externally attributing the error was significantly more favorable ($M = 4.05$) than accepting the failure ($M = 3.0$, $t\ (185) = -3.00$, $p = .003$) but no different from denying the failure ($M = 3.90$, $t < 1$). A similar pattern of results was also noticed for the monetary condition. Providing monetary compensation resulted in attitudes that were significantly more favorable ($M = 4.0$) than accepting the failure ($t\,(185) = -2.89$, $p = .004$), but no different from denying the failure ($t < 1$). Thus, externally attributing the failure and providing monetary compensation both helped improve attitudes towards the firm for participants who already had a high level of prior trust in the firm, providing further support for H4a and H5a.

With low prior trust participants, similar to study 2, there was no difference between attributing the failure elsewhere ($M = 3.3$) and accepting the failure ($M = 2.78$, $t\ (185) = -1.49$, $p > .1$). Thus, external attribution was not effective at improving attitudes when the failure was accepted under low prior trust. However, when the firm

Table 4
Results of study 3.

Variable	Low prior trust				High prior trust			
	Deny	Accept	Attribution	Money	Deny	Accept	Attribution	Money
Prior trust	3.27	3.26	3.26	3.19	5.71	5.64	5.57	5.53
	(0.91)	(1.03)	(1.01)	(0.85)	(0.90)	(0.74)	(0.78)	(0.78)
Mean attitude	2.48	2.78	3.30	3.67	3.9	3.0	4.05	4.0
	(1.00)	(1.17)	(1.08)	(1.49)	(1.26)	(0.95)	(0.90)	(1.18)
Post trust	2.57	2.96	3.50	3.28	4.17	3.52	4.28	4.35
	(0.94)	(1.06)	(0.98)	(1.0)	(1.03)	(0.92)	(1.15)	(1.15)
Future failure likelihood	3.06	3.83	3.20	3.38	4.61	4.50	4.72	4.76
	(1.26)	(1.29)	(1.33)	(1.29)	(1.34)	(1.73)	(1.12)	(1.43)
Intentions	2.86	3.44	4.20	3.27	4.10	3.7	4.42	4.59
	(1.3)	(1.28)	(1.16)	(1.19)	(1.28)	(1.35)	(0.74)	(1.35)
N	24	27	20	27	30	28	18	19

Numbers in parentheses represent standard deviations.

offered monetary compensation, participants rated their attitude toward the firm more favorably than they did when it accepted the failure ($M = 3.67, t(185) = -2.81, p = .006$). Thus, monetary compensation was effective at improving attitudes even under low trust for uncommon failures (see Table 4).

6.1.3. Post-recovery trust

There were significant main effects of response type (F (3, 185) = 4.58, p = .004) and prior trust (F (1, 185) = 44.63, p = .00) that were qualified by a marginally significant two-way interaction (F (3, 185) = 2.49, p = .06). Planned contrasts revealed that in the case of high prior trust condition participants, externally attributing the error was significantly more favorable (M = 4.28) than accepting the failure ($M = 3.52, t(185) = -2.439, p = .01$). Further, providing monetary compensation also resulted in significantly greater post-recovery trust (M = 4.35) than accepting the failure ($t(185) = -2.71, p = .007$). There was no difference between external attribution and monetary compensation ($t(185) < 1$). Thus, monetary compensation functioned akin to external attribution.

With low prior trust participants, when the error was attributed elsewhere, participants rated their post-recovery trust marginally higher (M = 3.5) than when the firm just accepted the error (M = 2.96, $t(185) = -1.79, p = .07$). With monetary compensation however, the difference between accepting and offering monetary compensation (M = 3.28) was not significant ($t(185) = -1.14, p > .1$). Thus, H6 was partly supported.

6.1.4. Intentions towards the firm

Significant main effects of response type (F (3, 185) = 4.09, p = .008) and prior trust (F (1, 185) = 17.54, p = .00) were qualified by a significant interaction (F (3, 185) = 2.75, p = .04). Planned contrasts revealed that when prior trust was high, externally attributing the error was significantly more favorable (M = 4.42) than accepting the failure ($M = 3.7, t(185) = -1.92, p = .05$). Similarly, providing monetary compensation resulted in significantly more favorable intentions (M = 4.59) than accepting the failure (t (185) = −2.42, p = .01), and there was no difference between externally attributing the failure and offering monetary compensation ($t(185) < 1$).

Low prior trust participants rated their intentions as significantly higher when the error was attributed elsewhere (M = 4.2) than when the firm accepted the error ($M = 3.44, t(185) = -2.06, p = .04$). But, the difference between accepting and offering monetary compensation (M = 3.27) was not significant ($t < 1$).

6.2. Discussion

The results of study 3 are somewhat different from the results of study 2, specifically with respect to the effects of offering monetary compensation. Thus, monetary compensation leads to effects on consumer responses that are similar or superior to externally attributing the failure. Unlike study 2, where offering monetary compensation did not significantly improve post-recovery trust and intentions under high trust, we found that both these outcomes were significantly higher than accepting the failure. Another interesting finding in study 3 is that external attribution and monetary compensation may differentially impact post-recovery attitudes, trust and intentions under low prior trust. Thus, external attribution significantly improved post-recovery trust and intentions as compared to only accepting the failure. Intriguingly however, consumer attitudes towards the firm were not significantly improved under external attribution, but were enhanced under monetary compensation. On the other hand, post-recovery trust and intentions were not significantly higher when monetary compensation was offered as compared to accepting the failure. These results are different from that found in study 2.

One reason for this difference could be that the type of failure used in study 3 was different from study 2, particularly with respect to its likelihood of recurrence. A toxic material spill tends to be relatively rarer in occurrence as compared to tax evasion, and this may have impacted our results[2]. Hence, a possible explanation (among other explanations) for the differences in results between studies 2 and 3 may be that for more uncommon failures, consumers are more focused on immediate reparation. Monetary compensation is more strongly associated with immediate reparation than external attribution resulting in more favorable attitudes. However, when intentions and post-recovery trust are considered, external attribution is viewed more positively than monetary compensation. We would like to emphasize that this explanation for the difference in results is necessarily post-hoc and speculative, and needs further data (e.g. manipulating future failure likelihood) to be supported because there were several other differences between the two studies apart from the type of failure.

The three studies thus far provide evidence that the interaction of prior trust in the firm, type of failure and type of response significantly impact consumers' perceptions about the focal firm and their willingness to continue a relationship with that firm, a limitation of these studies is the reliance on students as respondents. While student samples have been widely used in consumer research (Peterson, 2001), in

[2] To test whether the scenario used in this study was seen as being rarer compared to the one used in Study 2, we conducted a study on MTurk with 49 participants, using the scenarios from studies 2 and 3. A three-item scale was used to measure the rarity of the failure (I believe such failures are rare, I think that the chance that this failure will be repeated in the future is low, I do not think this failure will occur again; $\alpha = 0.85$; higher numbers indicate rarer failures). In line with our expectations, we found that the scenario in study 3 was seen as being rarer than study 2 (Study 2: M = 3.06; Study 3: M = 3.91, F (1, 47) = 4.49, p = .039).

Table 5
Results of study 4.

Variable	Low prior trust					High prior trust				
	Reticence	Deny	Accept	Attribution	Money	Reticence	Deny	Accept	Attribution	Money
Prior trust	3.43	3.74	3.57	3.84	3.64	4.95	5.06	4.71	4.89	4.84
	(1.2)	(0.89)	(0.98)	(1.19)	(0.71)	(0.82)	(0.91)	(0.93)	(0.67)	(0.83)
Mean attitude	2.20	2.98	2.62	3.65	3.01	2.61	3.73	2.86	3.74	4.15
	(1.12)	(1.48)	(1.88)	(1.79)	(1.39)	(1.17)	(1.25)	(1.61)	(1.07)	(1.62)
Post trust	2.39	2.98	3.16	3.46	3.29	2.96	3.97	3.11	3.91	4.04
	(1.1)	(1.36)	(1.12)	(1.29)	(0.91)	(1.09)	(1.09)	(1.08)	(0.83)	(1.26)
Future failure likelihood	2.79	3.1	3.65	3.71	3.58	3.69	3.65	4.45	4.55	4.28
	(1.07)	(1.56)	(1.29)	(1.57)	(1.35)	(1.17)	(1.08)	(1.33)	(1.15)	(1.36)
Intentions	2.40	2.89	3.01	3.60	3.05	2.65	3.02	3.78	3.85	4.08
	(1.47)	(1.88)	(1.68)	(1.94)	(1.45)	(1.22)	(1.63)	(1.24)	(1.30)	(1.77)
Total thoughts	3.57	2.91	2.64	3.17	3.72	3.03	3.13	3.06	2.88	3.40
	(1.68)	(1.21)	(1.31)	(1.41)	(2.11)	(1.83)	(1.55)	(1.96)	(2.0)	(2.06)
Net positive thoughts	−2.82	−1.5	−1.36	−0.92	−1.24	−1.82	−0.95	−1.31	−0.53	−0.13
	(1.92)	(2.08)	(1.72)	(2.74)	(2.53)	(1.44)	(1.93)	(1.71)	(1.79)	(1.94)
N	28	25	24	28	25	28	29	22	26	30

Numbers in parentheses represent standard deviations.

the interest of generalizing our findings to non-students, we conducted a final study with American adults using Amazon's MTurk service. Further, in order to expand our understanding of consumer mental processes, we included a thought listing measure in this study. An analysis of respondents' thoughts will enable a better understanding of how prior trust, failure and response type impact consumer responses.

Finally, in addition to the four responses examined in our previous studies, we include a control, no-response condition, in which the firm issued a noncommittal response of neither accepting nor denying the allegations. Prior research has found reticence, or the lack of response, to elicit lower evaluations than other responses (Bougie et al., 2003), but since many firms routinely pursue this response in the immediate aftermath of an allegation (e.g. Equifax, Yahoo), we included it in our next study as a baseline/control condition which would enable us to examine the relative effects of no response as compared to our other response conditions Our expectation was that reticence would elicit responses that were similar to or even worse than accepting the failure, but significantly worse than the other three responses – denial, external attribution and monetary compensation. This is because a reticent response offers no predictive ability in terms of perceived future failure likelihood and leads to uncertainty among consumers with respect to whether the transgression actually occurred, and if so, what action the company has taken to deal with its error. Thus,

H7:. A reticent response will lead to less favorable attitudes, intentions and post-recovery trust as compared to denial, external attribution or monetary compensation, but will be no different from these outcomes as compared to accepting an ethical failure.

7. Study 4

The study was a 2 (Prior trust: High vs Low) × 5 (Response: Reticence, Accept, Deny, External Attribution, Monetary Compensation) between-subjects design, using a scenario similar to study 3. The procedure and dependent variables were identical to study 3. Two hundred and sixty-five American MTurk workers (Mage = 31.9 years, 52.1% male) completed the survey in return for monetary compensation (50 cents). The dependent measures included perceived severity ($\alpha = 0.80$) of the failure, attitudes towards the firm ($\alpha = 0.97$), pre-failure ($\alpha = 0.84$) and post-recovery ($\alpha = 0.86$) trust in the firm, perceived future failure likelihood ($\alpha = 0.90$) and intentions ($\alpha = 0.95$) towards the firm.

7.1. Results

7.1.1. Manipulation checks

An analysis of variance on the prior level of trust towards the company revealed a main effect of the trust manipulation (F (1, 255) = 17.12, p = .00) with higher prior trust in the high trust conditions (M = 4.88) than the low trust condition (M = 3.64). There were no significant effects of response type or interaction between prior trust and response type (p's > 0.1). Thus, the trust manipulation was successful. There were no main or interactive effects of trust and response type on perceived severity of the failure (all p's > 0.1).

7.1.2. Attitudes towards the firm

For high prior trust condition participants, reticence led to attitudes that were no different from accepting the failure (M = 2.61; t < 1), but significantly lower than the other four conditions (p's < 0.05). Thus, H7 was supported. Consistent with the results found in prior studies, denying the failure (M = 3.73) led to higher attitudes than accepting it (M = 2.86, t = −2.23, p = .02). Accepting the failure also led to lower attitudes than both external attribution (M = 3.74, t = −2.34, p = .02) and monetary compensation (M = 4.15, t = −3.59, p = .00), while these two conditions were no different from denial (p's > 0.1). Thus, under high trust, both external attribution and monetary compensation led to attitudes that were as favorable as denial of the failure, and more favorable than accepting the failure.

With low trust participants, similar to the patterns found for the high trust conditions, reticence was not significantly different from accepting the failure (M = 2.2, t < 1), but resulted in marginally lower attitudes as compared to denial (t = −1.8, p = .07), external attribution (t = −3.47, p = .001) and monetary compensation (t = −1.87, p = .06). Thus, even under low trust, reticence was similar to accepting the failure and did not appear to help the firm's recovery. Accepting the failure (M = 2.62) was no different from denying the failure (M = 2.98) or offering monetary compensation (M = 3.01, p's > 0.1). However, when the firm attributed the failure to an external party, participants rated their attitude toward the firm more favorably than they did when it accepted the error (M = 3.65, t = −2.40, p = .02) (see Table 5).

7.1.3. Post-recovery trust

Planned contrasts revealed that in the case of high prior trust condition participants, externally attributing the error (M = 3.91) and offering monetary compensation (M = 4.04) were both significantly more favorable than accepting the failure (M = 3.71, $t_{attribution}$ = −2.70, p = .00, t_{money} = −3.24, p = .00), but no different from denying the failure ($M = 3.97$, t's < 1, p's > 0.1). Denying the failure led to significantly higher trust than accepting the failure ($t = -2.77$, $p = .00$). There was no difference between external attribution and monetary compensation ($t < 1$). As predicted, reticence ($M = 2.96$) was no different from accepting the failure ($t < 1$), but elicited significantly lower trust than the other three conditions (all p's < 0.05).

With low prior trust participants, there were no differences between accepting (2.98), denying (3.16), externally attributing the failure (3.46) or offering monetary compensation (3.29, all p's > 0.1). However, reticence (2.39) led to marginally lower trust than acceptance of the failure ($t = -1.82$, $p = .07$), and significantly lower trust than the other three responses (all p's < 0.01).

7.1.4. Intentions towards the firm

Planned contrasts revealed patterns of effects similar to attitudes and trust such that when prior trust was high, accepting the failure ($M = 3.02$) led to marginally lower intentions than denying ($M = 3.78$, $t = -1.83$, $p = .06$), external attribution ($M = 3.85$, $t = -2.1$, $p = .03$) and monetary compensation ($M = 4.08$, $t = -2.77$, $p = .00$), while external attribution and monetary compensation were no different from denial (t's < 1). Reticence ($M = 2.65$) was no different from accepting the failure ($t < 1$), but significantly lower than the other three responses (p's < 0.05). Under low trust, the only significant difference that emerged was between reticence ($M = 2.40$) and external attribution ($M = 3.6$, $t = -2.64$, $p = .00$). No other differences were significant.

7.1.5. Perceived future failure likelihood

Under high trust, externally attributing the failure after accepting it resulted in lowering the perceived future failure likelihood ($M = 4.55$) such that the likelihood was no different from the likelihood reported when the failure was denied ($M = 4.45$, $t < 1$) but was significantly lower than the likelihood reported when the failure was accepted ($M = 3.65$, $t = -2.73$, $p = .007$). Similarly, offering monetary compensation after accepting the failure also lowered the likelihood estimates ($M = 4.04$) as compared to accepting the failure ($t = -1.97$, $p = .05$) but not denying the failure ($t < 1$). Reticence ($M = 3.69$) led to similar estimates of likelihood as accepting the failure ($t < 1$), but marginally significantly higher than the other three responses (p's < 0.07). Under low trust, reticence ($M = 2.79$) led to significantly higher estimates of the perceived future failure likelihood than denial ($M = 3.65$, $t = -2.23$, $p = .027$), external attribution ($M = 3.71$, $t = -2.48$, $p = .014$) and monetary compensation ($M = 3.58$, $t = -2.06$, $p = .04$). No other differences were significant.

7.1.6. Cognitive responses

In line with prior research (e.g. Aaker & Maheswaran, 1997), each of the thoughts listed by our participants was coded as positive (e.g. “Exel is a competent and well regarded business”, “I liked how Exel took responsibility and how they were handling the issues”), negative (e.g. “Highly unreliable company which seeks to exploit the innocent citizens”, “I can't trust that Exel won't act unethically in the future”) or neutral (e.g. ”Maybe I should wait to hear the full story before I develop an opinion”, “The allegations should be investigated further”), and summed to arrive at a total thought measure. An analysis of variance revealed no differences in the total number of thoughts across conditions (p-values for the main effects and interaction > 0.1). Thus, our manipulations did not lead to greater thinking across conditions. We computed a net positive thought by subtracting the negative thoughts from the positive thoughts listed for each respondent. An analysis of variance on the net positive thoughts revealed a significant main effect of trust (F (1, 255) $= 6.17$, $p = .01$) and a significant main effect of response type (F (4, 255) $= 5.91$, $p = .00$).

Planned contrasts revealed that under high trust, reticence (-1.71) was no different from accepting the failure (-1.3, $t < 1$), but both were significantly worse than external attribution (-0.53) and monetary compensation (-0.13; all p's < 0.05). There were no differences between accepting and denying (-1.0) the failure ($t < 1$). Under low trust, intriguingly, reticence elicited significantly more negative thoughts than all the other four responses (all p's < 0.05). There were no other significant differences. These results are consistent with the findings for post-recovery attitudes and trust and further suggest that reticence may elicit poor consumer perceptions about the firm, and that both monetary compensation and external attribution may lead to improved perceptions as compared to accepting the failure.

7.2. Discussion

The results of study 4 replicate and extend the findings from our previous studies and provide additional support for our contention that recovering from ethical failures is contingent on how different responses impact consumers' perceived future failure likelihood by the firm. When consumers perceive the failure to be attributable to an external, third party other than the firm, or when the firm offers monetary compensation for its failure, consumer attitudes, intentions and trust in the firm are significantly higher than when the firm simply accepts the failure or adopts a reticence strategy of neither confirming nor disconfirming the failure. In fact, we find that reticence may even be worse than accepting the failure in terms of its effects on post recovery trust when prior trust in the company was already low. The pattern of results for cognitive responses also confirms these findings with more negatively valanced thoughts under reticence than the other responses, when prior trust in the firm was low.

While the results of this study support our predictions, an alternate explanation for the weaker effects of external attribution and monetary compensation under low trust could be lowered believability or credibility of the responses. Thus, for example, consumers may not believe that the failure can truly be attributed externally or may view the monetary compensation as an attempt by the company to “buy” its way out of the problem. This explanation is different from our contention that prior trust interacts with the response type to impact consumer perceptions of future failure likelihood and thereby attitudes and intentions. Hence, in order to rule out this explanation, we conducted an additional study to assess whether credibility of all responses across all experimental conditions was similar. 309 MTurk workers participated in a 2 (trust: high vs low) × 5 (response: accept, deny, external attribution, monetary compensation, reticence) between-subjects study using the same stimuli as in study 4. Response credibility was assessed using a 5-item scale (response was believable, credible, realistic, honest, sincere; $\alpha = 0.92$). The trust manipulation was successful with higher trust in the high versus low condition ($M_{high} = 4.70$, $M_{low} = 4.05$, F (1, 299 $= 48.68$, $p < .01$, $\eta^2 = 0.14$, Observed power $= 1$), but there was no significant effect of trust ($F < 1$, $\eta^2 = 0.001$, Observed power $= 0.08$) or significant interaction between trust and response type on perceived credibility of the responses ($F < 1$, $\eta^2 = 0.012$, Observed power $= 0.29$). In line with our expectations, there were no significant differences between the response conditions (Means ranging from 3.98 to 4.66 – see Supplementary Materials). Thus, it does not appear that trust leads to differential perceptions of credibility of the firm's responses.

8. General discussion

Our research examines the moderating role of prior trust on consumer responses to competence and ethical failures by firms, and a firm's subsequent response to such failures. We find that prior trust is an important determinant of how consumers respond to failures. Competence failures benefit to a greater extent from high prior trust compared to ethical failures. Ethical failures do not benefit when prior trust is low irrespective of the response. However, when prior trust in the firm is relatively high, then denying an ethical failure yields favorable effects on consumer attitudes and trust but accepting a failure even with relatively high prior trust does not seem to help. Interestingly, preliminary evidence seems to indicate that very high levels of prior trust may be able to overcome the negative effects associated with accepting ethical failures (study 1).

We suggest that this pattern of results is due to differences in the perceived future failure likelihood. Under low trust, when consumers do not have prior experiences or knowledge about the firm to rely on, then the firm accepting a competence failure is not predictive of future failures and hence unlikely to be predictive of future competence failures. Accepting a competence failure is also likely to shift consumer focus to reparation, and away from the failure, resulting in more favorable evaluations (Ohbuchi et al., 1989; Smith et al., 1999). However, when prior trust is high, consumers' prior knowledge and/or expectations about the firm can attenuate the differences between acceptance and denial.

When the firm has an ethical failure, prior trust helps the firm's recovery but only when the failure is denied. Thus, we find that high levels of prior trust do not significantly improve attitudes towards the firm as compared to low levels of prior trust, when the ethical failure was accepted. The reason seems to be that the perceived future failure likelihood does not significantly decrease. This finding suggests that denying an ethical failure continues to confer greater advantages than accepting an ethical failure, even under high trust. However, since denial is not a plausible option when the failure did indeed occur, we examine two additional responses that are frequently seen in the marketplace – monetary compensation and external attribution. Leveraging the finding that perceived future failure likelihood underlies the effects of failure, trust, and response on consumer attitudes, we find that external attribution results in greater advantage to a firm as compared to offering monetary compensation because it reduces the future failure likelihood. We thus extend past research on external attribution (Kim et al., 2006), which has found external attribution to outperform internal attribution for ethical failures, by identifying the mediating mechanism – perceived future failure likelihood. We also find that monetary compensation improves consumer attitudes, but does not always lower perceived future failure likelihood, thereby resulting in lower intentions and trust.

Our findings contribute to the literature on trust recovery (e.g. Dirks et al., 2011; Hodgins & Liebeskind, 2003; Kim et al., 2004, 2006; Lyon & Cameron, 2004; Tomlinson, Dineen, & Lewicki, 2004) in several important ways. First, we demonstrate that prior trust toward the firm is an important moderator to consider in the context of failure and responses to such failures by the firm. This is an important finding since it outlines a boundary condition for prior research in this area with respect to what would be optimal response strategies to adopt under competence versus ethical failures (e.g. Kim et al., 2004). Some prior research has considered the moderating effects of affective commitment (Mattila, 2004) and brand equity (Brady et al., 2008) on consumer evaluations of firms after failures, and our findings on trust add to this stream of work that examines how aspects of the firm's relationship with the consumer prior to the failure can affect consumer perceptions of the failure and subsequent recovery.

Second, the finding that prior trust differentially helps firms' recover from competence as compared to ethical failures is important because it emphasizes the need for firms to treat these two types of failures differentially. While past research has shown that competence and ethical failures differ significantly in terms of consumer response to such failures (e.g. Ferrin, Kim, Cooper, & Dirks, 2007), our findings add to this stream of research and demonstrate that even under conditions of high trust in the firm, ethical failures are harder to recover from than competence failures, and therefore may warrant responses that are different from those that would be optimal for competence failures. While some research has found that competence failures may be harder to recover from for organizations (Votolato & Unnava, 2006), our findings suggest that ethical failures are harder to recover from for firms, particularly when prior trust in the firm is low. One reason our results differ from the findings by Votolato and Unnava (2006) may be due to the differences in the firm's role in the failure. We consider situations where the firm fails, while Votolato and Unnava (2006) consider how failures of affiliated partners (e.g. a supplier to the firm) impact perceptions about the firm.

Third, we identify perceived future failure likelihood as a mediator of the interactive effects of failure type, trust, and response type on post-recovery attitudes, intentions and trust. This suggests that a focus on how consumers perceive the likelihood of the failure recurring in the future is a critical determinant of how favorable versus unfavorable their perceptions of the firm will be. Prior research (Kim et al., 2004) has identified beliefs about perceived integrity as a mediator of the effects of failure and response type on post-recovery trust. We suggest that perceived integrity is likely to be highly correlated with the future failure likelihood; in other words, perceived integrity of the firm is important *because* it helps consumers predict whether the firm is likely to repeat the failure. Hence, we suggest that our results extend the results of Kim et al. (2004).

Fourth, we examine a previously unconsidered response – offering monetary compensation – and find that it can have differing effects on consumer attitudes as compared to consumer trust and intentions. This is a particularly intriguing and important finding because it suggests that recovery from ethical failures can be a complex process and that differing responses can potentially have different sets of effects on different aspects of consumer evaluations of the firm. This also underscores the importance of including multiple measures and dimensions of consumer evaluations in order to gain a complete understanding of how consumer responses to failures and responses are shaped.

In summary, our research identifies an important moderator to firm failures and responses, and further identifies the variable that underlies this process – perceived future failure likelihood. We are therefore able to use this understanding of the process underlying consumer responses to offer insight into how different responses can impact different aspects of consumer responses (attitudes, trust, and intentions).

8.1. Limitations and future research directions

Some limitations of our work need to be articulated. First, we used scenarios across all our studies. While past research in this area has also typically used scenario-based approaches (Ferrin et al., 2007; Folkes & Kamins, 1999), we believe that the use of field studies that examine real failures and responses would be a very useful addition to this stream of research. However, given the difficulty associated with manipulating failures, this is a difficult task. On a related note, our studies focus on the immediate, short term consequences of trust, failure and response. Future research on the longer-term implications of these variables would be interesting.

Second, we use a rather simplistic version of prior trust in our paper – either high or low. However, research (e.g. Blomqvist, 2007; Dunn, Ruedy, & Schweitzer, 2012) has documented that trust can be a multidimensional construct and may potentially be of different types (e.g. cognitive versus affective). It would be particularly interesting to examine whether a particular type of trust (e.g. affective) offers more or less protection to different types of failures, as compared to a simple overall trust construct. On a related note, we find that even relatively small differences in trust can have significant effects on consumer perceptions. Thus, in study 1, although respondents in the low trust conditions reported pre-trust scores greater than the midpoint of the scale, indicating moderate levels of trust, they nevertheless reported significantly different post failure and response evaluations of the firm as compared to the respondents in the high trust condition. However, it would be interesting to see if very low levels of trust – perhaps active mistrust – would lead to a different pattern of results. For example, if consumers distrust a company, their evaluations will likely be different than consumers who hold low levels of trust in the company. Future research on the differences between low trust and active mistrust would be interesting.

Some prior research suggests that high levels of affective commitment to the brand may serve to magnify the effect of the failure (e.g. a breach of contract), and lead to worse evaluations post recovery than when commitment levels are low – a betrayal effect (e.g. Mattila, 2004), a finding that seemingly is contradictory to our findings of more positive evaluations post recovery under high trust. We suggest that a betrayal effect is noticed when the emotional involvement with the brand is high (e.g., Mattila, 2004; Aaker, Fournier, & Brasel, 2004) and even when this effect is noticed, it may be limited temporally to the immediate aftermath of a failure (e.g., Brady et al., 2008). In other situations when the emotional attachment is less extreme, a buffering effect is noticed (e.g., Ahluwalia, Burnkrant, & Unnava, 2000). Trust is less affectively laden compared to brand commitment, brand love, attachment, etc. and we therefore expect to see a buffering effect rather than a betrayal effect. Further, we manipulate trust for fictitious brands in our studies. Given the short duration of the interaction with the brand and the lack of any personal brand experience, it is difficult to imagine any meaningful affective connection for our participants. Therefore, we expect to see trust shielding the brand and forgiving it rather than "stinging" and hurting the brand. Hence, we contend that our predictions and findings are different from the findings for commitment and equity. However, an interesting avenue for future research would be to consider potential interactions between trust and commitment on consumer responses to different failures and recovery responses.

Finally, examining failure magnitude and recurrence likelihood could be fruitful areas for future research, as would examining issues related to the magnitude of compensation. Our studies simply informed respondents that the firm was offering some monetary compensation, without specifying the exact amount offered. However, if the offered compensation is viewed as being more or less than an amount that consumers view as fair and appropriate, then monetary compensation may have a backfire effect, and result in lower evaluations than simply accepting the failure.

Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jbusres.2020.08.059.

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The influence of political candidate brands during the 2012 and 2016 US presidential elections

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Abstract

Purpose – The purpose of this paper is to investigate whether voters consider a candidate's brand image when evaluating election alternatives. That is, how prominent a role does the candidate brand image have in the decision-making process? As election outcomes are behavior-driven, the goal is to examine the potential relationship between the candidate brand image, the self-brand image and voting intention.

Design/methodology/approach – Data were collected for the third week of October 2012 and again for the same time in 2016 – three weeks prior to the US presidential election each year. An online-based nationwide survey was leveraged, followed by correlation, regression and mediation analysis.

Findings – Candidate brand image has a role in US presidential elections. In addition, candidate brand image and self-brand image are significantly related to voting intention. In both elections, the losing candidate's brand image was more of a factor when it came to voting intention, as both candidates' brand image mediated the relationships between self-brand image and voting intention for all voters.

Research limitations/implications – A link between candidate brand image and voting intention was demonstrated for perhaps the first time. With results showing candidate brand image does relate to the voter's self-brand image and voting intention, future research should investigate what other brand elements are a factor. There are undoubtedly other factors – some branding-related, others not branding-related – that go into voter decision-making. Because results were stronger for a losing candidate than a winning one, research should also examine whether this occurrence was coincidence or consistent voter behavior.

Practical implications – When voters considered who might best represent themselves, the brand image of the candidate enhanced the likelihood of voting for, or against, the candidate. Therefore, it is highly recommended that campaign managers understand not only the importance of their candidate's brand image to develop and maintain a positive image among their supporters but also how to highlight what their supporters view as the negative aspects of the opposing candidates' brand image to increase the lack of affinity for competitors.

Originality/value – This research demonstrates, for the first time, that candidates' brand image is considered by voters in a US presidential election. In addition, it discovers the role candidate brand image plays in voting intention. Finally, it provides direction for campaign managers to conduct research into candidates as brands to build brand relationships with the electorate.

Keywords Branding, Brand image, Voting intentions, Political candidates, US presidential elections

Paper type Research paper

> You know the difference in Democrats and Republicans? In every presidential election, Democrats want to fall in love. Republicans just fall in line. – Bill Clinton, 2003

Introduction

Heavily contested presidential elections around the world in the past decade have highlighted the importance of marketing during an electoral campaign (Lees-Marshment, 2014;

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Van Steenburg, 2015). In fact, winning an election without marketing may be impossible (Cwalina *et al.*, 2008). According to the Center for Responsive Politics (2016), the cost of the past three US election cycles has escalated from $5.3 bn in 2008 to $6.4 bn in 2016, with a cost close to $2.5bn on average for the presidential elections alone. In terms of political advertising, spending during the 2016 US presidential election hit an all-time record of $1.4bn (Miller, 2017). The effect of marketing activities on political participation and turnout is dramatic (Shachar, 2009). At the same time, political marketers must manage their candidate's image to overcome an opponent (Garzia, 2013). The recent US presidential elections seem to serve as a reminder of how the power of a political candidate brand image (Guzmán and Sierra, 2009) and the media attention it gets (Dahl *et al.*, 2017) can influence voter perception, intention and choice.

With so much being spent in marketing and promoting political candidates, it is important to study, from a marketing perspective, one of the most critical decisions consumers make – casting a vote for a candidate. If former President Clinton is to be believed, Democrats are affective-driven individuals who vote based on emotion, while Republicans are loyal voters who support their party's candidate no matter what. But is that true? This paper adopts the view of political candidates – as opposed to just parties – being brands (Guzmán and Sierra, 2009; Guzmán *et al.*, 2015) and compares the 2012 and 2016 US presidential elections and results from a brand-image perspective. In doing so, it attempts to address a vital gap (Van Steenburg, 2015) in the marketing, political science and communications literature on the voter-as-consumer paradigm. Finally, it attempts to contribute to the important task that consumer researchers have in explaining why events unfold as they do (Dahl *et al.*, 2017).

Relying on brand relationship theory (Fournier, 1998; Fournier and Alvarez, 2013; Park *et al.*, 2013) for its foundation, this research attempts to develop a marketing explanation for the results from the past two US presidential elections. Because candidates do function as brands (Barrett, 2018; Cosgrove, 2014; Guzmán and Sierra, 2009; Schneiker, 2018; Speed *et al.*, 2015), and if conventional wisdom is correct, one could argue that Democratic voters are swayed by the affinity they feel for the brand, while Republican voters are only impacted by brand loyalty. In the case of the latter, previous research (Caprara *et al.*, 1997; Lock and Harris, 1996; Schneider, 2004; Rutter *et al.*, 2018) would argue it is loyalty to the party brand, while the former should demonstrate affinity for the candidate brand. However, there is the possibility of a "referendum" on a particular candidate or party, or on a candidate's or party's policies, as the reason for the electorate's decision-making. In such a case, the *lack* of affinity toward the candidate or party brand, known as the *anti* set, plays a role in election outcomes (Newman, 2007).

While previous research (Guzmán and Sierra, 2009; Guzmán *et al.*, 2015) has demonstrated the candidate–brand relationship in a presidential election in terms of brand image, such a phenomenon has not been examined in US presidential elections. Further, to the best of the authors' knowledge, no research to date has explored how voters consider the candidate's brand image when making electoral decisions. This is crucial, as marketers and researchers need to understand how the electorate's emotional connections and self-identification with the candidate affect voter behavior (Kaneva and Klemmer, 2016). Therefore, this research attempts to answer three primary questions. First, do candidates function as brands in US presidential elections? That is, do voters consider candidates as having a brand image? Second, if they do, how do voters consider the candidate brand image when evaluating election alternatives? In other words, how prominent a role does the candidate brand image have in the decision-making process? And finally, does the candidate brand image affect voter intention? Answers to these questions hold valuable insight into strategic direction for political marketers involved in election campaigns. Kaneva and Klemmer (2016) challenged researchers to develop a better understanding of individual candidate brands. With data from the past two US presidential elections, the analysis of the correlation, causation, and mediation of candidate brand image related to self-brand image and voting intention, first for the 2012 election and then for the 2016 election, was conducted. Results of this study further support the view of political candidates being viewed as brands and provide marketing insights to help explain the electoral results based on how voters relate to a candidate's brand image.

Literature review

Academic literature on political marketing emerged in the mid-1970s and became a serious research focus in the 1990s (Henneberg and O'Shaughnessy, 2007). Early political marketing literature, primarily developed in European countries where parliamentary systems are the norm, identified the political candidate as the product and the political party as the brand (Shama, 1976). Later iterations of this "product" approach to political branding research identified various combinations of the party image, party policies and leader image as the product offer (Harrop, 1990; Farrell and Wortmann, 1987; Worcester and Mortimore, 2005). Elaborating on this, Butler and Collins (1999) argued that these three components were simply one-third of the political product, with a voter's party loyalty and the ability of the product to evolve after an election making up the other two. The latter component was supported by Lees-Marshment's (2003) approach that the "product" was an ongoing effort by party leaders, policies, elected officials, their staffers and traditional branding elements such as party and candidate symbols.

A political brand is conceptualized as patterned political representations used to identify that representation, as well as differentiate it from other political representations (Nielsen, 2017). Brands are invaluable in politics because they simplify voter decision-making (Needham, 2006) by minimizing the effort voters must exert to know a party's or candidate's policies. To be successful, then, political marketers must leverage the political brand to establish a competitive advantage and win votes (Cwalina and Falkowski, 2015). Leveraging the political brand creates brand knowledge – the combination of brand awareness and brand image – in the minds of the voters. Because voters are most likely aware of the final candidates in a US presidential election, the focus here is on brand image, defined as perceptions consumers have about a brand through associations that are held in memory (Keller, 1993). A candidate's image is based on voters' perceptions of the candidate based on characteristics, leadership potential and messaging (Cwalina and Falkowski, 2015).

While there remains much work to do in developing empirical studies examining the impact brands have on voters and elections (Nielsen, 2017), some efforts have examined branding in politics in terms of brand communities (Dermody and Scullion, 2001), brand culture (Smith and Speed, 2011), brand perspective (Nielsen and Larsen, 2014), brand relationships (Scammell, 2007) and brand personality (Smith, 2009). Often, an individual's brand is linked to the brand of an organization, such as a political party (Speed *et al.*, 2015), though there is a paucity of marketing research in this area as well. Other literature has shifted the focus from the voters using the political party as a logical cognitive shortcut in making an electoral decision to the voters using the candidate image or brand (Barrett, 2018; Cosgrove, 2014; French and Smith, 2010; Guzmán and Sierra, 2009; Guzmán *et al.*, 2015; Jain *et al.*, 2018; Lees-Marshment, 2014; Phipps *et al.*, 2010; Schneiker, 2018; Speed *et al.*, 2015). This change has led to research examining the voter–brand relationship in terms of brand image, though much of it is still focusing on the party brand (Gorbaniuk *et al.*, 2015; Nielsen and Larsen, 2014; Rutter *et al.*, 2018; Pich *et al.*, 2018; Scammell, 2015; Smith, 2009; Smith and

French, 2009). As a result, there is a scarcity of research on branded political candidates (Kaneva and Klemmer, 2016), likely because of the relative newness of the concept (Van Steenburg, 2015).

The strength of a political brand (Ahmed *et al.*, 2017; Scammell, 2015) and the level of self-congruity a voter has with the political brand (Needham, 2006) or candidate brand image (Guzmán *et al.*, 2015) also influences voter perception. In the case of the later, voters ask themselves questions such as "Do I relate to this candidate?" and "How much does this candidate resemble who I am?" Voters tend to be more persuaded by information that more closely relates to their underlying moral foundations based on their political ideology (Kidwell *et al.*, 2013) and prior beliefs (Wood and Lynch, 2002). Thus, individuals selectively encode political information and use it as the basis of decision-making. Because voters attempt to understand a complex and ever-changing system of party and candidate information (Needham, 2006), self-referencing becomes a convenient cognitive structure for voters to rely on when analyzing candidates as brands to make their choices in an election (Guzmán *et al.*, 2015; Kaneva and Klemmer, 2016). Unlike typical consumer behavior, voters are making a long-term relationship commitment, often of four or five years. By voting for a candidate, voters make an advanced statement of loyalty (Needham, 2006). At the same time, contemporary brand management strategy encourages customers to play an active role in the creation of a brand's meaning (Brodie *et al.*, 2017; Kennedy and Guzmán, 2016) allowing the electorate to develop candidate connections through various brand resources (Ballard, 2018). Therefore, brand relationship theory (Fournier, 1998) provides an appropriate theoretical foundation for research in candidate brand image.

Brand relationship

Brand relationship theory has replaced the traditional short-term marketing paradigm (Dessart *et al.*, 2015; Fournier, 1998; Fournier *et al.*, 2015; Ruane and Wallace, 2015) as brands have become for consumers long-term relationship partners high in love, trust, and exclusivity (Fournier, 1998). Consumers are thus willing to engage with brands (Fuchs *et al.*, 2013) – this being of critical importance to political marketers because it changes the focus from the marketing transaction to election day (Needham, 2006). Relationship marketing is vital when consumer purchases are spread out over time (Egan, 1999), making it appropriate in political marketing research when elections are years apart. In addition, a brand relationship approach offers functional/utilitarian and/or psychological/emotional meaning to the consumer (Fournier, 1998) who will proactively behave in ways to support and protect the brand's reputation (Taute and Sierra, 2014).

While Fournier (1998) describes 15 different brand relationship forms, a more manageable framework focuses on two different types of relationships: communal and exchange (Clark, 1984; Clark and Mills, 1979; Clark *et al.*, 1986; Esch *et al.*, 2006). When it comes to political parties or political candidates, Lock and Harris (1996) found them to be complex, intangible products that are difficult for a voter to unbundle, forcing voters to evaluate the overall concept of the brand. Applying this logic and the brand relationship forms to consumer electoral decision-making, it seems to make sense to view the relationship between consumers and a political candidate brand in terms of how consumers view the candidate brand image within their social and community setting (communal relationship), and in regard to what they expect to obtain in exchange for their support given to a candidate (exchange relationship).

This, of course, differs for voters based on numerous factors such as one's level of political activity, consumption of media coverage, level of identification with a political party, opinions on certain ideological issues and exposure to candidate messaging

(Dahl *et al.*, 2017). The more an individual is influenced by any of these factors, the more extreme the positions one takes (Baldassarri and Gelman, 2008). For example, divisions between Republican and Democrat voters in the USA reached record levels when Barack Obama was President and have expanded in the past year (Pew Research Center, 2017a). Much of this is driven from the political parties, who through their own polarization have become better at sorting potential voters along ideological lines (Baldassarri and Gelman, 2008). At the same time, politicians have also become more ideological (McCarty *et al.*, 2016), leading voters to become more divided in terms of preferences, creating a self-reinforcing dynamic and affecting voting behavior (Baldassarri and Gelman, 2008). In fact, partisan loyalty is having a greater effect on voting behavior now than it ever has (Abramowitz and Saunders, 1998; Bartels, 2000; Hetherington, 2001; McCarty *et al.*, 2016). While this affects voters' engagement with candidates, because different relational models lead to different types of consumer–brand engagement (Kaltcheva *et al.*, 2014), ultimately consumers engage with all brands via cognitive, affective and behavioral dimensions (Dessart *et al.*, 2015).

Political brands can also be classified into six different categories according to how scholars implicitly understand the way voters perceive them from rational, emotional or social perspectives (Nielsen, 2017). Political candidate brands can therefore also be considered multidimensional, particularly given the way they engage today with the voter through multiple brand touchpoints. Not surprisingly, as a result consumers use candidate brands as shortcuts to make complex electoral decisions (Guzmán and Sierra, 2009). As previously mentioned, leveraging the political brand image creates perceptions voters have about a candidate through associations that are held in the voter's memory. This image, based on voters' perceptions of the candidate characteristics, leadership, and marketing communications, is then used as the basis for making a complex and ever changing electoral decision (Needham, 2006). In other words, the candidate brand image may be used to bypass the complexity of the cognitive relational dimension and can be considered to represent a synthesis of the candidate's characteristics (Caprara *et al.*, 2002). It is thus through the use of the emotional relational dimension that a brand relationship of affinity, or lack of, toward a candidate is developed. This affinity, in an electoral context, can be useful to understand voters' political activism, apathy or willingness to engage in word of mouth. We thus analyze the results of the 2012 and 2016 presidential election from a brand image relationship perspective, as we believe it provides an interesting and insightful explanation of the electorate's behavior.

Hypotheses development

Voters, when considering their candidate options in an election, use shortcuts to process the vast amount of information (De Landtsheer *et al.*, 2008; French and Smith, 2010; Guzmán *et al.*, 2015; Phipps *et al.*, 2010; Schneider, 2004; Smith, 2009). Among these shortcuts, the political candidate brand image is used to synthesize the candidate's ideology and proposals (Guzmán and Sierra, 2009). Definitionally, brand image is how consumers (voters) perceive a brand (Aaker, 1996) and relates to brand associations that consumers (voters) store in their long-term memories (Bian and Moutinho, 2011). In politics, brand image is built as voters have contact with the candidate through all of the candidate's brand touchpoints – advertising, news coverage, participation in debates, website, social media activity, etc. Furthermore, given that voters know candidates have perception motives, the perception of a candidate is influenced by persuasion knowledge (Campbell and Kirmani, 2000; Isaac and Grayson, 2017) – knowing that the politician is trying to influence you. Voters thus tend to rely on motivated reasoning (Kunda, 1990) and focus on what they want to hear, and ignore or forget public opinion polls and information that threatens an outcome opposite to their political preference (Dalton and Huang, 2014).

Research from cognitive psychology and consumer behavior has identified a shortcut known as self-referencing in which individuals encode events in reference to the self (Brown *et al.*, 1986). These cognitive shortcuts are developed because people know more about themselves than others, allowing individuals to develop more elaborate encoding of events made with respect to the self than via other approaches (Brown *et al.*, 1986; Debevec *et al.*, 1987). Thus, self-referencing provides meaning to stimuli while also allowing individuals to go beyond the available information to make decisions (Markus, 1977; Rogers *et al.*, 1977).

Political candidates also rely on this method as a way to connect with the electorate in a more personal way. As such, in political decision-making, voters develop a perception of each candidate and evaluate how his or her brand image relates, or does not relate, to the voter's self-referencing brand image. According to Guzmán *et al.* (2015), a voter's self-brand image influences his or her perception of a political candidate's brand image. In other words, voters use their perceived self-image as an additional shortcut to evaluate political candidates and how they relate to the candidate. This significant relationship was found with data from the 2006 presidential election in Mexico (Guzmán *et al.*, 2015). The question these findings initially produce is whether or not this relationship also applies to voters in a US presidential election.

In addition, with the increasing polarization of the electorate (Pew Research Center, 2017a), the understanding that brand image is a customer-based concept (Nyadzayo and Khajehzadeh, 2016), and the need for consumers to seek out information that supports their inherent beliefs (Dalton and Huang, 2014), it is likely that persuasion motives (McGuire, 1976) are also at play. For voters interested in supporting an existing attitude, need for consistency may be a cognitive approach to evaluate the candidate's brand image, and the resulting voting intention. For example, when liberal voters consider a Democratic candidate, or conservative voters consider a Republican candidate, affinity for the brand may be a factor. Similarly, when liberals consider a Republican candidate or conservatives consider a Democratic candidate, a lack of affinity may play a role in their decision-making. A positive brand image can establish a brand position and protect it against rival brands (Aaker, 1996) and has a pivotal role in helping individuals decide whether or not to buy the brand (Bian and Moutinho, 2011). We thus posit:

H1. Voters' self-brand image will be significantly related to their perception of the candidates' brand image in a US presidential election for all voters.

H2a. Voters' self-brand image will be positively related to their perception of the candidates' brand image of the voters' own political party.

H2b. Voters' self-brand image will be negatively related to their perception of the candidates' brand image of the voters' opposite political party.

Most importantly for marketers, however, is whether or not voter perception toward the candidates' brand image influences their voting intention. That is, do voters consider their own brand image and the candidates' brand image when deciding for whom to vote? As previously mentioned, a voter's self-brand image influences his or her perception of a political candidate's brand image (Guzmán *et al.*, 2015). Therefore, this cognitive shortcut should also affect how people vote. For example, if one considers himself or herself more conservative or more liberal, he/she should lean toward voting for the more conservative or liberal candidate. If, however, one identifies with one party more than with another, he/she will more likely vote for the candidate representing the party he/she most identifies with. Stated simply, self-image should influence voting intention.

What is important, then, is to explore how the candidate brand image influences this relationship. In other words, how candidate brand image influences a voter's self-perception and voting intention. As previously mentioned, according to Isaac and Grayson (2017), how a candidate is perceived is influenced by persuasion knowledge. Knowing that all candidates are trying to influence their perceptions, voters will engage in motivated reasoning (de Mello *et al.*, 2007), most likely relating to the candidates and the information to which they chose to pay attention (Dahl *et al.*, 2017; Dalton and Huang, 2014; Kidwell *et al.*, 2013; Tanner and Carlson, 2009; Wood and Lynch, 2002). Therefore, it is expected:

H3. A candidate's brand image will be positively related to voting intention for all voters.

H4a. A candidate's brand image will be positively related to voting intention for their party's candidate.

H4b. A candidate's brand image will be negatively related to voting intention for the opposing party's candidate.

Should a voter not like or personally identify with a candidate as he or she does not match the voter's self-perception regardless of political ideology or party affiliation, what effect does this have on his/her vote? We predict that the affinity a voter feels toward a candidate will intensify the relationship between self-brand image and intention to vote. If a voter feels a strong and positive appeal toward a candidate, it could be argued that the candidate brand image is having a positive influence on a voter's relationship between the self-brand image and his or her voting intention. Conversely, if a voter feels a strong and negative appeal toward a candidate, it could be argued that the candidate brand image is having a negative influence on the voter's relationship between the self-brand image and his or her voting intention. Therefore, we hypothesize:

H5. Voters' self-brand image will be related to voting intention for a candidate for all voters.

H6a. Voters' self-brand image will be positively related to voting intention for the candidate of the voters' own political party.

H6b. Voters' self-brand image will be negatively related to voting intention for the candidate of the voters' opposite political party.

When voters are not asking themselves how they relate to the candidate, political researchers are, with organizations updating presidential approval ratings every four-to-seven days (Gallup, 2018). This self-referencing dynamic affects voting behavior (Baldassarri and Gelman, 2008) as voters examine the communal and exchange relationships with the candidate, looking for shortcuts to understand a candidate's complex brand. Previous research has found that brand image mediates the relationship between experiential marketing and purchase intention (Oetomo and Budiyanto, 2017) as well as between product satisfaction and purchase intention (Chen *et al.*, 2018). Therefore, a candidate's brand image may play a similar mediating role for voters when considering their own image and deciding for whom to vote:

H7. A candidate's brand image mediates the relationship between voters' self-brand image and voting intention.

Methodology

To test these hypotheses a 58-item survey was distributed online via a US-based survey firm. Two qualifying questions were asked at the start of the survey:

Q1. Are you a US citizen?

Q2. Are you a registered voter?

By US law, the latter necessitated that all respondents were at least 18 years old. Respondents who did not meet both criteria were immediately thanked for participating and released from the survey, and were therefore not part of the final data set. An established scale was used to measure *candidate brand image* (Guzmán and Sierra, 2009), which functioned as an independent variable in the research (Appendix 1). The construct was captured using a seven-point Likert-type scale (1 = strongly disagree, 7 = strongly agree), with respondents applying the 26 items from Aaker's (1997) brand personality scale to each presidential candidate, as well as themselves – the latter to create the *self-brand image* independent variable. While some have argued that Aaker's (1997) scale is not suitable for research in political marketing because of its generalizability (Austin *et al.*, 2003; Bosnjak *et al.*, 2007; Supphellen and Grønhaug, 2003), it is appropriate for measuring candidate brand image in this study for two reasons. First, it includes items that measure characteristics beyond personality (Davies *et al.*, 2001; Azoulay and Kapferer, 2003; Guzmán and Sierra, 2009). Second, although brand personality and self-congruity are empirically discriminant constructs (Helgeson and Supphellen, 2004), this research measures candidate brand image and self-brand image rather than candidate personality and self-congruity.

The dependent variable *voting intention* was measured using a five-item (one reverse coded) Likert scale contextualized from two purchase intention scales (Baker and Churchill, 1977; Chen and Barnes, 2007) and applied to both candidates (Appendix 2). The potential covariate, *attitude toward voting* (Van Steenburg, 2012), is a six-item Likert-type scale with three reversed items (see Appendix 3). *Political beliefs* (Where do you see yourself in terms of political beliefs?) and *likelihood to vote* in the upcoming presidential election (How likely are you to vote in the November elections?) were measured on seven points, the former from liberal (1) to conservative (7), and the latter from very unlikely (1) to very likely (7). Respondents were also asked their political affiliation, with a five-item categorical scale featuring the following party options: Green, Democrat, Republican, Libertarian and Other. Finally, respondents provided demographic information and were thanked for their participation at the end of the survey.

Data were collected for the third week of October in 2012 and again for the same time in 2016. Both dates were three weeks prior to the US presidential election each year. The same professional service collected nationwide data each time, with 1,032 total participants. After removing responses from individuals who did not follow directions, did not complete the survey or were not US citizens registered to vote (2012 $n = 42$, 2016 $n = 63$), the samples for the 2012 ($n = 463$) and 2016 ($n = 464$) US elections were analyzed, representing 91.68 per cent and 88.05 per cent of those who initiated the survey, respectively.

The 2012 election sample had a mean age of 51.54 (*range* = 18-90), was 61.0 per cent female ($n = 283$) and 84.3 per cent Caucasian ($n = 391$) – the latter two slightly greater (female = 53 per cent, Caucasian = 72 per cent) than the final electorate (CNN, 2012). The sample showed normal distribution for education, but skewed toward higher incomes as 67.6 per cent earned more than $150,000 annually, compared with 28 per cent for the electorate. The Obama and Romney brand image scales loaded on two factors, and showed identical reliability (Cronbach's *alpha* = 0.983) while the self-image scale loaded on four factors and was also reliable (α = 0.941). Voting scales loaded on one factor and demonstrated reliability, with voting intention for Obama (α = 0.896) and Romney (α = 0.901), and attitude toward voting (α = 0.812), meeting reliability standards (Hair *et al.*, 2009). Finally, to check for common method bias (CMB), a Harman's single-factor test was conducted by loading the 26 items for the measures of each candidate and the respondents, as well as the five voting intention items for both Obama and Romney, into a single factor. With all 88 items in one factor, the variance explained was 35.25 per cent, below the 50 per cent threshold that could indicate CMB (Chang *et al.*, 2010; Podsakoff *et al.*, 2003; Tehseen *et al.*, 2017).

Results and analysis – 2012 election

Among all voters in the 2012 election, voters' self-brand image was significantly correlated to both the Obama and Romney brand image at the 0.01 level, thus providing initial support for *H1*. These correlations indicate that voters are thinking about their self-brand image when they consider the brand image of the candidates. To further test the hypothesis, regression analyses were run to examine the relationships between self-brand image and candidate brand image. In all relationships, results were significant and positive. Self-brand image was significant for the Obama brand image [$b = 0.265$, R^2 = 0.023, $F(1{,}461)$ = 10.67, $t = 3.27$, $p = 0.001$] as well as the Romney brand measure [$b = 0.393$, R^2 = 0.051, $F(1{,}461)$ = 24.59, $t = 4.96$, $p < 0.000$]. The results provide additional support for *H1*. Analysis to test the hypotheses in *H2*, *H4* and *H6* occurred later when data were parsed by political party.

To evaluate *H3* a series of regression analyses were run for both candidates' brand image on voting intention for each candidate. Candidate brand image was significant for all regressions, with results offering almost mirror pictures of each other (Table I). For example, all voters considered the Romney brand image when indicating their intention to vote for that candidate ($b = 1.02$, R^2 = 0.578, $p < 0.000$), while at almost the exact level voters considered the Obama brand image when voting intention was measured for the former president ($b = 1.01$, R^2 = 0.577, $p < 0.000$). Even the variance explained for the candidates' brand image is essentially identical, with the R-square for the Romney brand image on Romney voting intention differing from the Obama brand and voting intention for Obama by just 0.001. These results provide support for *H3*, and also demonstrate the power of the candidate brand image to affect voting.

Results were similar when voters considered the candidates' brand image and voting for that candidate's political opponent. When voters evaluated the Romney brand in concert with voting for Obama, the results were significant and negative (b = –0.847, R^2 = 0.398, $p < 0.000$) and almost identical to the Obama brand image's effect on voting intention for Romney (b = –0.837, R^2 = 0.395, $p < 0.000$). In sum, voters strongly weighed the brand of a candidate when considering voting for that candidate, and also, though not as much, considered the brand of the opposing candidate. Thus, *H3* is initially supported as voters do evaluate the candidate's brand image when considering their voting intentions. Further

Variables	B	SE	Beta	R^2	F	t-value	p-value
Obama BI → Obama VI	1.010	0.040	0.760	0.577	629.090	25.09	0.000
Obama BI → Romney VI	−0.837	0.048	−0.629	0.395	301.557	−17.37	0.000
Romney BI → Obama VI	−0.847	0.048	−0.631	0.398	305.392	−17.48	0.000
Romney BI → Romney VI	1.020	0.041	0.760	0.578	630.163	25.10	0.000

Table I. Brand image and voting intention in the 2012 election – all voters analysis tests the directionality of these relationships through the lens of voters' political affiliations.

As previously discussed, voters use cognitive shortcuts to make decisions by relating their own brand image to the candidates'. Therefore, to verify this, and to test *H5*, regression analysis was used to determine if a voter's self-evaluation of their brand image was related to voting intention. While the self-brand image for all voters did predict voting intention for Romney [$b = 0.272$, $R^2 = 0.014$, $F(1,461) = 6.32$, $t = 2.51$, $p = 0.012$], the results were not significant for Obama voting intention ($p > 0.10$). Therefore, *H5* is only partially supported, and further analysis is warranted to determine if voter party affiliation affected these results, and in a positive or negative relationship.

Evaluating by political party affiliation

Because of the increasing partisan divide in US politics already discussed, and to test the directionality of the relationships as stipulated in *H2a, H2b, H4a, H4b, H6a* and *H6b*, the data were parsed based on participants' response to the question about voter affiliation to examine whether there were differences between Republican and Democrat voters. Amongst voters who self-identified as Democrats ($n = 185$), the Obama and Romney brand image continued to show significant correlations at the 0.01 level, but for voters who identified themselves as Republicans ($n = 170$), only *their* party's candidate's brand image was significant. That is, Romney's brand image significantly correlated (0.01) while Obama's did not. These results indicate that Democrats consider *both* candidates' brand image when comparing the candidates to themselves. Republicans, however, consider *only* the brand characteristics of their party's candidate.

Next, regression analyses were conducted for voters in both parties to determine if the self-brand image influenced the voters' views of the candidates' brand image. Again, the Democrat voters considered the brand image of *both* candidates as results were significant for the relationship between their self-brand image and the Obama brand image ($b = 0.250$, $R^2 = 0.047$, $p = 0.003$), as well as the Romney brand image ($b = -0.317$, $R^2 = 0.051$, $p = 0.002$). And, as was the case with Republican voters, there was a significant regression for the Romney brand image ($b = 0.451$, $R^2 = 0.123$, $p < 0.000$) but not for the Obama brand image ($p > 0.10$). Thus, *H2a* is supported as far as voters considering their self-brand image when weighing the brand image of the candidates who represent the same party as themselves, but only Democrats do so when considering the candidate of the opposite party, providing partial support for *H2b*.

Would this trend hold when examining voters by party affiliation and voting intention (*H4a* and *H4b*)? Results for all groups and situations were significant, with the brand image for both candidates a positive indicator when voters consider voting for that candidate, and a negative indicator when considering voting for the opposite candidate. For example, the Obama brand image significantly predicted voting intention for Obama amongst both Democrats ($b = 0.681$, $R^2 = 0.330$, $p < 0.000$) and Republicans ($b = 0.473$, $R^2 = 0.462$, $p < 0.000$). Similarly, the Romney brand image was significant for predicting voting intention amongst voters, whether Republican or Democrats (Tables II and III).

But when voters consider a candidate's brand in relation to voting for the other candidate, the results were significant and negative. For example, the Romney brand image was a negative predictor of voting for Obama, and the Obama brand image was a negative predictor of voting for Romney. While this may seem logical, this pattern was consistent amongst all voters regardless of political affiliation. The results confirm that brand image, no matter the candidate's party nor the voter's party affiliation, is a significant predictor of voting intention. Thus *H4a* and *H4b* are supported across all instances in the 2012 election.

To test *H6a* and *H6b*, regression analysis was run for voters' assessment of their own brand image on voting intention for each candidate (see Table IV). Interestingly, self-brand image was not significantly related to Obama voting intention for *either* Democrats or Republicans (all ps > 0.10), but self-brand image was related to Romney voting intention for *both* Democrats and Republicans, with it showing significance with Republicans [$b = 0.335$, $R^2 = 0.044$, $F(1,168) = 7.78$, $p = 0.006$] and marginal significance amongst Democrats ($b = 0.191$, $R^2 = 0.019$, $F(1,183) = 3.47$, $p = 0.064$). Each of the two significant relationships was positive, thus offering support for H6a but not H6b.

Mediation analysis

With both voters' self-brands and candidates' brand image having effects on voting intention when evaluating all voters, and previous research demonstrating a relationship between self-brand image and a candidate's brand image, perhaps, then, the candidates' brand image act as a mediator to voting intention during the decision-making process. To examine this possibility, and to test *H7*, mediation analysis via the Process tool (Hayes, 2012) was used. Because the first requirement of mediation analysis is a significant relationship between independent and dependent variables (Baron and Kenny, 1986), only three relationships from the previous results for self-brand image on voting intention were

Variables	B	SE	Beta	R^2	F	t-value	p-value
Obama BI → Obama VI	0.681	0.072	0.574	0.330	90.079	9.49	0.000
Obama BI → Romney VI	−0.566	0.079	−0.469	0.220	51.575	−7.18	0.000
Romney BI → Obama VI	−0.354	0.068	−0.358	0.128	26.926	−5.19	0.000
Romney BI → Romney VI	0.508	0.064	0.504	0.254	62.313	7.89	0.000

Table II. Brand image and voting intention in the 2012 election – democrats

Variables	B	SE	Beta	R^2	F	t-value	p-value
Obama BI → Obama VI	0.473	0.070	0.462	0.213	45.508	6.75	0.000
Obama BI → Romney VI	−0.319	0.081	−0.290	0.084	15.408	−3.93	0.000
Romney BI → Obama VI	−0.499	0.080	−0.432	0.187	38.607	−6.21	0.000
Romney BI → Romney VI	0.775	0.075	0.626	0.392	108.139	10.40	0.000

Table III. Brand image and voting intention in the 2012 election – republicans

Variables	B	SE	Beta	R^2	F	t-value	p-value
All voters							
Self BI → Obama VI	0.037	0.109	0.016	0.000	0.115	6.86	0.735
Self BI→ Romney VI	0.272	0.108	0.116	0.014	6.323	2.51	0.012
Democrats							
Self BI→ Obama VI	−0.057	0.102	−0.041	0.002	0.310	−0.557	0.578
Self BI→Romney VI	0.191	0.102	0.136	0.019	3.469	0.1.86	0.064
Republicans							
Self BI → Obama VI	−0.110	0.114	−0.074	0.006	0.938	−0.968	0.334
Self BI → Romney VI	0.335	0.120	0.210	0.044	7.777	2.79	0.006

Table IV. Self-brand image and voting intention in the 2012 election analyzed following steps for mediator analysis using the Hayes (2012) bootstrapping method. These included:

- *all* voters' self-brand image on voting intention for Romney;
- Democrats' self-brand image on voting intention for Romney, and
- Republicans' self-brand image on voting intention for Romney.

Results indicate that the Romney brand image fully mediates the relationship between self-brand image and Romney voting intention (95 per cent confidence interval) for all voters as demonstrated by significant and positive effects [$b = 0.407$, $F(2, 460) = 318.49$, $R^2 = 0.581$, $p < 0.000$, CI: 0.2270 to 0.5946] while self-brand image was no longer a significant predictor of voting intention after controlling for the Romney brand image mediator ($b = -0.125$, $SE = 0.073$, $p > 0.10$), consistent with full mediation. When analyzing just Democratic voters, similar results were found. Mediation exists [$b = 0.159$, $F(2, 460) = 31.66$, $R^2 = 0.255$, $p < 0.000$, CI: 0.0523 to 0.2923] as a marginally significant ($p = 0.064$) relationship between self-brand image and voting intention becomes not significant ($b = 0.032$, $SE = 0.092$, $p > 0.10$) when controlling for the mediator. Finally, the Romney brand image also fully mediated self-brand image and voting intention for Republican voters [$b = 0.352$, $F(2, 167) = 53.77$, $R^2 = 0.392$, $p < 0.000$, CI: 0.1885 to 0.5501]. In the full mediation model, self-brand image is no longer significant for voting intention ($b = -0.017$, $SE = 0.103$, $p > 0.10$). This provides support for *H7* in so far as one of the two candidate's brand image mediated the relationship.

Discussion

In the 2012 election, it appears the Romney brand image was more of a factor than the Obama brand image when it came to voting intention, particularly for people considering voting for Romney. Voters considered both candidates' brand image when considering themselves (self-assessed brand image) in relation to the two candidates. This confirms existing research (Guzmán *et al.*, 2015) showing a relationship between self-brand image and candidate brand image as voters use a cognitive short cut to assess which candidate in an election appeals to them most based on which one is most like themselves. However, only when considering voting for Romney did voters evaluate their self-brand image – Republicans ($p = 0.006$) more so than Democrats ($p = 0.064$) – but in both cases the Romney brand image fully mediated the relationship between self-brand image and voting intention. In other words, as voters considered voting for Romney, they considered how in sync they were to the candidate's brand image. There was no such effect for the Obama brand image, nor was there significance for voters' self-brand image on voting intention for that candidate.

There was another noticeable effect of the candidates as brands in the 2012 election. Democrats considered the brand image of both candidates in relation to themselves, while Republicans considered the brand image only for the Republican candidate in concert with their self-image concept. This appears to add some credence to conventional wisdom regarding the need for Democrats to fall in love, while Republicans simply fall in line. Republican voters also gave slightly more consideration to their candidate's brand image when thinking about voting for him ($R^2 = 0.392$) than Democrat voters did when considering their candidate and voting for him ($R^2 = 0.330$). Both these provide some support for the notion of affinity for the brand. Couple that with the fact that the only mediation was for Romney, and given the results of the election, this begs the question, was the lack of affinity for the Romney brand the driving factor? In sum, it appears that in 2012, Democrats loved their candidate and voted accordingly, while Republicans might have loved their candidate less but voted by loyalty. Thus brand image had a positive effect within party lines and a negative effect across party lines, while self-image combined with brand image had an effect only for the and losing candidate.

Results and analysis – 2016 election

The 2016 election sample had a mean age of 42.25 (*range* = 18-82), was 53.9 per cent female ($n = 250$) and 76.1 per cent Caucasian ($n = 353$) – all in line with the actual electorate that year (CNN, 2016). The education and income of the respondents followed normal distribution. The candidate brand image scales again fell into two factors and proved reliable (Clinton $\alpha = 0.986$; Trump $\alpha = 0.980$). The self-image scale contained three factors, and was also reliable ($\alpha = 0.945$). All other scales were single factor and met reliability requirements (Hair *et al.*, 2009) with all *alphas* > 0.800. A Harman's single-factor test was conducted to check for CMB and the variance explained was 34.45 per cent, below the 50 per cent threshold (Chang *et al.*, 2010; Podsakoff *et al.*, 2003; Tehseen *et al.*, 2017).

In the 2016 US presidential election, again amongst all voters, there were significant correlations for self-brand image and candidate brand image, supporting *H1*. However, the level of significance for each candidate is noticeably different. For all voters, the Clinton brand image was significant at the 0.01 level, but only significant at the 0.05 level for the Trump brand image. As a reminder, in the 2012 election, brand image was significantly correlated at the 0.01 level for both candidates. This means that voters considered the Clinton brand image more deeply when thinking about their own self-image than they did the Trump brand image. In fact, the Trump brand image was also not as strongly considered in relation to the self-image as the two candidates in 2012. In other words, voters did not appear to see themselves in Trump.

This was confirmed when regression analyses were run for all voters' self-brand image as the predictor variable and the measures of the candidates' brand image as the outcome variables. As was the case in 2012, there were significant relationships between a voter's self-brand and each candidate brand image. However, the Clinton brand image proved to have more explanatory power than the Trump brand image as the Clinton measure [$b = 0.047$, $R^2 = 0.040$, $F(1,462) = 19.43$, $t = 4.41$, $p < 0.000$] showed more variance explained than the Trump measure [$b = 0.177$, $R^2 = 0.007$, $F(1,462) = 4.18$, $t = 2.04$, $p = 0.042$]. Still, the results provide support for *H1* for each candidate.

Among all voters in 2012, candidate brand image predicted voting intention. Would this be the case in 2016? The answer is yes, but differently. While both the Clinton and Trump brand image significantly predicted voting intention, unlike the election four years earlier, the Clinton brand image explained *more* variance ($R^2 = 0.642$) than the Obama and Romney brands (the latter two explained 57.7 per cent and 57.8 per cent variance, respectively), while the Trump brand explained *less* ($R^2 = 0.478$) variance. That is, amongst all voters, the Clinton brand image was a greater factor than the other three candidates in determining voting intention for the candidate, and the Trump brand image was not as much of a factor as the others (Table V). Still, the results support *H3*.

To discover if voters relied on their self-assessed brand image in 2016 to influence their voting intentions, and to test *H5*, regression analysis was used. Amongst all voters, self-brand image was significantly related to Clinton voting intention [$b = 0.235$, $F(1, 462) = 4.52$, $t = 2.13$, $p = 0.034$], but not to Trump voting intention ($p > 0.000$). As was the case in the 2012 election, *H5* is only supported for one candidate. To analyze further, and repeating the sequence for the first study, the effect of the candidates' brand image was analyzed by parsing the voters into groups by self-identified party affiliation.

Evaluating by political party affiliation

While Democrats ($n = 186$) in the 2012 election considered *both* the Obama and Romney brand image in comparison to their own, in 2016 there was correlational significance at the 0.01 level *only* for the Clinton brand image (0.321). That is, in 2016 voters who self-identified as Democrats acted like their 2012 Republican counterparts and only compared their self-brand to the candidate of *their* party. Again, this provides initial support for *H1*, and may add to the empirical evidence of increased voter polarization. Meanwhile, Republican ($n = 145$) voters in 2016 showed significant correlations between their self-brand image and the Trump brand image at the 0.01 level but not the Clinton brand image. This was exactly the same as it was in 2012 and provides additional support for *H1*.

To test *H2a* and *H2b* by examining potential causal relationships between voters of each party and the candidates' brands in 2016, and to duplicate the analysis of the 2012 elections, regression analyses were conducted by party. There was no significance between Republican voters' self-brand image and the Clinton brand image, nor Democratic voters' self-brand image and the Trump brand image (all ps $>$ 0.10). That is, voters did not cross party lines when considering how their self-assessed brand image compared to the opposing candidate's brand image. However, there were significant relationships between Democratic voters' self-brand image and the Clinton brand image ($b = 0.424$, $R^2 = 0.103$, $p < 0.000$), as well as Republicans self-brand image and the Trump brand image ($b = 0.588$, $R^2 = 0.119$, $p < 0.000$). This indicates support for H2a but not H2b.

Testing for the effects of candidate brand image on voting intention to investigate *H4a* and *H4b* showed significance for the Clinton brand image when Democrats considered voting for Clinton ($b = 0.615$, $R^2 = 0.323$, $p < 0.000$) as well as when Democrats considered voting for Trump (b –0.364, $R^2 = 0.106$, $p < 0.000$), though the latter in a negative relationship. Not surprisingly, the relationship with the most variance explained was when Democrats evaluated the Clinton brand image in consideration of voting for her (Table VI).

When it comes to Republicans in 2016, results were similar (see Table VII). The Trump brand image was a significant predictor of voting for Trump ($b = 0.867$, $R^2 = 0.499$, $p < 0.000$) and voting for Clinton ($b = -0.344$, $R^2 = 0.104$, $p < 0.000$), with the latter negative in direction. The Clinton brand image also significantly predicted voting intention for Trump ($b = -0.476$, $R^2 = 0.142$, $p < 0.000$) and for Clinton ($b = 0.700$, $R^2 = 0.405$, $p < 0.000$) for Republicans. Note that the variance explained for Republicans evaluating the Trump brand

Table V. Brand image and voting intention in the 2016 election – all voters

Variables	B	SE	Beta	R^2	F	t-value	p-value
Clinton BI → Clinton VI	0.943	0.033	0.801	0.642	827.464	28.77	0.000
Clinton BI → Trump VI	−0.588	0.044	−0.525	0.276	175.854	−13.26	0.000
Trump BI → Clinton VI	−0.596	0.053	1.466	0.217	128.110	−11.32	0.000
Trump BI → Trump VI	0.842	0.041	0.691	0.478	422.654	20.56	0.000

Table VI. Brand image in the 2016 election – democrats

Variables	B	SE	Beta	R^2	F	t-value	p-value
Clinton BI → Clinton VI	0.615	0.066	0.586	0.323	75.635	9.37	0.000
Clinton BI → Trump VI	−0.364	0.978	−0.325	0.106	21.791	−4.67	0.000
Trump BI → Clinton VI	−0.239	0.063	−0.270	0.073	14.509	−3.81	0.000
Trump BI → Trump VI	0.354	0.062	0.386	0.149	32.295	5.683	0.000

image and considering voting for Trump was the greatest amongst all eight relationships (R^2 = 0.499), with Republicans evaluating the Clinton brand image when considering voting for Clinton the second most explained (R^2 = 0.405). Therefore, *H4a* and *H4b* are fully supported.

Finally, to examine if voters by party evaluated their self-brand in conjunction with voting intention for each candidate, and to test *H6a* and *H6b*, self-assessed brand image was regressed on voting intention (Table VIII). For Democrats, the results were not significant when considering voting for either Clinton or Trump, but for Republicans, there was a significant relationship between self-brand image and Trump voting intention ($b = 0.427$, R^2 = 0.042, $p = 0.014$), offering some support for *H6a* but not *H6b*. Therefore, candidate brand image mediation analysis will include the two significant models for self-brand image on voting intention: (1) *all* voters for Clinton, which was previously found, and (2) Republican voters for Trump.

Mediation analysis

Following the Hayes (2012) bootstrapping method for mediation analysis using the Process tool, results showed the Clinton brand image partially mediated the relationship between self-brand image and voting intention for that candidate (95 per cent confidence interval). For all voters there were significant effects [$b = 0.390$, $F(2, 461)$ = 420.23, R^2 = 0.656, $p < 0.000$, CI: 0.1870 to 0.5931] while self-brand image was still a significant predictor of voting intention after controlling for the Clinton brand image mediator (b = –0.155, SE = 0.068, $p = 0.022$), consistent with partial mediation. When analyzing just Republican voters and the effects of the Trump brand image mediation, significance was also found. The Trump brand image fully mediated self-brand image and voting intention for Republicans [$b = 0.521$, $F(2, 142) = 71.29$, $R^2 = 0.501$, $p < 0.000$, CI: 0.2463 to 0.8083] as self-brand image is no longer significant for voting intention (b = –0.094, SE = 0.132, $p > 0.10$). Therefore, there

Variables	B	SE	Beta	R^2	F	t-value	p-value
Clinton BI → Clinton VI	0.700	0.071	0.636	0.405	97.180	9.86	0.000
Clinton BI → Trump VI	−0.476	0.098	−0.376	0.142	23.617	−4.860	0.000
Trump BI → Clinton VI	−0.344	0.084	−0.323	0.104	16.624	−4.08	0.000
Trump BI → Trump VI	0.867	0.073	0.707	0.499	229.059	11.94	0.000

Table VII. Brand image in the 2016 election – republicans

Variables	B	SE	Beta	R^2	F	t-value	p-value
All voters							
Self BI → Clinton VI	0.235	0.110	0.098	0.010	4.519	2.14	0.034
Self BI → Trump VI	0.117	0.105	0.052	0.003	1.240	1.11	0.266
Democrats							
Self BI → Clinton VI	0.031	0.105	0.022	0.000	0.085	0.292	0.770
Self BI → Trump VI	−0.049	0.109	−0.033	0.001	0.202	−0.449	0.664
Republicans							
Self BI → Clinton VI	−0.176	0.151	−0.097	0.009	1.352	−1.16	0.247
Self BI → Trump VI	0.427	0.171	0.204	0.042	6.218	2.49	0.014

Table VIII. Self-image and voting intention in the 2016 election is support for *H7* that candidate brand image mediates the relationship between voters' brand image and voting intention.

Discussion

As was the case in 2012, voters by political party in 2016 may have relied on candidate brand image when making electoral decisions. For example, there were significant relationships between the candidates' brand image and voting intention for those candidates amongst both Democrats and Republicans, with the relationship positive within the party (e.g. Democrats voting for Clinton) and negative when considering voting for the other party's candidate (e.g. Republicans voting for Clinton). Interestingly, there was a change from 2012 to 2016 amongst Democrats and Republicans in terms of the brand image of the candidate from the other party. In 2012, Democrats considered the brands of *both* candidates, and Republicans only the brand of *their* candidate. The opposite was true in 2016 as Democrats only considered Clinton in terms of brand image while Republicans considered both candidates. At the same time, the variance explained by Democrats evaluating the brand image of the candidates was relatively low for all models except when voting intention was for Clinton. This provides some evidence of brand affinity.

There were also changes in the way brand image acted as a mediator in 2016. Whereas in 2012 only the Romney brand image mediated self-brand image on voting intention – and for *all* voters – both brands in 2016 had mediating effects, though somewhat differently. The Clinton brand image was a significant mediator for *all* voters considering voting for Clinton, while the Trump brand image was significant only for Republican voters considering voting for Trump. The former result is consistent with the 2012 results in that all voters considered the brand image of the losing candidate when evaluating themselves and voting for the candidate. But the latter result – the Trump brand image mediation – is unique to 2016 in that it is the only time the winning candidate's brand had this effect, but only within the party. Still, it does have some similarities to the previous election in that amongst Republicans, their candidate's brand image did mediate the relationship.

What's more, the variance explained by the mediation models shows robust results, with the Clinton-as-mediator model explaining almost 66 per cent of the variance, and the Trump-as-mediator model explaining slightly more than 50 per cent. While the variance explained by the Clinton brand image mediation amongst all voters is similar to the variance explained by the Romney brand image (R^2 = 0.581), the variance explained for the Trump brand image amongst Republicans is greater than it was for Romney in 2012 (R^2 = 0.392). If the 2012 results demonstrate that Republicans "fall in line" the 2016 results may indicate that they did show some level of brand affinity for Trump, and perhaps "fall in love".

Once again, the result of the eventual loser's brand image having a greater effect may be a result of the candidate's brand image being effectively shaped by the competing candidate. Whereas the Obama campaign relied on advertising to position the opponent's brand, Trump leveraged in-person appearances and social media to attempt to shape the brand of Clinton. In fact, Trump began framing his eventual opponent as "Crooked Hillary" a full 19 months prior to the election (Yilek, 2016), first at a campaign rally, and then the next day via Twitter. When asked, she replied "He can say whatever he wants to say about me, I really could care less" (*ABC News*, 2016).

In addition, early analysis (Wesleyan Media Project, 2016) found the candidates taking markedly different approaches to their advertising, with 60 per cent of Clinton ads negative toward Trump and 31 per cent positive toward Clinton. Meanwhile, Trump ran no positive ads, only contrast ads that promoted himself and attacked Clinton. Advertising from outside groups supporting the candidates were equally as negative, with 93.7 per cent of pro-Trump group ads attacking Clinton, and 100 per cent of pro-Clinton group ads attacking Trump. Post-election analysis also focused on the dearth of Clinton ads aired in the battleground states of Michigan, Pennsylvania and Wisconsin (Fowler *et al.*, 2017), all of which ended up as wins for Trump. Therefore, it is possible, as was the case in the 2012 election, that one candidate was able to negatively affect the brand of the other by attacking the candidate's brand image early in the election cycle. And, in both elections, the candidate whose brand image was damaged first ultimately lost.

Conclusions

Examining the past two US presidential elections in terms of candidates and their brand image provides some interesting, and valuable, kernels of information. Perhaps most importantly, the losing candidate's brand image in each election was a significant mediator for all voters in the self-image/voting intention model. This certainly should not be construed as an election certainty as the system of using the Electoral College in US elections means a losing candidate can capture more votes than the winning candidate, which has happened five times including in 2016. In fact, Trump lost the popular vote by a greater margin than in any of the other occurrences. It is our hope that future research can determine whether this is simply a coincidence of these two elections, or whether brand image may cause a candidate to lose an election easier than it may help one win it.

Still, in 2012 and 2016, the brand image of the losing candidate mediated the relationship between self-brand image and voting intention for that candidate. That is, the entire electorate in both elections weighed the brand of the ultimate loser when considering voting for that candidate, but not the winning candidate. This would seem to indicate that a lack of affinity for a candidate is stronger than affinity. Equally as compelling is the fact that self-brand image was only a significant predictor, when considering all voters, for the losing candidate. In 2012, voters did not think of their self-brand image when considering voting for Obama, and in 2016 they did not think of their image when considering a vote for Trump. It was only the losing candidates for whom voters examined their self-brand image in consideration of voting for that candidate. Again, this speaks to the potential for a lack of affinity having a greater effect on voting attention than affinity. It will take additional research to determine if the similarities between the two elections are merely an anomaly, or something political marketers and campaign managers must take into consideration.

Another interesting finding is what appears to be increasing polarization in the electorate. In 2012 Democrats seemed to examine the brand image for both candidates when considering the candidate's brand in relation to themselves. Conversely, Republicans only considered the image of their candidate. Four years later, both groups only examined *their* candidate as a brand in this context. Along the same lines of increasing polarization, self-brand image was a significant predictor of voting for Romney in 2012 by Democrats as well as Republicans. But by 2016, Democrats were not considering their own image when evaluating a vote for Trump, while Republicans still were. This is demonstrated by the change from partial support to no support for *H2b* and *H6b*, when the electorate were evaluating their self-brand image in relation to candidate brand image and voting intention, respectively. From 2012 to 2016 voters saw less of a connection between their brand image and the brand image of the opposing candidate (Table IX).

Finally, an examination of the various models for a candidate's brand image predicting voting intention reveals something rather thought-provoking. Of the five models with the most explanatory power in terms of variance explained, the top three were from Republican voters: Trump brand image voting for Trump ($R^2 = 0.499$); Clinton brand image voting for Clinton ($R^2 = 0.405$); and Romney brand image voting for Romney ($R^2 = 0.392$). The next two with the most explanatory power were from Democrats when considering the Obama brand and voting for him ($R^2 = 0.330$) and considering the Clinton brand when voting for her ($R^2 = 0.323$). While it is not surprising to see a strong model when voters consider voting for a candidate from their own party, it is interesting that Republicans took the Clinton brand image into account in 2016 more so than they did the Romney brand image in 2012. If one considers the Republican voters' strong consideration of the opposing candidate in 2016 an outlier, the results still demonstrate that these voters examine the brand of their candidate more than Democrats consider the brand of their candidate. Because previous research has found that customer loyalty is related to brand image (Lai *et al.*, 2009; Ryu *et al.*, 2008), and Republicans are considered to be party loyalists (i.e. they "wait to fall in line") then it is not surprising the importance that brand image plays with voters associated with that party.

This leads to the question: Was the 2016 election simply a referendum on Hilary Clinton? It seems like it may have been. In 2012, Democrats had an affinity for their candidate and voted accordingly, while Republicans might have had less of an affinity for their candidate but voted by loyalty. Thus brand image has a positive effect within party lines and a negative effect across party lines and self-brand image has the expected effect. In 2016, Republicans had an affinity for their candidate and voted accordingly. Democrats, on the other hand, had less affinity for their candidate than in 2012.

Theoretical and managerial implications

Perhaps the most important theoretical, and consequently managerial, implication is the discovery of the role brand image plays in mediating the relationship between self-image and voting intention for the losing candidate. That is, when voters considered who might best represent themselves, the brand image of the candidate enhanced the likelihood of voting for, or against, the candidate. Therefore, it is highly recommended that campaign managers not only understand the importance of their candidate's brand image to develop and maintain a positive image amongst supporters, but also understand how to highlight what their supporters view as the negative aspects of the opposing candidates' brand image to increase the lack of affinity.

The effect of negative messaging in electoral campaigns is well documented. Negative political advertising is a common approach followed by almost all politicians, and studied extensively by academics (Allen *et al.*, 2007; Chou and Lien, 2010; Dermody and Scullion, 2005; Garramone, 1984; Marks *et al.*, 2012). In this past electoral presidential campaign, a constant stream of negative attacks, both at a policy and personal level, were delivered by candidates within and across party lines (Wesleyan Media Project, 2016). As has become evident, these attacks have generated an unprecedented level of divisiveness amongst the

Table IX. Results of hypotheses analysis

Hypothesis	2012 Election	2016 Election
H1	Supported	Supported
H2a	Supported	Supported
H2b	Partially supported	Not supported
H3	Supported	Supported
H4a	Supported	Supported
H4b	Supported	Supported
H5	Partially supported	Partially Supported
H6a	Supported	Supported
H6b	Partially supported	Not supported
H7	Partially supported	Partially supported

American public (Pew Research Center, 2017a). Similarly, the results of this research suggest that, from a branding perspective, negativity can affect not only an opposing candidate's brand image but also intensify the lack of affinity from their supporting voters by generating a bigger schism between their self-brand image perception and the brand image of the opposing candidate. While a favorable brand image may not positively affect the outcome of an election, a negative brand image might.

Furthermore, campaign managers should approach marketing their candidates from a truly strategic brand management perspective. If political marketing is the trade of support by a voter for the hope that a candidate will deliver on his or her electoral promises (Dann *et al.*, 2007), then understanding how voters view the candidate brand image within their social and community setting, and in regard to what they expect to obtain in exchange for their support given (communal and exchange relationships), seems critical to determine how they will vote. Campaign managers must go beyond how voters react to messaging and topical issues, and truly research how their candidate is viewed by the electorate through the lens of a brand relationship, adopting strategies that focus on building this relationship in terms of the candidate's brand image. As research (Fournier, 1998; Taute and Sierra, 2014) has demonstrated, a brand relationship approach offers greater meaning to the individual, who will be proactive in supporting the brand. However, these results are largely limited to a consumer-product scenario, rather than a voter-candidate environment. It would be wise for campaign managers to adopt a similar approach as was implemented prior to the 2005 UK General Election to rebrand Prime Minister Tony Blair (Scammell, 2007). The strategy included reconnecting the candidate to disaffected voters, which was later demonstrated to be effective in re-engaging such individuals (Lees-Marshment, 2011).

Similarly, Speed *et al.* (2015) argue that in order for a candidate's brand to sway voters, it must have authenticity as an advocate for the party's policies. The popular press (Catanese, 2019; Ember, 2018) has also identified authenticity as a key to developing voter appeal. However, the 2016 Republican presidential primaries demonstrated that a candidate need not even agree with decades of policy to become the standard-barer for the party as Trump's political positions were often at odds with the Republican Party (Kaneva and Klemmer, 2016). While opposition to Trump from conservative traditionalists was consistent and strong, resulting in a coalition of those often dubbed "Never Trump Republicans," it did not stop him from winning the presidency. While Speed *et al.* (2015, p. 147) saw this lack of party authenticity as insincere, manipulative or artificial, it did not "weaken the brand appeal to voters" in 2016 as they believed it should. Perhaps the results were more akin to what Cwalina and Falkowski (2015) discovered – that it is important to not only strengthen the positive associations a candidate has, but neutralize negative associations.

Paradoxically, Trump did not implement large advertising spend into his campaign strategy compared to Clinton (Allison *et al.*, 2016). Instead, he leveraged public relations opportunities to differentiate his brand image from that of his opponents. And, as previously discussed, brand his rivals before they responded in kind. This supports the results of this research, which seem to indicate that a lack of affinity for a candidate is stronger than affinity. Revelations in 2018 regarding the use of targeted messaging by Cambridge Analytica through social media platforms has confirmed the effect of these messages on the electoral results (Rosenberg *et al.*, 2018).

Limitations and future research

As the first empirical investigation into candidates as brands in US presidential elections, there are clearly limitations to the work. One important limitation is that the data were collected online and skewed Caucasian (84 per cent) in 2012, which may have affected the relationships between self-brand image and the Obama brand image. Although the percentage of Caucasian voters in 2012 was the majority (72 per cent) of all voters, the sample was not equivalent to the actual electorate. Secondly, data collection in the 2016 election took place the week immediately following the revelation of recorded audio of then-candidate Trump making sexually explicit comments regarding his approach toward women. This may have had an effect on respondents' attitudes toward the Trump brand image, particularly in consideration of potential social desirability bias. Some research (Pew Research Center, 2017b) seemed to indicate that voters were not particularly willing to admit they planned to vote for Trump. In fact, in this research, amongst all voters there is a significant difference ($p < 0.000$) between voting intention means for Clinton [$M = 4.22$, $SD = 1.98$, $t(463) = 45.83$] and Trump [$M = 3.40$, $SD = 1.89$, $t(463) = 38.77$]. While there was a statistically significant difference ($p < 0.000$) in voting intention between Obama [$M = 4.04$, $SD = 2.10$, $t(462) = 41.29$] and Romney [$M = 3.91$, $SD = 2.10$, $t(462) = 40.03$] the differences were not as great.

Furthermore, brand image was the only mediator tested in the model. There are undoubtedly other factors that go into voter decision-making, and boundary conditions to such a process are ripe for future research. In addition, other brand measures could factor into the candidate-as-brand analysis. For example, *brand personality* and *candidates as experiential brands* may be appropriate brand measures for this research. As a result, opportunities abound to examine candidate brands using existing branding metrics, as well as to create a better understanding of how candidate brand building takes place in a political environment (Van Steenburg, 2015). Tangentially, the original brand image scale (Guzmán and Sierra, 2009) fell onto five factors (competence, empathy, openness, agreeableness, and handsomeness), thus providing an opportunity for future research to explain the discrepancy between US voters and voters in Mexico, where the scale was first used.

Additionally, all four candidates had a brand image prior to these elections. In the case of Clinton and Romney, it was their previous work and experience as elected officials that helped shape their image. Obama also had a brand image prior to the 2012 election that began being shaped nationally as early as the 2004 Democratic Convention and when he ran for president in 2008. Finally, the Trump brand image had been shaped for decades through his work in the corporate world. Therefore, it is possible there are issues outside the scope of this research that affected brand image for each candidate. Still, the brand image scale used in this research has been used to measure candidate brand image previously (Guzmán and Sierra, 2009; Guzmán *et al.*, 2015), with the results here finding significant causality with the construct and the outcome variables.

Finally, brand research has traditionally focused on the development of positive customer feelings and company or brand outcomes (Veloutsou and Guzmán, 2017). This research, does not accomplish that in two ways. First, it measures voting intention rather than actual behavior. While behavioral intention has been demonstrated to be the best predictor of behavior (Ajzen, 1991) it is far from absolute. Therefore, all the results can show is the respondents' self-reported plan to vote. Perhaps exit polling data could be leveraged to compare intention to how the electorate actually voted. Second, the research did not measure brand affinity (love or hate) in any way. Therefore, future research should measure these constructs to assess whether such affection moderates the mediating effect of candidate's brand image perceptions in the relationship between self-brand image and voting intention.

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Appendix 1. Brand image scale

To what extent do you believe the following adjectives describe each of the candidates and yourself?

(1) Hard-working
(2) Intelligent
(3) Leader
(4) Successful
(5) Constant
(6) Responsible
(7) Dynamic
(8) Energetic
(9) Enterprising
(10) Sharp
(11) Creative
(12) Innovative
(13) Modern
(14) Original
(15) Cheerful
(16) Sentimental
(17) Friendly
(18) Cool
(19) Young
(20) Generous
(21) Loyal
(22) Sincere
(23) Reliable
(24) Glamorous
(25) Good looking
(26) Charming

Appendix 2. Voting intention scale

To what extent do you agree with the following statements about each candidate?

(1) I would vote for that candidate.
(2) I would seek out more information about that candidate.
(3) I would like to investigate that candidate's stance on the issues.
(4) It is unlikely that I would vote for that candidate. (reversed)
(5) Given the opportunity, I predict I would vote for that candidate.

Appendix 3. Attitude toward voting scale

To what extent do you agree with the following statements about voting?

(1) It is everyone's patriotic duty to vote.
(2) My vote doesn't really count. (reversed)
(3) My vote won't really make a difference in who wins or loses an election. (reversed)
(4) Voting is not important because what happens in government does not really affect me. (reversed)
(5) It is important to make an attempt to vote in every election.
(6) I always try to vote because elections are too important to leave it to other people's decisions.

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