2021 AMA Marketing and Public Policy Conference

Marketing for Social Change: People, Planet and Prosperity

June 24-25 | Virtual

PROCEEDINGS

Volume 31

Co-Chairs:

Remi Trudel
Questrom School of Business, Boston University

Katherine White
Sauder School of Business, University of British Columbia
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Katherine White Sauder School of Business, University of British Columbia
2021 Marketing and Public Policy Conference Awards

Best Conference Paper

Brands Playing Politics: When Does Brand Anthropomorphism Matter?
Dan Sheinin, University of Rhode Island
Gema Vinuales, San Jose State University
Geraldo Matos, Roger Williams University

Brenda M. Derby Memorial Award

The Brenda M. Derby Memorial Award is presented nationally to an outstanding doctoral student who demonstrates excellence as an emerging policy researcher. The award honors a strong advocate of the public policy and marketing subdiscipline.

In Search of Moderation: How Counter-Stereotypical Endorsers Attenuate Polarization over Public Policies
Guilherme Ramos, FGV/EBAPE
Yan Vieites, FGV/EBAPE
Eduardo Andrade, FGV/EBAPE
Welcome to the 2021 AMA Marketing & Public Policy Conference! While we are not able to meet in person and enjoy Washington, DC, together, we are thankful for the opportunity to meet virtually with friends and colleagues from around the world and engage in a productive dialogue on issues we are all passionate about. This year’s conference has over 250 registered participants—100 more than is typical—highlighting the growing interest in social, environmental, and policy issues. We are honored to co-chair this event and are grateful for your participation.

For decades, MPPC has been a conference for research focused on the greater social good. Our conference theme is “Marketing for Social Change: People, Purpose, Planet, and Prosperity”—the 4Ps of social change. Our motivation in selecting this theme was to encourage research and dialog on the contributions of marketing for addressing social and environmental issues involving diverse perspectives and interests in a dynamic, rapidly changing environment. As you look through the program for this year’s conference, we think you will find that we have succeeded thanks to all of you and the quality of your submissions.

We would especially like to thank Michael Hallsworth (BIT North America) and Doug Mackenzie-Mohr (Mackenzie-Mohr & Associates) for graciously agreeing to provide keynote talks. We were excited to have keynote speakers that are passionate about social marketing and using behavioral insights to improve policy and social outcomes. We know you will enjoy the blend of theory and practice and their work that substantively and positively impacts people’s lives. We would also like to thank Martin Mende, Maura Scott, and Linda Salisbury for organizing our keynote plenary sessions. We also recognize the generous support of our sponsors—The Peter P. Dhillon Centre at the UBC Sauder School of Business.

We want to acknowledge the years of dedication and work that has made the Marketing & Public Policy Conference the outstanding conference that it is today. We thank all the volunteer reviewers, special session organizers, and hundreds of authors from around the world who submitted their research. You have embraced the conference theme and we look forward to the sessions. We greatly appreciate the support we received from the rock star staff at AMA, and we are particularly indebted to Monica Gerhardt, Matt Weingarden, Hannah Finkelstein.

While, of course, we would rather see everyone in person in Washington, D.C., we are excited about the program and trust that you will all find it has much to offer! Much gratitude to all of you for your continued support for MPPC, your specific contributions to this year’s conference, and for attending the conference virtually from wherever you are.

Sincerely,
The Conference Chairs

Katherine White, Sauder School of Business, University of British Columbia

Remi Trudel, Questrom School of Business, Boston University
Special Thanks to the MPPC 2021 Reviewers

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Special Session
DESIGN THINKING FOR SOCIAL CHANGE: LESSONS FROM FOOD WELL-BEING.

Chairs: Jane Machin, Radford University, jmachin@radford.edu; Emily Moscato, Saint Joseph’s University, emoscato@sju.edu

Description (100 words):
Design thinking is a process-driven framework for developing innovations and is particularly well suited to confronting complex social and environmental issues. This session explores the value of design thinking as a novel practice to develop solutions that enhance consumer well-being and propel social change. Using food well-being as an illustrative context, the session identifies opportunities, key processes, and critical mindsets necessary for researchers and policy makers to realize the potential of design thinking in marketing for social change.
Proposal

Session Objective: Reflecting the conference theme of social impact and the call for the consumer research community to address problems of consumer welfare (Ozanne et al. 2017), this session explores the value of design thinking as an inventive practice to develop solutions that enhance consumer well-being and propel social change. Particularly suited to dynamic, rapidly changing environments, design thinking is a participatory research method that focuses first on understanding problems from multiple perspectives, and then co-creating solutions (Battarbee, Suri Fulton, and Gibbs Howard 2014; Brown 2008; Kolko 2015). Three projects in the domain of food well-being demonstrate the potential of design thinking to address complex social and environmental issues. Using food well-being as an illustrative context, the session identifies key practices necessary for marketing researchers and policymakers to realize the potential of design thinking to address complex social and environmental issues.

Structure & General Orientation: The session explores design thinking for social change in three sections (see Table 1). First, an orientation reviews the stages (i.e., empathize, define, ideate, prototype, test), key concepts (i.e. desirability, viability, and feasibility), and mindsets (i.e. tolerance for ambiguity, willingness to fail, positivity, and action orientation) critical for successful design thinking projects. This will enable design thinking novices to understand the basic process while providing a refresher for those familiar with the practice. Emphasis will be directed to the value of design thinking in tackling wicked social issues – that is, highly complex and ambiguous problems with no clear solution (von Thienen, Meinel, and Nicolai 2014). An overview of the model, together with curated references, books, and additional learning resources will be provided to session attendees.
Table 1: Special Session Structure.

<table>
<thead>
<tr>
<th></th>
<th>Orientation</th>
<th>10 min</th>
<th>Session Chairs</th>
<th>Welcome and introduction; Overview of design thinking and its value in marketing research for social change.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Presentations</td>
<td>45 min</td>
<td>Research Presenters</td>
<td>Each presenter describes their research, focusing on how design thinking is beneficial for social change within the context of food well-being.</td>
</tr>
<tr>
<td>3</td>
<td>Discussion</td>
<td>20 min</td>
<td>Presenters and Audience</td>
<td>A question and answer period guided by the session chairs on how design thinking can be used to drive social change.</td>
</tr>
</tbody>
</table>

In the second section, three research presentations highlight the potential of design thinking to generate solutions in one inherently wicked context: the pursuit of food well-being. Food well-being refers to a holistic understanding of the psychological, physical, emotional, and social relationships individuals have with food at both the personal and societal levels (Block et al. 2011). The first paper explores the meaning of food well-being among college students in North America and demonstrates how design thinking was used to generate digitally inspired innovations in each of the five domains of food well-being: food availability, food literacy, food marketing, food socialization, and food policy. The second paper examines the potential of photography as a design thinking method to develop innovative food experiences that improve food well-being. Drawing from marketing research, this critical review establishes the conceptual legitimacy of photography in design thinking and identifies creative photographic methods that can be used to understand food issues, and generate tasty and healthy food innovations. The third research paper details the use of design thinking skills and strategies to co-create an innovative and profitable food venture. The authors improve the rigor and validity of the design thinking process by aligning it with netnographic procedures, opening up exciting possibilities for the use of design thinking in the marketing field.
The final section of the special session is a directed discussion, in which attendees will be invited to ask questions about the design thinking process and to share ideas for integrating design thinking into their own research projects for social change. Moderated by the session chairs, the goal is to build attendee confidence in the use of design thinking as a method for marketing researchers and policymakers to address complex social problems.

**Likely Audience:** This special session is created for a wide audience interested in social change. Lack of familiarity with design thinking is not a barrier to audience participation. The practical orientation will appeal to scholars and public policy practitioners interested in transformative participant and community action research for social change. Theoretical connections to marketing embedded in design thinking will be highlighted for scholars to increase the rigor and validity of future research. Doctoral students will find the pragmatic process and discussion beneficial in developing research streams and connecting with other scholars. Finally, the subject matter will interest researchers in the growing fields of food well-being, food justice, food insecurity, food waste, and obesity.

**Key Issues and Topics:** Design thinking is a process-driven framework for developing innovations and is particularly well suited to confronting wicked problems. The first stage requires the development of a comprehensive empathic understanding of stakeholders’ lived experiences which is synthesized to better define the issue (Brown 2008; Luma Institute 2012). Guided by the insights generated in these stages, it is then possible to begin generating solutions. Through an iterative process of ideation, prototyping, and testing; innovative products, services, and experiences are identified. It is important to note that, although the model suggests a linear
relationship between the stages, design thinking is, in practice, more flexible and recursive (Brown 2008; Luma Institute 2012). This special session not only presents novel insights and innovations that can emerge from design thinking practices but provides conceptual legitimacy for the methods to strengthen the overall model. By exploring how the design thinking framework can be leveraged in food well-being research, we aim to encourage use of the process in marketing for social change. Critical to producing sustainable improvements in consumer well-being are human-centered innovations that incorporate multiple stakeholder perspectives.

**Contribution to Marketing:** Design thinking process offers a pragmatic, inclusive, and creative means for promoting social change and enhancing well-being. Design thinking has been embraced by marketing practitioners as an intelligent, empathetic, and flexible process that delivers competitive advantage and drives business growth (Brown 2008; Neumeier 2009; Schifferstein 2016). Governments and non-profit agencies have also demonstrated the potential for design thinking to develop creative products, services, and experiences that bring positive societal change (Liedtka et al. 2020; Milkowska 2018; Owen 2007). There are significant overlaps between marketing theory and design thinking that are primed for exploration in the promotion of work on improving sustainable consumer behavior, quality of life, and well-being. The value of the design thinking framework lies in ensuring stakeholders’ needs and lived experiences are placed at the foundation of developing and creating interventions (Lockwood 2009). This orientation aligns with an evolved understanding of marketing, its societal responsibilities, and opportunities for positive impact (Hill and Martin 2014; Ozanne et al. 2017).
Presentation 1

How Design Thinking Can Help Create Innovative Digital Food Experiences for Consumer Well-Being.

Jane Machin*, Radford University
Brooke Love, Radford University

This paper examines the use of design thinking to develop innovative food experiences in the higher education sector. Improving college campus food experiences is a wicked problem that the qualitative research methods embedded in design thinking are well suited to tackle (Buchanan 1992; von Thienen et al. 2014). Extant research in campus food experiences comprises quantitative surveys examining either student satisfaction with food services or the nutritional quality of campus food (Lugosi 2019). These studies remain firmly rooted in the paternalistic and functional view of food as health (Block et al. 2011) and miss key elements of the design thinking practice, including empathy, visualization, and collaboration, that are critical to fully understanding food needs. Solutions emerging from these normative methods are often limited to simple product ideas, missing opportunities to develop healthy and pleasurable experiences that also include innovations in the space, delivery, and payment of the meal. This paper reports on a design thinking project conceived to uncover novel insights about campus food experiences and develop digitally inspired solutions in the five domains of food well-being. Food products represented only a tiny fraction of the solutions generated to improve food well-being. Instead, participants designed innovative experiences for all stages of the food journey, from awareness through consumption to disposal. Food is not merely a means to survive, but a deeply social and emotional experience, and student dining solutions considered the broader communal context, not just individual customer tastes.
As a microcosm of universal food experiences, insights gained from understanding how to improve student food well-being can inform innovation in all food sectors. Daily decisions regarding what, where, when, and how much to eat dominate students’ time and energy, and, in this respect, they are analogous to most food consumers. Food research in higher education can also help improve the well-being of the food insecure, a large, but inadequately understood, population (Bublitz et al. 2019; Lugosi 2019), since students are more likely to experience hunger than U.S. households on average (Cady 2014; Laterman 2019; van Woerden et al. 2019). This research demonstrates the value of design thinking to improve food well-being and we strongly recommend foodservice providers invite consumers in their innovation processes to co-design food experiences.

**Presentation 2**

**Photography in Food Well-Being and Design Thinking**

Emily M. Moscato*, Saint Joseph’s University
Charlene Dadzie, University of South Alabama
Jane Machin, Radford University

This paper examines the potential of photography as a design thinking method to develop innovative food experiences that improve food well-being. Photography is a remarkably inclusive and accessible research method for understanding issues and opportunities for food well-being. The theoretical legitimacy of photography is well-established in the social sciences (Ozanne, Moscato, and Kunkel 2013), but has been missing from design thinking practices. Through a critical review of research using photography to examine the complex psychological, physical, emotional, and social relationships individuals have with food at both the personal and societal levels, this work provides the first conceptual foundation for the use of photography in
design thinking. Special attention is given to photographic research characteristics that make the method an ideal partner for designing healthier food experiences.

Inventive photographic methods appropriate for all stages of the design thinking process are identified, from understanding problems to generating solutions. Particularly well suited to evaluate the highly visual nature of food practices, photography proves to be a less disruptive way of measuring and gaining insight into everyday food practices and experiences, helping to reveal hidden aspects of food consumption. Photography also engages multiple stakeholders on a collaborative playing field, giving voice to often neglected populations, proving critical for building empathy with consumers and stakeholders (Ozanne et al. 2013). Practical and ethical issues in the use of photography as a research tool for social change are discussed and best practices for the successful integration of photographic research methods in design projects are highlighted. Future research that more fully integrates photographic methods has the potential to help marketing practitioners and public policymakers develop pioneering solutions to wicked social problems.

Presentation 3


Rachel Ashman *, University of Liverpool

Anthony Patterson, Lancaster University

Robert Kozinets, University of Southern Carolina

The goal in this paper is to strengthen the process of design thinking by aligning it with netnography, specifically auto-netnography, which lends itself well to the task of studying the
actions of a singular designer or team of marketing innovation designers seeking solutions to the wicked problems they encounter. Somewhat surprisingly, existing research has not previously linked design thinking with either netnographic or auto-netnographic research Kozinets 2020); after all, the process of design thinking and the netnographic method share several commonalities. First, their abiding perspective is to see things from the point of view of the consumer. Second, they both seek to iteratively acquire meaningful cultural insights. Finally, they are both situated within a focus on in-depth qualitative research methods.

Auto-netnography is one of four core sub-approaches netnography identified by Kozinets (2020), which privileges the creation of vibrant introspective personal reflection over collecting large sets of online data. It is a descendant of the widely used “auto-ethnography” (Hayano 1979), which combines the characteristics of autobiography and ethnography to create a method that uses researchers’ own personal experiences to illuminate the characteristics of a particular culture (Ellis et al 2011). In recent times there has been a growing interest in employing the method (Kozinets and Kedzior 2009; Kozinets et al. 2018; Syrjälä and Norrgrann 2018; Villegas 2018; Howard 2020), which has a reflexive quality, offering researchers an opportunity to carefully curate and value the knowledge of one individual, in a way that filtering the accounts of multiple respondents does not.

In this paper, an auto-netnography is conducted to afford a multiperspectival understanding of how a popular online health food and wellness influencer succeeds in designing, launching, and maintaining a vegan restaurant. By continually tapping into the wellbeing needs and life values of her followers, this online content creator is able to translate emergent discourses of health and ecology and practices of intimacy and authenticity into the profitable growth of both her website and the food venture. Aligning the process through which
the blogger develops and adapts her new food offering with the five stages of design thinking – *empathizing, defining, ideating, prototyping, and testing* – reveals a robust framework for future designers and marketers to interact with consumers and co-create desirable products services and experiences.

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Female (Dis)empowerment and Public Policy

Ron Hill, American University
Laurel Steinfield, Bentley University

“When I talked about sex-based discrimination, I got the response, 'What are you talking about? Women are treated ever so much better than men!'

Ruth Bader Ginsburg

Objective of the Session

We know that women have been and remain enmeshed in a patriarchal and misogynistic world (Folbre 2010; Lerner 1986). Until recent history (20th Century) in the United States, women were considered property of their husbands, not allowed to apply for credit cards, and lacked the right to vote. Further, the United Nations Development Program (UNDP 2019) reports data showing that no country in the world provides equal development opportunities for men and women, examined along three dimensions of access to healthcare, education, and income. Clearly, these deficits have important and negative consequences on their marketplace relationships and consumer wellbeing.

Thus, our objective is to present several far-reaching cases of female (dis)empowerment that showcase contexts in which women currently remain at significant disadvantages because of historical prejudice and discrimination, but also to highlight how policies, markets, and women’s own actions are key to overcoming these oppressive forces. Each paper is connected to marketing and public policy in ways that are often ignored by our field, providing a novel look at where our research can be effective. They include: the commoditization of sex workers in India (Hill and Chaudhuri); abortion services around the world (Paul, Steinfield, Ramani, and Hill); commercializing sexual inequality in pornography, (McVey, Gurrieri, and Tyler); and female deviance and reintegration into markets post prison (Hutton and Crangle-Sim).

Structure and Orientation

We have organized our session into four different papers that come together around the theme of female (dis)empowerment and public policy. Each presentation brings together different authors and perspectives to this vexing situation. They offer ideas about the current environment in which these women are currently exposed, as well as some historical and current framing as to how this dilemma was created, sustained, and, in some cases, is being (or could be) challenged and changed. Thus, women’s disempowerment is chronicled along with women’s own actions to navigate these disempowerments, and how more empowering public policy and/or market-based solutions could advance women’s rights, agency, and well-being.
Intended Audience

Social equality/equity and health and well-being are two central themes of this conference and continue to be sustained areas of interest in the field (e.g., Hill and Adrangi 1999; Santos and Laczniak 2009; Scott et al. 2011). In this session we provide scholars working in this area an opportunity to recognize how gender structures consumers’ experiences in both of these domains. This special session also extends prior viewpoints that considers the way policies and markets maintain social hierarchies and stratifications, such as those along racial (e.g., Crockett and Grier 2020; Harris, Henderson, and Williams 2005) and/or class lines (e.g., Viswanathan et al. 2019), and sustain a lack of international parity (e.g., Hill and Adrangi 1999; Scott et al. 2011). Moreover, it expands upon transformative consumer research (a scholarship well aligned with these topical areas) by exploring and discussing ideas and contexts that are rarely given emphasis, creating a novel basis that should attract attention.

Contribution to the Discipline

While gender has been addressed at the conference to a certain extent, by the journal (JPPM) (e.g., Hein et al. 2016), and in various (recent) special issues in other journals (e.g., Gurrieri, Previte, and Prothero 2020; Tissier-Desbordes and Visconti 2019), it has not reached the level of attention of other topical categories (Gurrieri, Previte, and Prothero 2020). Moreover, many gendered marketplace experiences and areas remain under-explored, such as the markets of prostitution and pornography, abortion, or the experiences of female convicts. Given the importance of gender to the political landscape and the important nuances described here, we view this work as significant to extending gender-based research in under-appreciated areas within marketing and public policy research.

Brief Abstracts

Abstract 1: People as Consumable Objects: Understanding the Human Commoditization Process

People have commoditized human beings in many ways for millennia. One principal means by which individuals are bought and sold is through prostitution, a system in which primarily males negotiate with primarily females or handlers to receive certain forms of physicality and access to sexual acts. While there has been some attention in consumer research to commoditization, the field has not detailed how the fuller process plays out for people as consumable objects, as well as how these individuals cope by commodity pathway diversions, or ways of temporarily moving in-and-out of this status in order to regain their humanness for short periods of time. Thus, our purpose is to chronicle how the commoditization process unfolds for Indian women who became liner meye (brothel-based sex workers) despite natural inclinations and initial disgust at selling intimate parts of their bodies. Often, as is the case in India, these markets operate free of policy protocols, which heightens the market-based dynamics of commoditization. Our results show that commoditization
is a dynamic rather than a static state, and diversions and other coping mechanisms evolve over time, culminating in a sustaining fantasy that women’s sex work will ultimately improve their material lives. Our paper contributes to the field’s understanding of modern commoditization and use of diversions by women to manage this commodification status.

Ron Hill, American University
Himadri Roy Chaudhuri, Xavier School of Management, XLRI, India

Abstract 2: Abortion Services Around the World: Implications for Public Policy Makers

Provision of abortion has been one of the most controversial healthcare services in modern times. The debate often devolves into emotional name-calling that suggests either access to services on demand or service refusal regardless of circumstances. However, the reality is different from the political sloganeering, at least as it manifests in the United States. Taking an international perspective, we demonstrate how access varies widely depending upon the location of the potential recipient as well as a host of factors associated with nation-states, which in turn shape women’s rights to markets of abortion services. Thus, our purpose is to reveal the different legislative protocols for its availability, and to determine what underlying factors may drive these policy decisions. Together they reveal a complex mosaic of fundamental principles and rights that are rarely, if ever, considered when formulating public policy. We hope that this look across countries will help policy makers recognize options and opportunities and their implications as they continue to debate provision of abortion services to women impacted by their deliberations.

Rehana Paul, American University
Laurel Steinfield, Bentley University
Girish Ramani, American University
Ron Hill, American University

Abstract 3: Marketing empowerment, practicing harm: investigating the online pornography market

There is increasing international attention being brought to the role of pornography in women’s inequality. This has included concern on how new technologies are facilitating evolving forms of violence against women. However, largely absent from such considerations is an understanding of how markets and marketing are implicated in women’s sexualized inequality. While marketing scholars are building a rich body of work exploring issues around gender injustice and inequality, pornography is an area on which the discipline has been notably silent. Further, although some feminist scholars continue to critique pornography for its disempowerment of women, much of the broader academic discussion on pornography centrally frames it as a harmless text or consumer fantasy, with some even suggesting women and girls may be empowered by newer forms of digitized sexualization. To centre women’s wellbeing, we bring attention to pornography as a market that commercializes sexualized inequality. Results from our study point to the dominant
use of ‘female empowerment’ discourses to disguise the harms of this market system. We intend 
our work to prompt policy makers to take more seriously the role of markets and marketing in 
violence against women, while offering marketing scholars an exemplar of marketplace gender 
inequality.

Laura McVey, RMIT University
Lauren Gurrieri, RMIT University
Meagan Tyler, RMIT University

Abstract 4: Female Deviance and (Re)Integration Markets

Female offenders who have broken the law have also broken the gender norms about appropriate 
female behavior. As such they are considered doubly deviant, morally depraved and corrupt, in 
need of closer forms of control to facilitate reintegration post release. As there is less policy 
emphasis on the aftermath of women offenders’ conviction, incarceration and community re-entry 
experiences, we examine the empowerment rhetoric surrounding the commodification of 
reintegration programs designed for female offenders, and the actions they take to navigate the 
market re-entry process. Although community re-entry is challenging for both genders, pathways 
out of crime and reintegration have been found to be more complex for women. To this end, we 
consider the “punitive turn” in public policy making to examine how women are more likely to be 
imprisoned for the complexity of the gendered and exclusionary nature of their living conditions. 
We highlight how prison sentences, re-entry markets and policies act as mechanisms for gendered 
poverty surveillance, yet in spite of this, women navigate such intense restrictions to leave the 
deviant behind.

Martina Hutton, University of Winchester
Francesca Crangle-Sim, University of Winchester

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Competitive Paper
#BLACKLIVESMATTER: UNDERSTANDING CONSUMER RESPONSES TO CORPORATE SOCIO-POLITICAL ACTIVISM

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Jimin Nam, Harvard Business School

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Keywords: Social Media, Socio-Political Activism, Black Lives Matter, Authenticity

Description: When faced with a socio-political issue, such as Black Lives Matter, we find evidence that when companies delay posting a statement on social media (e.g., Instagram), it leads to negative consumer reactions, even after controlling for the perceived authenticity of the statement.

EXTENDED ABSTRACT

Research Question

In response to the death of George Floyd on May 25, 2020, companies rushed to release official statements showing support for the Black Lives Matter (BLM) movement. Historically, companies have taken a variable approach to releasing socio-political statements that may alienate some consumers. In the case of BLM, a vast majority of companies with social media

1 References are available upon request.
platforms showed their support for BLM, and instead used their discretion to moderate the
degree to which they issued public support of the BLM movement. We examine the features of
company BLM posts on social media, specifically Instagram, and how they were publicly
received by prospective consumers.

**Method and Data**

Our data consists of Fortune 500 companies, as of February 2020, where the companies
met the following requirements: (1) Had an active Instagram account, (2) Had a post directly
related to BLM on or after May 25, 2020 (the death of George Floyd) containing still images (not
videos), and (3) Had at least 35 top-level comments on the post about BLM within 5 days of the
post’s creation date. If the company’s first BLM post was simply a black photo with the caption
“#blackouttuesday,” we sampled their next related post (if applicable) that contained more details
on their stance. For each of these companies, we also recorded the number of likes on each focal
post, as well as the number of followers the company had as of May 20, 2021. We further
scraped all comments on each of these focal Instagram posts about BLM, including information
on the timing of each comment, and whether it was posted directly under the focal post or as a
reply to another comment. We ended up with a total of 77 companies, and 46,139 comments
across all companies.

In order to extract perceived sentiment for each company’s BLM post as well as the
intended sentiments of users’ comments, we used a zero-shot learning model (facebook/bart-
large-mnli) developed by Facebook AI and published by Hugging Face (Lewis et al. 2019,
Williams et al. 2018). The model is a pre-trained Natural Language Inference model that assigns
a probability score for how likely each comment’s context entails or contradicts a label assigned
by the researcher. In this case, we examined the following sentiments for each comment:
negative, disagreeing, and unsupportive. For each of these sentiments, our outcome variables were calculated as the average of each sentiment across the top-level comments under each Instagram post. Given that each individual comment’s sentiment evaluation is on a scale from 0 to 1 as they represent probabilities of expressing a sentiment, each of these average sentiment outcome variables are also contained within a 0 to 1 range.

Our dependent measure of interest was authenticity of the companies’ BLM posts, measured using the same sentiment calculation process. For a robustness check, we also recruited 1,237 participants (M_{age} = 39.95 years; SD = 11.19 years; 51.90% female) from Amazon Mechanical Turk to evaluate a subset of companies’ BLM posts in terms of perceived authenticity, and confirm that our results remain the same whether we use the model-created authenticity scores or human-evaluated authenticity scores.

**Summary of Findings**

Our results are twofold. First, we find a positive relationship between the timing of company BLM posts and negative reactions through comments (i.e., negative, disagreeing, and unsupportive). When controlling for authenticity of the focal statement, we find that being slow to upload a BLM related post has an additional detrimental effect on public perception of that post. In other words, as time passes between the day of George Floyd’s death to when the company uploads a BLM related Instagram post, public evaluations, estimated through comments, become increasingly negative ($b = 0.012$, $SE = 0.003$, $p < .01$, 95% CI = [0.005, 0.019]), disagreeing ($b = 0.010$, $SE = 0.003$, $p < .01$, 95% CI = [0.004, 0.017]), and unsupportive

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2 We also included the reverse items as a robustness check: positive, agreeing, and supportive. The interpretation of all our results remains the same for when we use the reverse sentiment items.
(b = 0.012, SE = 0.003, p < .01, 95% CI = [0.005, 0.019]). This suggests a potential trade-off for companies in terms of taking longer to formulate more thoughtful and authentic-sounding Instagram posts versus creating a statement right away that may not sound as authentic but is perceived more positively due to its immediacy.

**Statement of Key Contributions**

In the past, companies have differentiated themselves by making a statement regarding a socio-political issue as a form of corporate social activism. More recently, there has been a rise in movements for which consumers expect statements from corporations (e.g., BLM, #MeToo, Stop Asian Hate). This research sheds light on an additional variable that firms encounter when releasing socio-political statements on social media platforms: time. We find evidence that even when a company produces a thoughtful statement in regards to BLM, being late to the game can cause their positioning to rebound as viewed by prospective consumers.
3Rs OF SUSTAINABLE MARKETING:

A FRAMEWORK FOR EMPOWERING MARKETERS TO BE RESPONSIBLE

Authors: Prasan Kumar, Juliana Zaffari

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Keywords:
Sustainable Marketing, Responsible Marketing, Marketing Frameworks, Marketing and Sustainability, Brand Responsibilities.

Description:
This paper introduces a new, comprehensive framework about how to incorporate the concept of sustainability, both people and planet, in marketing practices to empower marketers to produce campaigns that are responsible, ethical, equitable and sustainable.
EXTENDED ABSTRACT

Research Question

Marketing is one of the most powerful tools for influencing consumer behavior and actions. Therefore, marketers need to act responsibly when planning marketing communications. For many years, they had perpetuated stereotypes and hidden behind humor showing a pattern of disrespect towards minorities and marginalized groups. Misrepresentation of ethnic communities and the trivialization of the role of women in society was unfortunately an acceptable practice. However, with current times marketers need to be more critical about their role as brand ambassadors. As brands take on cause-based issues, human or environmental, it is imperative marketers take into consideration how their actions impact the planet and all the creatures that live on it. But with the absence of industry-wide guidelines that enable marketers to be responsible, they are failing to meet audience and sustainability expectations, resulting in backlash and brand erosion. The goal of this research was to arm marketers with tools that would help them understand all stakeholders so they can act responsibly and be successful. This research was designed to answer the following question: What are the key variables that make up for Sustainable Marketing and how can it set marketers up for success by empowering them to be responsible?

(word count: 199)
Method and Data

To address those questions, we used a qualitative approach, gathering primary data from in-depth semi-structured interviews. The twenty individuals interviewed for this study fell in two different categories: (1) marketing professionals (55%); and (2) consumers (45%). Given the current situation imposed by the global pandemic all the interviews were conducted via video calls with an approximate duration of one hour. We divided the interviews in two segments. In the first segment the interviewees were exposed to 7 commercials (4 purpose driven, 3 regular ads) and they were asked to provide their initial thoughts and reactions. In the second segment we presented to them the 5Rs that we considered to be the key variables for sustainable marketing, which were established based on literature review and professional experiences. The interviewees were then asked to reflect back on the ads and to provide their opinion on which key variables they thought could be the most important to analyze a brand’s communication and to provide a sequence of priority. We used thematic analysis with deductive coding and compared their first reactions to the ad with their opinions about the proposed key variables, which enabled us to prioritize the variables and establish the proposed framework.

(word count: 200)
Summary of Findings

This research helped us define Sustainable Marketing and identify the key variables for achieving it: Respect, Relevance and Results. It also helped prioritize the variables and define the questions that marketers should be asking themselves to be sustainable. Respect, which is captured in how the message is conveyed, generates immediate reactions. If audiences perceive a marketing campaign to be disrespectful, it is less likely that they would give any credence to the remaining variables. Once a piece of communication has been deemed Respectful, it can be evaluated for Relevance and Results. If the brand communication is aligned with its mission, values, industry, audiences and/or products, and if the brand is taking immediate action to address its claim, audiences will be even more approving of the brand. Finally, to achieve the highest level of sustainability and ensure the least risk of criticism, brands will need to demonstrate long term commitment to the cause. Even though all three Rs are equally necessary, Sustainable Marketing can be best achieved if marketers apply them in the sequence specified in the different tiers of the framework. As marketers move down the continuum, they increase their degree to sustainability and reduce the risk of brand defamation.

(word count: 200)
**Key Contributions**

Sustainability has become synonymous with environmental issues. But as evident in the United Nations Sustainable Development Goals, sustainability extends beyond the environment and encompasses additional elements such as individuals, communities and animals. In order to be truly sustainable, brands need to demonstrate responsibility towards all these wider elements. While previous research has sought to explore the role of marketing in the discount about sustainability, the body of work is still quite theoretical, lacking clear guidelines for marketers. In addition, the recommendations often explore either environmental or social aspects but not both simultaneously. As a result, uninformed marketers have continued to engage in unethical behavior, including greenwashing and woke-washing. This paper first offers a definition of Sustainable Marketing: the practice of responsibly addressing all four sustainability elements -- individuals, society, animals and planet -- in brand marketing. In addition, it provides a comprehensive and straightforward framework to guide marketers in developing communications that have a positive impact on all, while simultaneously minimizing negative feedback, criticism, and backlash. This study is particularly valuable to for-profit companies that are learning how to position themselves in a new set of social, political, and environmental rules that demand them to constantly take a stand.

*(word count: 199)*
A COMMUNITY-BASED APPROACH TO ADDRESSING THE HOMELESSNESS CRISIS

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Keywords: Homelessness, community interventions, community assessment

Description: This paper examines hyperlocal, community-based, initiatives to address the homelessness crisis.

EXTENDED ABSTRACT

Research Question

The purpose of this research is to understand the homelessness crisis using a community-based approach and to identify and propose hyperlocal initiatives to address the crisis. Our research focuses on the Linda Vista (LV) neighborhood in San Diego, CA that is comprised of more than 11,000 residences and 16 sub-neighborhoods. LV has a growing homeless population for various reasons and it is important to examine and to develop strategies to alleviate the problem.

Method and Data

Multiple stakeholders interact with and support unsheltered individuals who sometimes stay in a particular community for reasons such as safety and comfort. We conducted a two-phase research project that included a survey of community partners to assess the resources provided to the homeless, interviews with local businesses, and interviews with unsheltered individuals who are homeless or have experience with being homeless. In Phase I, we surveyed 22 organizations/entities who provide support services to people who are experiencing homelessness in or near LV. Topics of community outreach, services provided, and desired, and related challenges were assessed. In Phase II, we interviewed cashiers and managers at seven businesses in the LV community including five restaurants/coffee shops and two markets/liquor stores to understand how they interact with and formal and informal services they provide to unsheltered individuals. Additionally, we conducted 17 in-depth interviews with individuals with lived experience with homelessness to gain a greater understanding of available resources and pain points.

Summary of Findings

Our research showed that several community organizations provide services to fulfill basic needs (e.g., housing and food) which are utilized by homeless individuals. However, both groups feel that existing services such as food support, access to healthcare, and employment training could be enhanced and streamlined. Unsheltered individuals indicated a greater desire for specialized
healthcare services such as counseling and substance abuse. They indicated that a lack of affordable transportation was a barrier to access healthcare. In the LV community, the perceptions of unsheltered individuals by business owners are mixed. This mirrors the mixed feelings of safety and security felt by unsheltered individuals. Negative interactions between business managers and unsheltered individuals are manifested in how the latter are treated and compounds the feelings of unwelcome and lack of safety experienced by them. This exacerbates existing mental health challenges and sometimes results in adverse outcomes such as arrests. The results of our research suggest that hyper-local strategies designed through a trauma-informed lens can create a sense of community and provide services at the local level so all individuals in the community can benefit and the homelessness crisis can be addressed in a more targeted manner.

**Key Contributions**

In this research, data is collected from non-profits, for-profits, and unsheltered individuals in a specific neighborhood in San Diego, CA. The triangulated data informs a multi-faceted solution to address various aspects of homelessness. This intersectional approach is a key contribution of our work as it allows us to understand and address the challenges faced by all stakeholders simultaneously. Non-profit organizations, governmental agencies, for-profit businesses, and unsheltered individuals benefit from our findings. Non-profit organizations can tailor their existing offerings or identify resources to create new offerings to address the needs and wants of unsheltered individuals. Partnerships with government agencies could help identify and deploy necessary resources such as mobile clinics and showers, handwashing stations, and housing and food support. For-profit firms such as restaurants and grocery stores can develop sensitivity training for their staff to facilitate positive interactions with the homeless. Individuals with lived experiences with homelessness are the main beneficiaries of our work as we recommend hyperlocal, community-based strategies to alleviate some of the concerns faced by unsheltered individuals in a more targeted and cohesive manner.
ACCESSIBILITY OF UNIVERSITY ATHLETIC PROGRAM WEBSITES: FINDINGS AND RECOMMENDATIONS FROM A TWO-YEAR STUDY

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Keywords: Sport Marketing, College Sports, E-Commerce, Website Accessibility, Disabled Fans

Description: The results of the study show that most universities need substantial work on their athletic program websites in order to provide an inclusive experience for sports fans with disabilities.

EXTENDED ABSTRACT

Research Question – Universities may have a serious problem that could make them vulnerable to litigation on multiple fronts. This problem stems from the accessibility of their official athletic program websites for visitors with disabilities who have direct affiliations to the university as students and alumni, or may simply be fans of the teams. According to the latest U.S. Census, about twenty percent of the U.S. population or over sixty million people have a disability (Census.gov), and at least half or thirty million of them are directly affected by websites that are inaccessible.

In this paper we describe how the special conditions of a university’s website for its athletic program could be applicable to both Title II and III of the Americans’ With Disabilities Act.
(ADA), as well as sections 504 and 508 of the Rehabilitation Act of 1973. In addition, we provide and discuss the results of a two year study evaluating the number of accessibility-related errors found on the home page, ticket landing page, and merchandise page for the sixty-four teams taking part in the NCAA’s Men’s’ Basketball Tournament in 2019, and the top twenty-five football programs as ranked by ESPN, repeating the evaluations for the same teams in 2020.

**Method and Data** – To gain a sense of the severity of the problem, we evaluated the accessibility for the official athletic program websites of universities that were either invited to take part in the NCAA Men’s Basketball Tournament or were ranked as one of the top twenty-five football programs by ESPN in 2019. We felt this sample was representative of schools whose athletic programs would be of significant importance to student life on campus, alumni, and both geographically affiliated and non-affiliated fans of the school’s programs. Each program’s website was evaluated against the globally accepted World Wide Web Consortium 2.0 Guidelines (W3CG 2.0), but not against Section 508 guidelines because this standard has been replaced in favor of the W3CG 2.0 standard. The analysis was replicated for the same teams in 2020. The Sort-Site Evaluation tool was used in our research because it quantified the issues and divided them into their Priority A, AA, and AAA categories while providing performance statistics on the entire site. Sort-Site allows for evaluation of one page at a time, a group of pages, or the entire site (depending on the size of the website).

**Summary of Findings** – Visually impaired individuals using assistive technology would find a website extremely difficult or nearly impossible to navigate without conformance to priority A success (W3C.org). Similarly, lacking conformance to priority AA success criteria would make
difficult or very difficult to navigate a website for those individuals using assistive technology (W3C.org). Although the data seems to reflect that a relevant effort has been made to improve the accessibility of websites, lacking conformance to priority A translates into visually impaired individuals being unable to navigate the homepage, ticket site, and merchandise site of these teams. Focusing on priority A, only the merchandise website of two of the programs yields no A errors in 2020, reflecting the severity of the problem.

**Statement of Key Contributions** – This research illuminates a critical policy issue for universities by exposing their potential legal vulnerabilities regarding the inaccessibility of their athletic websites for students with disabilities. Growing lawsuits are being filed against high-profile institutions because their athletic program websites are still not fully accessibility to all students. Most universities have an office dedicated to helping disabled students succeed academically and acclimate to life on campus. Additionally, many actively promote inclusion through organizations and committees dedicated to social sustainability, diversity, equity, inclusion, and student success, so inclusion for people with disabilities is a part of their mission. Our study found most university athletic program websites still lagging in providing accessibility to students with disabilities. We offer recommendations for ways to get different members of the campus community engaged to address and fix this ongoing athletic program inaccessibility problem. In addition, we contend that universities are not obtaining full potential revenue from ticket and merchandise sales because many disabled fans are often not able to use their athlete program websites. By examining the problems of disabled consumers in purchasing online, we expand the understanding and scope of the marketing theories of Expectancy Disconfirmation, Attribution, Social Identity, and Inter-group Contact.
ADDING GOOD OR REMOVING BAD: CONSUMER RESPONSE TO NUTRITION CLAIMS

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**Keywords:** Nutrition claims; food marketing; consumer health; perceived value

**Description:** Through a meta-analysis and experimental studies, this research finds that adding positive nutrients (vs. removing negative ones) increases perceptions of value for money and, consequently, purchase intentions.
EXTENDED ABSTRACT

Research Question

Nutrition claims are used to highlight the healthiness of a food. While there is regulation surrounding when manufacturers may use such claims, freedom to decide whether or not to carry them, and which specific ones, remains. For example, a product may be low in fat, but high in fiber: does it matter which claim a manufacturer decides to place on their product? While recent work has established that consumers react differently to various types of nutrition claims (André, Chandon, and Haws 2019), current regulation and academic research largely ignore such differences. Furthermore, research has found mixed results for consumer reactions to nutrition claims (Seymour et al. 2004; Wansink and Chandon 2006). To understand these contradictions, and further study consumer reactions to nutrition claims, the purpose of this paper is to understand how and why consumers differentiate between two specific types of nutrition claims, namely those focusing on the presence of positive nutrients, such as “high in vitamin C” (“presence claims”) vs. those highlighting the absence of negative nutrients, like “low in carbs” (“absence claims”). We argue that consumers react positively towards presence claims as they perceive products carrying such claims to bring more value through the addition of the nutrient.

Method and Data

To offer initial evidence for our proposed main effect that consumers react more positively to presence than absence claims, we conducted a meta-analysis of existing research into nutrition claims. This included data from 39 studies, with a total of 174 effect sizes. We followed the meta-analysis with three experiments (N_{total} = 682) using an unknown nutrient framed as having either a positive or a negative effect on one’s health to focus on the effect...
of presence vs. absence rather than existing perceptions of the nutrient itself. In experiment 1, participants evaluated a product with either no claim, a presence claim or an absence claim. We aimed to investigate the proposed mediating role of perceived value for money.

Experiment 2 manipulated the process by adding a condition where the absence claim was combined with an explicit value cue. We expected that this would mitigate the difference between the presence and absence claims. Finally, in experiment 3 we addressed a potential alternative explanation that the absence claim draws attention to the fact that some of the negative nutrient is still present in the product. Therefore, we compared a presence claim to a “reduced in” claim as well as a “completely without” claim.

Summary of Findings

The meta-analysis shows that on average, including a nutrition claim focusing on the presence of positive nutrients increases consumers’ intention to purchase the product, while no effect was found for claims that focus on the absence of negative nutrients. Presence claims increase purchase intention significantly more than absence claims in comparison to a no claim version of the product. Experiment 1 replicates the main effect from the meta-analysis, showing that consumers react more positively (purchase intent, WTP and attitude) towards a product with a presence claim than one with an absence claim. This effect is mediated by a higher perceived value for money. In the second experiment, we find that adding an explicit message highlighting the value that the removal process adds to the product with an absence claim mitigates the effect of claim type (though it does not fully disappear). The third experiment shows that a full removal claim mitigates the effect by reducing the difference in healthiness perceptions across the two products, but the effect driven by perceived value for money remains.
**Key Contributions**

Through a meta-analysis of 174 effect sizes and three experiments, we studied the differences in consumer reactions towards nutrition claims highlighting the presence of a positive nutrient versus the absence of a negative nutrient. Our results show that consumers perceive the ‘positive nutrients added’ claim to signal a higher value for money due to additional ingredients being present in the product. These results help explain the mixed findings of previous research and offer more insights into nudging consumers towards healthier consumption.

For policy makers, it is important to understand that these two nutrition claim types are perceived differently by consumers. Given consumers’ more positive reactions towards presence claims, they may be more easily misled by such claims compared to absence claims. As most rules currently group presence and absence claims under the same guidelines, reconsidering the formulation of the guidance on the usage of nutrition claims is important. Marketers can make their products more attractive by opting for added positive nutrients. However, products with reduced negative nutrients will benefit from either fully removing the nutrient or highlighting the value added by the reduction process. Responsible marketers can use these findings to promote healthier consumption patterns among consumers.

References are available upon request.
AN INQUIRY INTO RETAILERS’ VULNERABILITY: A MARKETING AND PUBLIC POLICY PERSPECTIVE

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Keywords: Retailer vulnerability, public space, neoliberalism, development discourse.

Description: The paper examines the experiences and struggles of vulnerable retailers in India, arguing that the public policy entrenched in neoliberalism may have unintended and negative consequences contributing to retailer vulnerability.

EXTENDED ABSTRACT

Research Question: The retail economic activities in developing countries are dominated by small retailers due to their convenient location, familiarity, and trust. Many of these retailers are petty shopkeepers and family businesses with almost no outside employees except the family members. These retailers operate with bare minimum resources and earn just enough income to lead a dignified life.

Majority of small retailers in India are vulnerable as they experience a lack of access to resources, are susceptible to harm, or barely manage consumption adequacy (Hill and Sharma 2021 AMA Marketing and Public Policy Conference).
While scholarship in the marketing domain has investigated the poor retailers as micro-entrepreneurs (e.g., Venugopal, Viswanathan, and Jung 2015), the role of public policy in the well-being of retailers remains under-investigated. A key objective of public policy is to improve the well-being of people, especially the vulnerable population. The development discourse prioritizes and constructs certain types of knowledge and reality that fail to consider critical aspects of the lived realities of the poor, adding to, rather than alleviating their misery and impoverishment (Escobar 1995). This study of poor retailers in a south Indian city examines how changes in public spaces manifested as outcomes of the development initiatives exacerbate the already persistent retailer vulnerability.

**Method and Data:** This study was conducted in the outskirts of Tiruchirappalli, a south Indian city located in India. We followed interpretive research design and used purposive sampling to recruit our participants. Our participants are petty retailers and vendors conducting their businesses and residing near a business management school in Tiruchirappalli, India. Two authors are familiar with the local language and culture. In our research context, the grocery retail shops stock a narrow range of products that include non-branded candies and savory snacks, cigarettes, smokeless tobacco, and single-use cosmetic items. It is not uncommon to see shopkeepers residing in the shop blurring the line between home and workplace. We conducted multiple interviews with seven retailers over a period of 2 years. We asked these retailers about their experiences and challenges of conducting business, the impact of systemic factors such as state interventions, development projects, and access to public resources on their business and well-being. We also observed the retail stores, their consumers, wider social interactions, retailers’ relationship with family members and the community.
Summary of Findings: Our study shows that public policy initiatives, without proper understanding of the everyday life circumstances of the poor retailers and consumers, may add to the vulnerability of impoverished consumers and retailers. When the implementation of development initiatives overlooks the retailer’s dependence on public infrastructure, it has deleterious consequences for poor retailers contributing to retailer vulnerability. Specifically, we find that initiatives to improve public infrastructure through the expansion of highways negatively impact the profitability and sustenance of poor retail businesses.

The changes in public spaces affect not only the business but also the subjective well-being of the retailers. We find that a development initiative that was undertaken without much attention to the lived reality of the small retailers resulted in their lack of access to shared resources that were important to conduct the business. This lack of access to public spaces and the associated resources has negatively affected their quality of life.

We also report that when access to and control over resources is not attainable, retailers adopt the non-defensive coping mechanism of giving up on the restricted resources.

Key Contributions: We contribute to the area of consumer vulnerability by highlighting the less examined aspects of retailer vulnerability. In a recent article, Hill and Sharma (2020) argue that consumer vulnerability can emerge from restrictions on individual, interpersonal, and structural factors. In a dominant and important perspective, scholars have defined consumer vulnerability primarily as a temporary and fluid state (e.g., Baker, Gentry, and Rittenburg 2005; Baker, Hunt, and Rittenburg 2007). In another perspective, scholars have investigated the systemic aspects of consumer vulnerability (Commuri and Ekici 2008; Shultz and Holbrook 2009). We add to the latter perspective by highlighting the impact of structural resources on vulnerability that is more systemic and persistent.
Our study specifically focuses on the role of public policy as a structural resource in contributing to retailer vulnerability. We argue that at a structural level, developmental and welfare policy initiatives entrenched in neoliberalism may contribute to retailers’ vulnerability by limiting their access and control over resources. Intended to improve the well-being of people and alleviate vulnerability, policy measures deliver these unintentional outcomes, overlooking the lived reality of vulnerable population through the discourse and practices of development (Escobar 1995).

*Note: References are available upon request*
An investigation of the impact of consumers’ sustainability consciousness on sustainable purchase intention amongst Gen Z in the South African fashion retail market.

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UNIVERSITY OF CAPE TOWN

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Date

21 January 2021
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My academic journey has been inspired by The All-Knowing, The All-Wise, The Almighty. I am forever grateful for this opportunity. A heart-felt gratitude goes to my loving husband and my supportive family. A special mention to my incredible supervisor, I cannot thank you enough for your guidance and wisdom.
Abstract

A new generation of conscious consumers have placed pressure on fashion retail businesses to implement sustainability into their respective business operations. Conscious consumerism is a driving force behind sustainable consumption as these consumers play a strong role when influencing business practices. Although many retailers have adapted responsible procedures by offering sustainable products to their consumers, there is a lack of research on identifying and understanding the conscious consumer holistically. The aim of the present research is to gain a better understanding of the conscious consumer in relation to the three pillars of sustainability (people, planet, profit). The three main types of conscious consumer behaviour together with the three pillars of sustainability form a new construct called consumers’ sustainability consciousness. This study sets out to examine the Generation Z consumer market as they display traits of conscious sustainability consciousness and also aims to unpack the main drivers of their sustainable purchase intentions within the South African fashion retail market.

Online quantitative surveys were sent out to respondents aged between 18-24 years old. Descriptive statistics and inferential statistics were employed to assess the data received from the survey. Path Modeling, Confirmatory Factor Analysis and Structural Equation Modeling were then carried out in order to further analyse the data. The results from the proposed hypotheses presented that the health, labelling and peer pressure dimensions of consumers’ sustainability consciousness had a positive influence on the intention to purchase sustainably amongst the Generation Z consumer market.

In conclusion, the findings of this study have several important implications for both academia and fashion retailers. This research topic is the first to be conducted within South Africa and thus it will enhance the current studies found on conscious consumerism. These findings also provide significant insights for fashion retailers to implement. Ultimately, the insights from this body of work will generate both important implications and opportunities for further research.

Keywords: Conscious Consumerism, Conscious Consumption, Consumers’ Sustainable Consciousness; Sustainable purchase intention; Sustainable Consumption; Generation Z; Fashion Retail Market; South Africa
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Chapter One: Overview of the Study

1.1 Introduction and Background to Study

Introduction

The study of sustainability has been an important topic that has been studied since its formal introduction in 1987 (Cassen, 1987). This research paper aims to gain a better understanding of the role of sustainability within the marketing landscape as it has become an important focus for consumers. In recent years, consumers have become aware of the impact of both business practices and the effect of their own consumption on the environment. Consumers play an important role in the field of marketing and therefore it is essential to understand their conscious consumption preferences. The main purpose of this study is to unpack the concept of conscious consumption using the lens of the three pillars of sustainability (people, planet and profit).

Background

Sustainability

The area of sustainability has been studied for over three decades and only in the late twentieth century was it formally introduced by the United Nations (Purvis, Mao & Robinson, 2019). The framework of sustainability was established in form of identifying its three main pillars: people, planet and profit (Gladwin, Kennelly & Krause, 1995). The importance of sustainability has brought about a significant change in the way businesses operate (Purvis, Mao & Robinson, 2019; Bansal & Des Jardine, 2014; Stoughton & Ludema, 2012; Cassen, 1987). This is because traditionally businesses only aimed to generate profits and now shifted their business efforts to include all the pillars of sustainability by integrating people and planet into their respective business strategy (Murray, 2019).

Conscious consumerism

Consumerism takes place when consumers consider the product’s price in relation to its value as part of the purchasing decision making process. Conscious consumerism occurs when the consumer adopts a holistic purchasing decision making process before purchasing a product (Cizmeci, 2020). Therefore, the entire production process is considered from the extraction of raw material, the way in which the product was made to its effect on the environment once it is disposed (Cizmeci, 2020). Conscious consumerism is one of the main drivers of adopting
sustainable consumption practices as it drives consumers to make choices that are good for them and the planet (Szmigin, Carrigan & McEachern, 2009). There are three ways in which this consumer group displays conscious purchasing consumption behaviour; ethical, social and environmental consumption (Balderjahn, Peyera, Seegebarth, Wiedmann & Weber, 2018; Szmigin, Carrigan & McEachern, 2009; Zakbar & Hosta, 2013; Webster & Frederick, 1975). These three types of consumer behaviour have helped researchers gain a better understanding of consumer consumption in relation to sustainability and its impact on the consumers intent to purchase sustainably. However, these studies on these aspects have been researched independently (de Carvalho, Salgueiro & Rita, 2015). In response, de Carvalho et al., (2015) proposed the Consumers’ Sustainability Consciousness Construct (CSC) which successfully integrates ethical consumption, social consumption, and environmental consumption with the three pillars of sustainability (people, planet and profit). The purpose of this construct is to provide an integrated view on how consumers’ sustainability consciousness impacts a consumers’ intent to purchase sustainably (de Carvalho et al.,2015)

The Generation Z consumer segment

Concurrently, a new generation of young consumers are placing an increasing amount of pressure on the way in which businesses operate socially and environmentally (Nielsen Report 2012; Nielsen Report 2019). Young consumers are concerned with environmental issues and their purchase intentions can be driven by the sustainable business practices (Bentley, Fien, & Neil, 2004). These consumers form part of Generation Z (Gen Z) who expects companies to operate ethically (Francis & Hoefel, 2018). Gen Z are referred to the ‘True Gen’ and the ‘We Gen’ as they are actively involved in community projects and participate in conversations which positively contribute to the world (Francis & Hoefel, 2018). Many factors influence these types of conscious behaviour and thus businesses need to remain relevant by understanding conscious consumerism and adjusting their efforts accordingly (Janardhanan, 2018). As such, this research study seeks to understand consumers’ sustainability consciousness and its impact on sustainable purchase intention within the South African fashion retail market focusing on the Gen Z consumer segment.

1.2 Problem Statement

The fashion industry is an important sector as its globally worth US$ 2.5 trillion and employs more than 60 million people globally with clothing being the largest output of textiles as it
accounts for 60% of textile production (Guo, Choi & Shen, 2020; Euromonitor International Apparel & Footwear, 2016). Furthermore, this industry has been identified as a significant contributor to plastic waste, as half a million tonnes of plastic microfibres are released annually during the washing process of plastic-based textiles such as polyester, nylon or acrylic (O’Connor, 2014). Consequently, the impact of fashion on the environment has led many companies to incorporate sustainability into their business strategies (Smith, 2007; de Brito, Carbone & Blanquart, 2008) As the end consumer is central to the business strategy of clothing retail companies it is therefore essential that they have extensive knowledge of factors influencing their consumers’ purchasing behaviour (Hollywood, Armstrong & Durkin, 2007).

Consumer preferences have become increasingly complex as style, quality and price are no longer the only factors that influence purchasing behaviour (Borland, 2004). Sustainable preferences have become a significant contributor to purchase behaviour driven by environmentally conscious consumers within emerging markets (Faisal, 2010). Nevertheless, conscious consumerism studies conducted within an emerging market such as South Africa have primarily focused on social, environmental, or ethical aspects of consumption (Hughes, McEwan & Bek, 2015; Janardhanan, 2018). Consequently, the consumers’ sustainability consciousness (CSC) construct was developed which holistically measures meaningful consumption in relation to sustainable purchase intention (de Carvalho et al., 2015). The formation of this construct was tested in Portugal and limited studies were done on a global scale. As a result, there are no current studies which measures all aspects of conscious consumerism holistically within an emerging market context.

Therefore, the research question is as follows; *what are the main drivers of consumers’ sustainability consciousness on sustainable purchase intentions amongst Gen Z in the South African fashion retail market?*

### 1.3 Research Objectives

**Primary Objective:**
To evaluate whether consumers’ sustainability consciousness has a positive relationship on sustainable purchase intention amongst Gen Z in the South African fashion retail market.
Secondary objectives:
The secondary objectives will expand on the topic at hand by reviewing literature on the above-mentioned dimensions of the consumers’ sustainability consciousness construct and its relation to sustainable purchase intention:

- To determine the relationship between consumers’ sustainability consciousness and sustainable purchase intention as far as the trust dimension is concerned
- To determine the relationship between consumers’ sustainability consciousness and sustainable purchase intention as far as the accessibility dimension is concerned

The results from these research objectives will become significant considerations for current and future sustainable product and marketing strategies for South African fashion retail companies.

Chapter Two: Literature Review

2.1 Introduction

In this chapter, the theoretical research will provide an initial discussion about studies related sustainability and the fashion retail industry. Thereafter, linking sustainability to conscious consumption and introducing the consumers’ consciousness sustainability construct. Subsequently, the chapter will then discuss sustainable purchase intentions and end with a focus on gaining a better understanding of the Gen Z consumer market.

2.2 Uncovering the Sustainability Landscape

The Global Establishment of Sustainability

The concept of sustainability was instituted at the 1992 United Nations (UN) Conference on Environment and Development in Rio de Janeiro. Following this summit, the UN established the Commission on Sustainable Development (CSD) which aimed to guide, monitor and assess the progress of the UN 21 agenda (Purvis, Mao & Robinson, 2019). The main objective of the UN 21 agenda is to provide local and international governments with a detailed plan as to how to achieve sustainable development within their respective countries (United Nations, 1992). In 1995, a workshop was held to review the three aspects of sustainability and concluded that the CSD should work on indicators which emphasise social (people), environmental (planet) and economic (profit) institutional aspects of sustainable
development (Gladwin, Kennelly & Krause, 1995). In September 2015, the UN hosted a summit inviting world leaders to attend with the aim of establishing 17 Sustainable Development Goals (SDGs) (Robles, 2019). The purpose of these goals is to help fight poverty, inequality, and climate change, ultimately placing pressure on leaders to operate sustainably (UN Report, 2019).

**Operational Definition of Sustainability**

The most commonly accepted and widely used definition for sustainability was described by the Cassen Commission Report (1987) as meeting the needs of the present without compromising the needs of future generations (de Carvalho et al., 2015; Purvis, Mao & Robinson, 2019). Thereafter an array of definitions of sustainability were proposed (Gladwin, Kennelly & Krause, 1995). According to Viederman (1994), sustainability is a participatory process that creates and implements a vision of a community that optimally uses its natural and human resources. Furthermore, this definition leads to the concept of sustainable development where there are limitations on the amount of natural and human resources used based on the present state of technology. However, economic growth can take place if the social and technological organisation on environmental resources is optimally managed (Cassen, 1987). A more recent description of sustainability was defined as a set of development plans aimed to fulfil the social, economic and environmental issues addressing the current generation without comprising the needs of the future generation (Espina, Phan & Markman, 2018; Hussain, Rigoni & Orij, 2018; Willard, 2012). The more recent definition of sustainability will be used for the purposes of this study.

**The Three Pillars of Sustainability**

There are three pillars of sustainability namely, social (people), environment (planet) and economic (profit) and they also form part of the Triple Bottom Line (TBL) which is practiced by many companies (Cavagnaro & George, 2017; Kalish, Burek, Costello, Schwartz & Taylor, 2018). TBL is a popular concept used by companies to develop their respective sustainability strategies. For the purposes of this research study, the three pillars of sustainability will be referred to as people, planet and profit.

**People**

The social dimension of TBL focusses on the company’s relationship with their main stakeholders; employees, communities, customers, suppliers, and investors (Delai &
Companies practice corporate social responsibility (CSR) where they engage in socially responsible activities which results in enhanced societal wellbeing (Jackson & Apostolakou, 2010). The key aspects of CSR include employee training and development, monetary or in-kind contributions to impoverished communities, customer health & safety and offering supplier support by giving them long terms contracts (Delai & Takahashi, 2013; Harun, Prybutok & Prybutok, 2018; Naderi & Van Steenburg, 2018). The launch of the SDGs has placed more emphasis on companies to implement CSR practices as it positively contributes to creating meaningful impact on the environment and local communities (Robles, 2019).

**Planet**

The second pillar of sustainability is focused on the environment. The depletion of natural resources has placed detrimental effects on the ecosystem and thus have caused many businesses to incorporate environmental sustainability procedures into the production of their respective goods and services (Velela & Ellenbecker, 2001). Companies practice the environmental dimension when they focus on reducing their carbon footprint by implementing activities which will reduce their water & energy, waste and carbon emissions across their business (Ekins, 2010; Gimenez, Sierra & Rodon, 2012).

**Profit**

Lastly, the economic dimension is best explained using the concept of shared value. In 2011, the concept of shared value was introduced as the way in which companies find business opportunities in social problems thereafter integrating this thinking into their business strategies (Porter & Kramer, 2011). This concept depicts the relationship between business opportunities, social needs and corporate assets working together to form a strategy which is inclusive of everyone’s needs (Porter & Kramer, 2011). Based on the above introduction to shared value, no scale was found as to how to measure the way in which consumers understand the economic benefits of their consumption behaviour (de Carvalho et al. 2015).

**Sustainability in emerging markets**

A considerable amount of literature has been published on sustainability in developing countries as this concept has been an interest to these countries for many decades across Brazil and Chile (Aritzía, Kleine, das Graças, Brightwell, Agloni, Afonso & Bartholo, 2014; Delai & Takahashi, 2013), India (Manaktola & Jauhari, 2007; Sharma & Joshi, 2019), China
(Gassler, Meyer-Höfer, Spiller & Achim, 2016; Aroche, 2016), South Africa (Hughes, McEwan & Bek 2015; Mkhize & Ellis, 2019; Corvino, Doni & Martini, 2020). Since then, sustainability has become an interest to emerging markets as companies are seeing the positive effects of integrating sustainability into their business strategies (DWS, 2019).

One such example is that of large companies in Chile and Brazil that have successfully adopted sustainable practices within their businesses and thereafter focus their efforts in communicating their social and environmental actions to their respective consumer bases (Ariztía, Kleine, das Graças, Brightwell, Agloni, Afonso & Bartholo, 2014). Their sustainable practices are also communicated to their business stakeholders as part of their company’s corporate reporting (PricewaterhouseCoopers, 2008).

In 2014, the King Report on Corporate Governance was introduced to South African companies listed on the Johannesburg Stock Exchange (JSE) (Corvino, Doni & Martini, 2020). The purpose of this report is aimed to encourage companies to operate responsibly by publicly reporting on their business practices (PricewaterhouseCoopers, 2020). The King Report provides a mandate for JSE South African companies such as Woolworths, Pick n Pay and The Foschini Group (TFG) to implement sustainability into their business practices by producing integrated reports. These reports include integrating financial, social, and environmental information into corporate reporting (Corvino, Doni & Martini, 2020). This form of reporting is strongly linked to sustainability as it indicates how a company can create and sustain value by generating greater transparency in their respective corporate reporting (Eccles & Krzus, 2014). Furthermore, integrated reports are of high importance to current and potential investors as it provides them with a better understanding of whether the company is operating successfully using the triple bottom line (people, planet and profit) framework (Corvino, Doni & Martini, 2020). As these reports are made publicly available, consumers are then able to access this information and develop a well-informed perception towards the respective company (Eccles & Krzus, 2014). This is specifically important to the Gen Z consumers as they conduct research about a brand’s sustainable practices before supporting them (Pillay, 2020). Therefore, fashion retail brands need to ensure that their sustainable efforts are well communicated across all their platforms in order to attain Gen Zs’ brand preferences (Francis & Hoefel, 2018).
Sustainability and the fashion retail industry

The fashion retail industry produces 10% of the world’s carbon emissions and is the second largest consumer of the global water supply (Johnsen, 2019). The environmental aspect of sustainability has become a growing concern for this industry due to the challenge of balancing environmental impact and fulfilling business needs (Clarke & Clegg, 2000). Therefore, sustainable business practices have become an important aspect in the fashion retail industry and many companies have incorporated this way of thinking into their respective business models (Fineman, 2001; Klimley, 2005; Niinimäki, 2010). The concept of sustainability within the fashion industry involves making meaningful decisions at every point of a product’s life cycle from sourcing material, product design, production, product sale to its end life (Robles, 2019). The fashion retail industry plays a significant role in sustainability due to their global economic power and ability to influence both production and consumption (Delai & Takahashi, 2013).

Fast Fashion

Since the early 1990s, fashion has become faster and cheaper to produce resulting in higher consumption (Black, 2010). This process is known as fast fashion where the production of fashionable clothing is produced quickly and sold inexpensively to consumers (Khandual & Pradhan, 2019). As a result, 80 billion pieces of clothing are produced globally on an annual basis with three out of four pieces either ending up in landfill or gets incinerated (Chung, 2016). The consumers’ demand for clothing continues to grow with the increasing demand driven by Asian and African countries. Furthermore, the demand is predicted to increase to 160 million tonnes by 2050 (Johnsen, 2019). This would result in a significant environmental catastrophe if the negative effects of clothing production are not adequately addressed and hence highlights the importance of implementing sustainable business practices within the fashion industry.

The Circular Economy

Recently, the practice of sustainability has transformed from a linear thinking to a circular way of thinking (Robles, 2019). This new approach forms part of the new economic model which is known as the circular economy (Geissdoerfer, Savaget, Bocken & Hultink, 2017; Robles, 2019). The circular economy plays an essential role in achieving sustainable development as it focuses on ensuring that nothing is wasted by repurposing, recycling or
reusing things (Ellen MacArthur Foundation, 2013). This approach is used by many international fashion brands such as Adidas, H&M and Stella McCartney as these brands have successfully integrated sustainability into their business strategies with the intention to reduce their impact on the environment (Morgan & Birtwistle, 2009; Cheung, 2017; Khandual & Pradhan, 2019). Due to the shift from linear to circular thinking there has been a gradual shift from fast fashion to sustainable fashion (Khandual & Pradhan, 2019).

*Sustainable fashion*

The term sustainable fashion is used interchangeably with eco-fashion, green fashion, ethical fashion or slow fashion (Caniato, Caridi, Crippa & Moretto 2012; Khandual & Pradhan, 2019). According to Khandual & Pradhan (2019), there are six forms of sustainable fashion which is illustrated in the diagram below:

![SIX FORMS OF SUSTAINABLE FASHION](image)

Figure 1: Forms of sustainable fashion

**1. Custom made**

The garment is made when the customer places an order and it is produced in an environmentally friendly manner (Khandual & Pradhan, 2019).
2. Sustainable design and production

There are four main types of sustainable design techniques that can be used: upcycling, recycling, reconstruction and zero waste (Khandual & Pradhan, 2019). Recycling occurs when something is reused, and upcycling refers to repurposing an item with the intention to increase its value (Jestratijevic & Rudd, 2018). Reconstruction takes place when a garment is upcycled and made into a new design (Ellen MacArthur Foundation, 2013). Lastly, zero waste design techniques are applied from the pattern making phase until the final production of the garment ensuring unnecessary waste is eliminated at every stage (Khandual & Pradhan, 2019).

3. Fair and ethically made

This form of sustainable fashion promotes the fair and ethical practices of the process of garment formation from procurement of raw material to safe and fair employee working conditions (Grazia, 2018).

4. Waste management

Textile waste is one of the largest problems within the fashion retail industry as millions of fabrics are sent to landfill on an annual basis (O'Connor, 2014; Jestratijevic & Rudd, 2018; Khandual & Pradhan, 2019). This form of sustainable fashion aims to reduce the leftover fabric and trimmings that is usually found after garments are made (Jestratijevic & Rudd, 2018; Khandual & Pradhan, 2019).

5. Second hand

Consumers are becoming increasingly conscious about their buying decisions and thus seek to purchase clothing from thrift stores and charity shops (Jestratijevic & Rudd, 2018; Khandual & Pradhan, 2019).

6. Collaborative consumption

Lastly, the concept of collaborative consumption occurs when consumers swap, rent or trade fashion items instead of purchasing them brand new (Lang & Armstrong, 2018; Khandual & Pradhan, 2019).
Sustainability and fashion retail in emerging markets

Brazil has the second largest fashion industry in the world due to the size of its retail workforce and being one of the key global producers of cotton and denim (Petty, 2018). Brazil forms part of the Fashion Transparency Index (FTI) where they assess twenty local brands based on their ethical, social and environmental standards (Petty, 2018; Fashion Revolution, 2020). The report is then publicly made available with the intention to display the transparency of business operations of these twenty local brands (Fashion Revolution, 2020). Local designers such as the brand Santista Jeanswear have incorporated sustainable fashion to their offering by producing denim made from recycled cotton (Petty, 2018).

India is the world’s fifth-largest global destination in the retail space and has emerged as one of the most dynamic and fast-paced retail industries (IBEF, 2020). Sustainability is a core component of the Indian culture as its values are underpinned by environmentally friendly and sustainable practices and as a result, they are known to be one of the least wasteful countries (Pandey, 2017). Sustainable fashion is not a new concept to Indian consumers as they wear pre-used clothing and clothing is reused when passed from elder siblings or family members (Nath, 2020). If the clothing item is no longer suitable to wear it is then upcycled into a cleaning cloth (Nath, 2020). Indian consumers are therefore conscious about their environmental footprint and make sustainable fashion choices (Pandey, 2017). Several Indian fashion designers offer sustainable fashion namely, Aeon Row only uses recycled yarn in their garments and Doodlage uses fabric scraps, textile waste with organic cotton in their offerings (Khandual & Pradhan, 2019). In 2019, fashion collections offered by Indian designers were highlighted as the top trends to watch (Amed, Balchandani, Beltrami, Berg, Hedrich, & Rölkens, 2018).

The retail industry in South Africa is one of the country’s top ten sources of employment (Flanders, 2016). This sector relies heavily on imports from China, Bangladesh, Pakistan and Cambodia thus placing an immense amount of pressure on local fashion retailers (Palmi, 2006; Flanders, 2016). Prior to 2005, South African had local textile mills generating raw material used to produce clothing garments (Bylund & Eriksson, 2015). In January 2005, there was a significant change in the global textile industry where the World Trade Organisation allowed retailers to buy from anywhere in the world (Bylund & Eriksson, 2015). This legislation posed a significant threat to the South African textile industry as many clothing factories either reduced their workforce, outsourced part of their production or
closed business operations (Palmi, 2006; Flanders, 2016). This was due to the local retail industry’s inability to maintain the competitive prices that were offered by their international counterparts (Palmi, 2006; Flanders, 2016).

In 2015, the Department of Trade and Investment partnered with key South African fashion retailers; The Foschini Group and Cape Union Mart to restore the local fashion retail industry by investing in their local suppliers with the intention to boost local supply and production (Booysen, 2015). The sustainability of South Africa’s fashion retail industry is dependent on local demand and supply and thus poses an opportunity for local fashion designers to create a market for this demand (Palmi, 2006). In contrast to Brazil and India, the practice of sustainability within the South African fashion industry is small scaled (Longden, 2020). There are a few local brands that offer sustainable fashion such as Woolworths using 100% recycled plastic in their recent winter jacket collection and The Fix uses 100% recycled water in their denim jeans (Caboz, 2020; TFG Sustainability Report, 2020). Additionally, several local designers have also embarked on the sustainable fashion journey such as The Joinery who makes products from recycled plastic bottles, Sindiso Khumalo who uses sustainable textiles to make garments and Rewoven who repurposes textile waste by generating new fibre from it to make new fabric (Kabwe 2019; Beaton, 2020).

Based on the above body of work, sustainability and fashion retail in India and Brazil is more advanced in comparison to South Africa. However, there is a growing interest in sustainable fashion offerings and thus poses a positive outlook for the future of fashion within the sustainability landscape across emerging markets. Consequently, this indicates that it is fundamental that fashion retail companies understand their respective conscious consumer market to ensure that their retail fashion offerings are aligned with consumer preferences.

2.3 Pillars of sustainability and conscious consumption

Sustainable consumption is defined as the utilisation of resources that integrates the three pillars of sustainability; social (people), environment (planet) and economic (profit) in order to meet the needs of both current and future generations (Balderjahn, Peyera, Seegebarthb, Wiedmann, & Weberd, 2018). The application of sustainable consumption is practiced by conscious consumers who supports fashion brands that implement sustainability into their supply chain by adopting environmental practices and work with ethical suppliers (Khandual & Pradhan, 2019; Lee, Choia, Hanb, Kima, Koc & Kimd, 2019).
The purpose of this current study is to focus on understanding the conscious consumer and their sustainable purchase intentions. The following sections will discuss the types of conscious consumption in relation to the three pillars of sustainability (people, planet and profit).

**Pillar one: Social Sustainability (People)**

The term conscious consumption can be explained by viewing the two terms separately. The concept of consciousness refers to the ability to recognise and become aware of one’s behaviour and able to act accordingly (Buğday & Babaoğul, 2016). When consciousness is applied to consumption, it becomes a controlled behaviour within the marketplace and thus the conscious consumer can make rational purchasing decisions (Buğday & Babaoğul, 2016; Cizmeci, 2020). The practice of conscious consumption within the sphere of sustainability involves decision-making processes that are well informed as the products entire production process is taking into consideration from the extraction of raw material, the way in which the product was made to its effect on the environment once it is disposed (Cizmeci, 2020). Conscious consumers therefore practice a purchasing decision process that includes three main types of behaviour (Balderjahna, Peyera, Seegebarthb, Wiedmannec & Weberd, 2018; Szmigin, Carrigan & McEachern, 2009; Zakbar & Hosta, 2013; Webster & Frederick, 1975). These three main behaviours classify conscious consumers as:


Below is a summary of the three main types of conscious consumers.
Figure 2: Types of conscious consumers

These types of consumers will further be explained in the following paragraphs.

Ethically Conscious Consumer

The term ethical consumption was introduced by Mintel (1994) who defined ethical consumption as keeping military expenditure and animal protection issues in mind when shopping. Ethical consumption forms part of broader consumption and occurs when there is a series of cognitive transactions that takes place when an individual consumes a product (Peattie, 1999; Szmigin, Carrigan & McEachern, 2009). These transactions include whether the individual should engage with the product or seek alternatives (Peattie, 1999). Furthermore, Szmigin et al. (2009) argues that ethical consumption promotes positive decision making such as choosing Fairtrade products, environmentally friendly products and avoidance or boycott of certain products. A later body of work by Uusitalo & Oksanen (2004) expanded on the understanding of ethical consumption to include the categories of child labour practices, conducting animal tests, and viewing labour union protection aspects as part of the creation and distribution of products. Research by Crane and Matten (2004) provided a generic definition by stating that ethical consumption is practiced when conscious and deliberate decisions are made to consumption choices based one one’s personal moral beliefs.
and values. Thus, these definitions indicate that ethical consumption is viewed from conception to consumption.

*Ethical conscious consumption in emerging markets*

The majority of ethical consumption studies are found using a Global North context and limited studies are based on context within the Global South (McMahon, 2016). There has been a steady increase in consumers who value and support fashion brands who implement sustainability into their supply chain (Khandual & Pradhan, 2019). South African fashion retail brands such as Woolworths and Mr Price have partnered with the Ethical Trade Initiative and the Better Cotton Initiative in order to promote responsible supply chains within their respective business (Woolworths Sustainability Report, 2019; Mr Price Group Sustainability Report, 2019). Research conducted by the Belgian Development Agency (2013) found that South African consumers view the Proudly South African initiative as the most significant ethical movement that positively contributes to sustainability. The Proudly South African movement is a labelling initiative that promotes the economy and employment growth by encouraging consumers to purchase local products (Hughes, McEwan & Bek, 2015).

Furthermore, a study by Ariztía, Kleine, das Graças, Brightwell, Agloni, Afonso & Bartholo (2014), found that ethical consumers in Chile and Brazil have different paths of ethical consumption found within their respective demographic locations. Ethical consumption in Chile is driven by NGO’s, private sector and government with a strong focus on its relation to corporate social responsibility (PricewaterhouseCoopers, 2008). When viewing ethical consumption in Brazil, this type of consumption has become significantly important within the NGO, corporate and public sector. Brazil has played a more active role in driving ethical consumption by making it part of its public policy (Ariztía et al., 2014). This indicates that the implementation of ethical consumption is an important practice in Brazil. This signifies as an encouragement for the South African government to learn and adapt some of Brazil’s important ethical practices in order to drive ethical consumption amongst its residents. Thus, highlighting the importance of gaining a better understanding of conscious consumption within the South African marketplace.
Social Conscious Consumer

Several definitions of the social conscious consumer (SCC) have been proposed. This term was introduced by Anderson and Cunningham (1972) defining SCC as consumers that make purchases which benefits society. This explanation was derived from the social conscious construct which measured consumers’ concerns towards social and environmental issues (Berkowitz & Daniels, 1964). A study by Brooker (1976), adds to this definition by suggesting that the actions of social conscious consumers lead to improving the quality of life in society. This consumer group believes that their actions can have a positive impact on solving problematic environmental and social issues and thus engage in behaviours that consider the greater good of society and the environment at their core (Ladhari & Tchetgna, 2017). Research conducted by Nielsen (2012) found SCC to be consumers who are willing to pay extra for a product that is ethically produced. A more recent body of work described SCC to display behaviours where consumers act upon their concern for the environment (purchasing products made from recycled content), health (buying organic food) and social issues (supporting companies that gives back to communities) (Ladhari & Tchetgna, 2017).

Social conscious consumption in emerging markets

Studies relating to social conscious consumption have predominantly taken place within the North American and European regions. Overall, these studies account for 90% of the literature on this topic (Cotte, Richard & Trudel, 2007). In 2012, a study focused on socially conscious consumers was conducted at a global level to include all continents except for Australia (Nielsen Report, 2012). This study defined social conscious consumers as having a definitive shopping behaviour which showed a willingness to pay extra for products and services from companies who gave back to communities (Nielsen Report, 2012). Findings indicated that consumers within emerging countries within Latin America, Asia and Africa were willing to pay more for a product that was produced ethically. The largest social conscious group was found in Phillipines where 68% of the respondents said they were willing to pay extra for a product by a company who gives back to the community. One of the interesting findings were that social conscious consumers rated environmental sustainability as the top cause by consumers within Latin America and Asia as opposed to Africa where the social issue of eradicating hunger was rated the top cause (Nielsen Report, 2012).
Pillar two: Environmental Sustainability (Planet)

Over the past decade there has been a significant focus on consumer consumption and its relation to the environment (Chen & Chai, 2010). Environmental issues such as pollution, global warming and the depletion of natural resources has had detrimental effects on the ecosystem therefore motivating consumers to adopt pro-environmental behaviour (Griskevicius, Tybur & Van den Bergh, 2010). As a result, environmentally friendly products are produced allowing consumers to make responsible purchasing choices when shopping (Veleva & Ellenbecker, 2001). This type of responsible consumption is referred to as green consumption and is practiced when consumers take the environmental impact of their purchases into consideration (Moisander, 2007). Furthermore, green consumption is predetermined by green purchase behaviour which is considered as a type of socially responsible behaviour (Moisander, 2007). When making purchasing decisions environmentally conscious consumers hope to bring about social change as they intend to contribute to making the world a more sustainable place to live in (Shamdasani, Chon-Lin & Richmond, 1993).

The term environmentally conscious consumer behaviour (ECCB) encompasses the attitudes and beliefs of green consumers’ towards environmentally friendly products (Leonidou, Leonidou & Kvasova, 2011). This consumer type adopts recycling habits, buys products that use less packaging and make environmentally conscious choices (Roberts & Bacon, 1997). The benefits derived from practicing this behaviour are often seen in the future as opposed to the present and may have a significant impact on the environment as it promotes a healthy and conscious way of living (McCarty & Shrum, 2001).

Interestingly, a study conducted by Kirmani & Khan (2016), found that religiosity also positively influences green behaviour as it impacts the collectivism values of consumers (Kirmani & Khan, 2016). This finding can be associated with prosocial behaviour shown by environmentally conscious consumers.

A recent article published by Bakhtiari (2020), supports the above finding as he mentions a strong movement from individualistic to collective behaviour. The main reason behind this movement is due to the current COVID-19 health pandemic where individuals are becoming more community focused (Bakhtiari, 2020; Charm, 2020). In addition, for the first time in history, climate change was highlighted as the top global risk at the 2020 World Economic Forum (Aljazeera.com). Given that both the COVID-19 pandemic and climate change are key...
global risks suggests that it is important to further understand the environmentally conscious consumer.

Environmentally conscious consumer in emerging markets

A few studies within emerging marketing have found a gap between concern and behaviour (Manaktola & Jauhari, 2007; Anderson, Romani, Phillips, Wentzel, & Tlabela, 2007; Kennedy, Beckley, McFarlane & Nadeau, 2009; Albyarak, Caber, Herstein & Moutinho, 2011). A study conducted in Turkey found that consumers are sceptical of the companies claims of being green therefore there is a disparity between environmental concern and pro-environmental behaviour (Albyarak, Caber, Herstein & Moutinho, 2011). Studies in India found that consumers were environmentally aware but not willing to pay a premium price for green products (Manaktola & Jauhari, 2007). A recent body of work found that four out of five Indians were aware of the impact of their actions on climate change and expressed an interest to change behaviour however very few displayed actual behaviours (Ghosh, 2020). In South Africa, a few studies have been conducted on studying environmental perceptions, awareness, and behaviour (Anderson, Romani, Phillips, Wentzel, & Tlabela, 2007; Kennedy, Beckley, McFarlane & Nadeau, 2009; McMahon, 2016). These studies found that South Africans value the environment however there are more important social issues that take precedence over their concern for the environment such as financial security and safety (Kennedy, Beckley & McFarlane & Nadeau, 2009).

Pillar three: Economic Sustainability (Profit)

The economic aspect of sustainability is also referred to as the profit dimension (Balderjahnna, Peyera, Seegebarthb, Wiedmann & Weberd, 2018). In recent years, companies have been viewed as a major contributor to social, environmental, and economic problems as their business approach is focused on short term financial success as opposed to long term financial success (Porter & Kramer, 2011). This limited way of thinking excludes aspects that may influence their customers’ needs in the long run (Porter & Kramer, 2011). These aspects include and not limited to customer wellbeing, limited natural resources and economic conditions that negatively affect their supply chain and ultimately customer spend (Porter & Kramer, 2011). Consequently, giving rise to the notion of shared value (Porter & Kramer, 2011).
The principle of ‘Shared Value’ has been introduced by Porter and Kramer (2011), whereby economic value is created by addressing society needs and challenges. Thus, the new purpose for a company should be about creating meaningful impact and not limited to profit generation. Porter and Kramer (2011) argues that creating shared value leads to innovation and boosts productivity within the global economy. Prior to the work of Porter and Kramer, the concept of shared value was introduced in the 1980s within the definition of corporate culture (Schein, 1985; Chatman & Cha, 2003). Historically, shared value was defined as a clearly articulated organisational values that make a significant difference in the lives of employees, as well as in their organisation’s performance (Schein, 1985). Past studies have discussed the integration of society into economic value creation activities that can be found in practices of corporate social responsibility (CSR) (Garriga & Melé 2004; Lamberti & Lettieri 2009). However, these studies lacked the practical application of the concept as it was limited to measuring aspects that enhance the company’s brand reputation (Schmitt & Renken, 2012).

Shared value in emerging markets

There is a growing body of literature that recognises the importance of the creation of shared value in emerging markets; Brazil (Porter & Kramer, 2011; Spitzeck & Chapman, 2012; Schneider, 2016), China (Porter & Kramer, 2011; Marquis, Yang, & School, 2014) and South Africa (Porter & Kramer, 2011; Camilleri, 2016). The ability to create value applies equally to both developed and developing countries however the opportunities and outcomes may differ (Porter & Kramer, 2011). This is due to greater opportunities will arise from impoverished communities within developing countries as their societal needs are more crucial as opposed to communities within developed countries (Porter & Kramer, 2011).

Over the past decade, Chinese companies have placed a focus on developing shared value strategies within their respective businesses. One of the main driving forces behind this focus are the Chinese youth as they are environmentally and socially conscious and thus place pressure on Chinese brands to operate responsibly (Marquis, Yang, & School, 2014). An example of a successful shared value practice in China, was implemented by Cisco where they rebuilt a disaster hit area within the Sihuan region so that this area can become connected and therefore creating a new consumer target market for Cisco’s products (Marquis, Yang, & School, 2014). Similarly, Coca Cola is a leading brand in Brazil and needed to find a way to strengthen their brand presence within low-income communities.
Coca Cola then applied a shared value strategy by implementing an eight-week training programme to empower unemployed youth living within the Brazilian low-income communities in order to help them find new economic opportunities (Schneider, 2016). Another example of implementing a shared value approach within an emerging market is practiced by The Foschini Group (TFG). This fashion retail company needed to increase their competitiveness within the South African fashion retail market by focusing their efforts on producing clothing locally so that their consumer base has quick access to the latest fashion attire (TFG Sustainability Report, 2020). The company’s shared value strategy took form of investing in the Caledon area within the Western Cape by building a clothing factory which currently employs over 1 300 previously unemployed residents. Furthermore, they invested in the local Caledon schools to ensure that their basic needs of access to food, water and clothing are met (TFG Sustainability Report, 2020).

In conclusion, this section discussed the pillars of sustainability and conscious consumption separately and therefore presents a research opportunity to study an integrated view of conscious consumption using the triple bottom line framework (de Carvalho et al., 2015). This research opportunity will take form of introducing the consumers’ sustainability consciousness construct in the next section and is key to unlocking the purpose of this study.

2.4 Conscious Consumption Evolution

Consumers’ sustainability consciousness

In 2015, de Carvalho, Salgueiro & Rita successfully developed the consumers’ sustainability consciousness construct to gain a better understanding of what drives the conscious consumption of sustainable products and services by integrating the three pillars of sustainability (people, planet and profit). The previous section highlighted how that the concept of conscious consumption has often been studied independently as three distinct categories: ethical, social and environmental conscious consumption. Therefore, the development of the consumers’ sustainability consciousness construct fills a gap in the current literature on conscious consumption. These dimensions will be defined in the following section. The table below summarises the types of conscious consumption behaviour that have discussed in this body of work.
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<th>Authors</th>
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</thead>
<tbody>
<tr>
<td><strong>1. People</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Conscious consumption</td>
<td>Consumer behaviour applied when making conscious decisions about the consumption of sustainable products</td>
<td>Balderjaina, Peyera, Seegebarth, Wiedmann &amp; Weberg (2018)</td>
</tr>
<tr>
<td>1.1.2 Ethical conscious consumption</td>
<td>Ethical consumption is practiced when conscious and deliberate decisions are made to consumption choices due to personal moral beliefs and values.</td>
<td>Crane and Matten (2004)</td>
</tr>
<tr>
<td>1.1.3 Social conscious consumption</td>
<td>Consumers act upon their concern for the environment (purchasing products made from recycled content), health (buying organic food) and social issues (supporting companies that gives back to communities)</td>
<td>Ladhari &amp; Tchetgna (2017)</td>
</tr>
<tr>
<td><strong>2. Planet</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental conscious consumption</td>
<td>This consumer type adopts recycling habits, buys products that uses less packaging and make environmentally conscious choices</td>
<td>Roberts &amp; Bacon (1997)</td>
</tr>
<tr>
<td><strong>3. Profit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared Value</td>
<td>The creation of economic value is generated by addressing society needs and challenges. Shared value is a business practice and not a type</td>
<td>Porter and Kramer (2011)</td>
</tr>
</tbody>
</table>
Table 1: Pillars of Sustainability and Conscious Consumption

The study by (de Carvalho et al., 2015) highlights that there are five main dimensions of that influences the consumers’ sustainability consciousness: sense of retribution, access to information, labelling and peer pressure, health and crisis scenario.

1. Sense of retribution

This term collectively describes when the consumer displays a combination of ethical, social and environmental conscious behaviour as they act responsibly when make purchases (de Carvalho et al., 2015). Sense of retribution is similar to the body of work previously studied on conscious consumption as it highlights how the consumer displays ethical, social and environmental conscious behaviour. When purchasing products, consumers consider their environmental impact thus are willing to pay more or seek alternatives (Griskevicius, Tybur & Van den Bergh, 2010). At the time of purchase, the consumer faces an ethical dilemma which determines whether they will purchase or not. Thus, ethical conscious consumption plays an important role at this point as the consumer would then favour products that do not harm humans, animals or the environment (Huh, 2011). The role of community organisations and governments also play an essential role in promoting conscious consumption by driving the education of sustainable/ethical practices (Ariztía, Kleine, Brightwell, Agloni, Afonso & Bartholo, 2014).
In addition, de Carvalho et al., (2015) found that there are three types of responses that drive consumers to act responsibly: denial, consumer participation by taking responsibility of their actions and having a feeling of ‘connectedness’. A strong connection can be drawn with these responses and the current consumer COVID-19 behaviour. In the current pandemic, consumers are acting more socially responsible by wearing masks, washing hands more regularly and applying social distance (Bakhtiari, 2020). Furthermore, consumers are feeling more connected to one another as everyone is experiencing the same pandemic on a global level (Charm, 2020).

2. Access to information

Social media has made the search for information on products and services easier (Voramonti & Klieb, 2019). Social media networking sites like Facebook, Twitter and Instagram plays a substantial role in influencing consumer behaviour (Gillin, 2007). The power of social media has enabled consumers to connect and discuss brands with one another instantaneously (Powers, Advincula, Austin, Graiko & Snyder, 2012). These discussions have therefore changed the way consumers search for product information as they trust the opinions of their peers over brand content (Smith, 2009; Mangold & Faulds, 2009). Consequently, social media directly affects consumer buying behaviour (Lueg, Ponder, Beatty & Capella, 2006; Sheikh, Islam, Rana, Hameed & Saeed, 2017). Therefore, the surge of technological innovations and advancement of communication technologies have substantially contributed to the development of consumers’ sustainable consciousness (de Carvalho et al. 2015).

Sustainable product certifications are also another medium for consumers to acquire information that influence their purchasing behaviour (de Carvalho et al. 2015). Ethically conscious consumers prefer to consume goods that are made using responsible practices such as environmentally friendly products and locally produced products (Ladhari & Tchetgna, 2017). Certifications have therefore made it easier for consumers to find out about the sustainable practices of the product that they are interested in purchasing by providing symbols that indicates that the product was made responsibly (de Carvalho et al. 2015).

3. Labelling and peer pressure

Conscious consumers seek product information from their peers as the first point of call and thereafter gathers more information about the product when reading the product’s label.
Product labelling increases consumer trust as transparency of information is important to conscious consumers (de Carvalho et al. 2015).

According to the global eco-labelling network, eco-labels are defined as a symbol which identifies products/services which have been produced in an environmentally friendly manner based on its life cycle process (Global Eco-labelling Network, 2011). Eco-labels are used to attract the consumers’ attention and inform them of its environmentally friendly attributes (Rashid, 2009). In order for these labels to be effective, they have to be credible, meaningful and well recognised by the consumer (D’Souza, Lamb & Taghian, 2006). The recognition of these labels often takes form of an environmental symbol or environmental body such as Forest Stewardship Council (FSC) and Fairtrade (Roe, Teisl, Rong & Levy, 2001).

In 2019, the World Wide Fund for Nature (WWF) and a few South African retailers such as The Foschini Group, Woolworths and Pick n Pay united to develop on pack recycling labels, which indicates whether the packaging can or cannot be recycled. The purpose of this collaboration was to increase the recycling rates within South African by clearly indicating its recycling properties across all products sold by the retailers (WWF, 2019). Examples of these labels either contain an environmentally friendly logo such as a recycling logo or a sustainable certification such as Fairtrade (Morris, Hastak & Mazis, 1995).

4. Health

Consumers concerned with environmental sustainability and making improvements to their quality of life are experiencing social and environmental changes within their lifestyles (de Carvalho et al., 2015). Consumers are becoming more conscious of their wellbeing thus playing a more active role in maintaining a healthy lifestyle. Being health-conscious plays a motivational role as it encourages consumers to enhance or sustain their physical wellbeing allowing them to prevent health related issues (Jayanti & Burns, 1998; Michaelidou & Hassan, 2008). They therefore carefully choose well balanced meals in order to maintain a healthy lifestyle ultimately preventing them from health-related issues (de Carvalho et al., 2015).

The food and nutrition industry are constantly evolving to meet consumer needs and demands. The three main key developments within the food and nutrition industry are consumer segmentation, mindful consumption, and plant-based eating (Bagul, Koerten & Rees, 2020). Consumer segmentation has always been an important part of any industry,
however within the food and nutrition industry, consumers' lifestyles are continuously evolving. These changes include eating with a sensory experience, convenience eating and food innovations that support their respective life stage (Bagul et al., 2020). Mindful consumption is associated with conscious consumption as consumers are becoming more aware of what they eat (Lim, 2017; Sheth, Sethia, & Srinivas, 2011). As a result, mindful consumers tend to choose more natural food and less processed food. In addition, these consumers have placed high importance on food labels ensuring that product ingredients are free from unhealthy substances (Bagul et al., 2020). Lastly, plant-based eating is derived from being environmentally conscious due to the increase in global meat consumption and its impact on the environment (Bagul et al., 2020).

5. Crisis scenario

Socio-economic crisis directly impacts purchasing decisions (de Carvalho et al., 2015). A current and relevant example would be the COVID-19 global health pandemic. This global pandemic is not a normal crisis as many countries underwent and still undergoing full and partial lockdown (Mehta, Saxena & Purohit, 2020). Public health measures and lockdown have a direct impact on the way the economy operates resulting in economic instabilities (Charm, Grimmelt, Ortega, Robinson, Sexauer, Staack, Whitehead & Yamakawa, 2020). Furthermore, the effects of the economic instabilities have directly affected consumer buying behaviour (Mehta, Saxena & Purohit, 2020). Consequently, many consumers swopped from their preferred brand to a different brand during the crisis (Charm, 2020). The pandemic has accelerated the three main consumer trends; increased focus on health, rise in conscious consumption and growth in love for local products (Charm, et al., 2020). Coincidentally, these trends perfectly fit with the above-mentioned dimensions of consumers’ sustainability consciousness.

The concept of buying local was also found to have a direct influence on purchasing products (de Carvalho et al., 2015). In addition, this study found that consumers considered buying local as one of the main conditions for a product to be sustainable due to it positively contributing to solving economic crises. These results are similar to those reported by Belgian Development Agency (2013) and Hughes, et al. (2015), where South African consumers support the proudly South African initiative as they believe that buying local is strongly associated with sustainability in the country.
2.5 Sustainable Purchase Intention

Several studies have examined the relationship between the awareness and purchasing of socially responsible products (Tanner & Kast, 2003; Kozar & Hiller Connell, 2013). A study by Niinimäki (2010), found that a consumer is more likely to purchase socially responsible products if it matched their personal values. Hence, if the product was made in an ethical environment such as using fair labour practices and the consumer becomes aware of this fact, this impacts their attitude towards the company selling the product and as a result leads to an increase intention to buy the product (Dickson, 1999). A later study by Leary, Vann, Mittelstaedt, Murphy & Sherry (2014) supported this finding as they found that sustainable apparel purchases were made by consumers with a strong set of values and ethics. Furthermore, there is a gap between consumers’ attitude and behaviour within the fashion retail market hence highlighting the importance of understanding and applying the sustainable purchase intention construct (Lee, Choia, Hanb, Kima, Koc & Kimd, 2019).

In 2015, a study by de Carvalho et al., took a progressive approach by conducting a study to further understand which dimensions of consumer consumption impacts their sustainable purchase intentions. Furthermore, viewing these sustainable purchase intentions within in the context of the triple bottom line (de Carvalho et al., 2015). This study took form of developing a new construct referred to as ‘consumers’ perception on sustainable purchase intention’ and it was developed by measuring two dimensions, trust and accessibility.

1. Trust

The first dimension of sustainable purchase intention relates to the consumers’ belief to know and gain product assurance by developing trust towards the product. This is developed by a consumers’ level of understanding of product labels and their past experiences with the product (de Carvalho et al., 2015). Consumers may not always have access to reliable product information thus a degree of uncertainty arises when a lack of trust towards the product exists (Testa, Iraldo, Vaccari, & Ferrari, 2015; Thøgersen, Haugaard, & Olesen, 2010). Therefore, the role of third-party sustainability labels serves as a guidance to consumers in providing transparent and reliable information encouraging the consumer to make sustainable purchasing decisions (D’Souza, Lamb & Taghian, 2006). An example of third-party sustainability labels such as the Better Cotton Initiative becomes increasingly important to reduce the level of uncertainty amongst consumers (Thøgersen et al., 2010).
Another form of product belief occurs when consumers tend to place confidence in retailers that have a good reputation for practicing ethical standards in their supply chain (Castaldo, Perrini, Misani & Tencati, 2009). Research findings de Carvalho et al. (2015) showed that as the offering of sustainable product increases within the marketplace, the more the regular consumer will have a need to increase their trust towards these offerings.

2. Accessibility

The second dimension of sustainable purchase intention relates to accessibility. The concept of accessibility refers to in-store product availability, the prevalence of lower priced goods as well as proximity of these products to one’s home (de Carvalho et al., 2015). Similarly, a study conducted by Vermeir & Verbeke (2004), found that price and product availability were also barriers for sustainable consumption. Price was found to be the most important barrier to the consumers’ perception of sustainable products as these products appear to be more expensive and thus affected the consumers’ intention to purchase (De Pelsmacker, Driesen & Rayp, 2003). Consumers perceive that the price of sustainable products cannot be compared to conventional products (Rausch & Kopplin, 2020). This popular perception is a fact within the clothing retail industry as sustainable fashion is more expensive than conventional clothing (Connell, 2010; Rausch & Kopplin, 2020).

The availability of sustainable products also acts as a barrier to sustainable consumption due to the lack of consumer demand for these products, their limited product availability and presence in shops (Dickson, 2001; Vannoppen, Verbeke & Van Huylensbroeck, 2002). Furthermore, the sale of ethical products is not adequately promoted thus the consumer is not always aware of the product’s availability in-store (De Pelsmacker, Driesen & Rayp, 2003). Consequently, if the consumer trusts the product however is not available at their local shop or it is too expensive, no purchase intention will exist. The same accessibility principles for conventional products apply to sustainable product offerings and the intention to purchase them (de Carvalho et al., 2015). Interestingly, there has been an increase in specialised stores that offer sustainable products and an interest in non-retail stores such as Yoga studios to sell sustainable offerings to the conscious consumer (de Carvalho et al., 2015).

The concept of sustainability and adopting sustainable business practices have become an important global issue (Jaiswal & Kant 2018; Saeed, Farooq & Kersten 2019). However, the adoption of sustainable practices and product offerings are more common in European countries (KPMG, 2015) than in developing countries (Altarawneh 2013; Butt 2017;
Mohiuddin, Al Mamun, Syed, Masud & Su, 2018). Furthermore, literature regarding sustainable purchase behaviour in developing countries are scarce (Jaiswal & Kant 2018; Joshi & Rahman 2015). Thus, this presents an opportunity to explore sustainable purchase intention and the dimension of trust and access within a developing country.

2.6 Examining Generation Z

Definition

The Generation Z cohort is born after Millennials and often referred to as Gen Z, Post-Millennials, Gen Wii, NextGen or True Gen (Raphelson, 2014; Turner, 2015; Francis & Hoefel, 2018). Going forward the literature will use the term Gen Z. Some demographers suggest that they were born from early 1990s to until 2000 (Addor, 2011; Iorgulescu, 2016; Seemiller & Grace, 2017) whereas some studies suggest that they are born from 1997 until around 2010 (Ernest & Young, 2015; Cheung, 2017). However, for the purposes of this study, the latter definition will be used.

Characteristics

Nearly a third of Gen Z were born surrounded by technology thus being digitally connected is a standard practice for this segment (Kebritchi & Sharifi, 2016; Paakkari, 2016; Turner, 2015). As a result, Gen Z is known to be technologically savvy and innovative (Paakkari, 2016). According to a study conducted by Kirk, Hennigan & Steinauer (2020), Gen Z spends approximately fifty hours per week on social media as it makes them feel motivated and empowered as they able to make real connections. Conversely, findings from Kaspersky Lab 2018 report, revealed that this cohort is known to be the most anxious generation as they have a constant desire to be perfect when posting on their social media channels (Parker, 2018). An interesting study found that seven out of ten Gen Z adults, those aged 18 to 24, reduced their online presence during the COVID-19 pandemic due to concerns over their mental wellbeing (Stieg, 2020; Daniel, 2020).

Furthermore, Gen Z embodies the following behavioural traits: individualism, avoidance of labels, willingness to get involved in community driven and cause related projects with the intention to improve the world (Francis & Hoefel, 2018). They also have a higher emotional connection to social issues specifically around the environmental and social justice as they believe they able bring about changes that will create a better future (Admirand, 2018).
It is important to note there are three age categories within Gen Z: tween (10-12 years), teens (13-17 years) and adults (18-24 years). Thus, it is essential for companies to keep this in mind when marketing to Gen Z (Schiffman & Wisenblit, 2015). The younger age group tend to be more loyal to brands and the older group tends to be a bit more sceptical (Schiffman & Wisenblit 2015).

**Consumer behaviour**

Gen Z is the largest and fastest growing consumer group, constituting 40% of Europe, US and BRIC countries and therefore it is important to study their consumer behaviour (Fitch, 2016; Weinswig, 2016). Their behaviour is different to the previous generations as they have experienced several significant political, social and economic encounters including times of recession, highest levels of unemployment and war in their brief lifetime (Ernst and Young, 2015). In addition, this consumer segment is also currently experiencing the COVID-19 global pandemic. This cohort portrays an activist nature as they aim to solve world problems and also put immense pressure on their household, social media networks and brands to drive actual change (Nielsen, 2019). Gen Z consumers make purchasing decisions based on their values grounded by their personal, social and environmental principles.

The Gen Z group were introduced to a healthy lifestyle from an early age and therefore they are more knowledgeable on sustainable living than previous generations. Living a sustainable lifestyle is important to this group as they can make socially and environmentally responsible decisions (Su, Tsai, Chen & Qing, 2019). Their concern for the environment makes them more inclined to buy upcycled products and give sustainable gifts. A large majority of Gen Z prefer to buy from sustainable brands and expect retailers and brands to become sustainable (Pillay, 2020).

This cohort uses social media to consult with their friends and families before making purchase decisions (Francis & Hoefel, 2018). Furthermore, they value interaction and engagement and place significance on building relationships with others including brands (Pillay, 2020). Their consumption choices are based on ethics and they consequently expect brands to have a purpose by supporting causes relevant to the brand (Francis & Hoefel, 2018). They have a strong value base and an appreciation for authenticity which allows them to be open minded (Francis & Hoefel, 2018; Pillay, 2020).

**Gen Z and sustainable fashion**
A research study conducted by Ernest & Young (2015) indicates that 62% of Gen Z consumers prefer to buy from sustainable brands. Furthermore, sustainable fashion is practiced by the Gen Z consumer segment as they buy upcycled products such as products made from previously discarded material, purchase second-hand clothing, and participate in clothing swapping (Carufel, 2020). Research performed by Global Web Index (2020) found that 69% of Gen Z respondents said they either rented or wanted to rent products instead of purchasing them and 78% of Gen Z consumers purchased or wanted to purchase pre-owned, repaired or renewed products.

Young consumers in Brazil, China and India were found to express a higher interest in purchasing sustainable clothing and actively look for information on the sustainable product attributes before they purchase (Gassler, Meyer-Höfer, Spiller & Achim, 2016). Gen Z consumers in the Brazilian fashion retail market play a strong role in driving sustainable practices (Common objective, 2018). Similarly, in China, young consumers under the age of twenty is driving the sustainable consumption agenda (Aroche, 2016). This generation of young advocates demand that fashion brands implement ethical sourcing standards within their business operations and provide proof for these practices (Aroche, 2016).

There have been several studies that focus on behavioural traits of the Gen Z within the South African market however limited research have been conducted on the sustainable fashion practices of the Gen Z consumer segment. This highlights the opportunity to fill the gap in the literature by providing insight on the sustainable consumption amongst the Gen Z market.

2.7 Chapter Summary

This chapter provided a review of previous research studies related to the research topic at hand and was divided into five main sections. The first section provided a definition of sustainability and established its importance within the fashion retail industry. Thereafter, the connection between the pillars of sustainability and conscious consumption was established. This then led to the introduction of the new constructs: consumers’ sustainability consciousness and sustainable purchase intention. Lastly, the literature discussed Gen Z and the influence that sustainability has on this cohorts’ consumer behaviour.
Chapter Three: Conceptual Model and Hypotheses Development

3.1 Introduction

A conceptual framework shows the relationship between concepts and their impact on the research topic being investigated (Ngulube & Mathipa, 2015). The framework is derived from constructs in order to provide a better understanding of the research topic at hand (Ngulube & Mathipa, 2015). The conceptual framework is best depicted with the use of a diagram as it visually shows the relationship between constructs (Miles & Huberman, 1994). This depiction is commonly referred to as concept maps or concept modelling (Ngulube & Mathipa, 2015). This study will use the depiction in form of a conceptual model which will illustrate the relationship between the constructs and the proposed research topic.

3.2 Conceptual Model

The conceptual model has been derived from the CSC construct developed by de Carvalho et al., (2015). This model has been chosen as it examines five dimensions that triggers sustainable consumption which has a direct and indirect impact on sustainable purchasing intentions. In addition, past studies have investigated these factors in isolation thus this model was chosen as it provides an integrated view of conscious sustainable consumption using the lens of the three aspects of sustainability (de Carvalho et al., 2015).

The model is depicted as follows:
3.3 Overview of Variables

The proposed model illustrates the following relationships presented by the following two constructs:

- **Construct 1:** The consumers’ sustainability consciousness is measured by using its dimensions; sense of retribution, access to information, labelling and peer pressure, health and crisis scenario.

- **Construct 2:** Sustainable purchase intention - measured by two dimensions; trust and accessibility.

The relationship between the constructs and dimensions can be divided into independent variables and dependent variables.

3.3a Independent Variables

The independent variables are identified as the dimensions that is assumed to have a direct effect on the dependent variable (McLeod, 2019). In this case the independent variables are the following: sense of retribution, access to information, labelling and peer pressure, health, crisis scenario, trust and accessibility.

3.3b Dependent Variables

Conversely, the dependent variable is the variable being tested and measured in the study and is 'dependent' on the independent variable (McLeod, 2019). In this case the dependent variables are the consumers’ sustainability consciousness and sustainable purchase intention.

3.4 Hypotheses Development

Based on the above conceptual model the following hypotheses are stated:

a. Consumers’ sustainability consciousness and intention to purchase sustainably, as far as the trust dimension is concerned
Producing product samples is the best way to introduce sustainable products to consumers who are looking to change their normal shopping behaviour to shop for sustainable product alternatives. This enables the consumer to interact with the product and thus labelling becomes essential in order for trust to be established (de Carvalho et al., 2015). Another form of establishing trust is when consumers seek feedback by going online and connecting with their peers. This form of trust is especially prevalent within the Gen Z consumer segment where seeking peer and family reviews is of utmost important (Accenture, 2017; Francis & Hoefel, 2018). Furthermore, there are many levels of forming trust ranging from understanding products labels, trusting retailers with a good reputation and third-party environmental product credentials (Gilg, Barr & Ford, 2005; Castaldo, Perrini, Misani & Tencati, 2009). As such, one can intuitively conclude the following hypothesis:

\[ H2: \text{Consumers' sustainability consciousness has a positive influence on intention to purchase sustainably, as far as the trust dimension is concerned} \]

b. Consumers’ sustainability consciousness and intention to purchase sustainably, as far as the accessibility dimension is concerned

Consumers carry perceptions that sustainable products are more expensive than regular products thus view sustainable products as inaccessible from a financial sense (De Pelsmacker, Driesen & Rayp, 2003). The demand for sustainable products is small relative to traditional product offerings and therefore has a direct impact on the production and distribution for them ultimately affecting their product availability. As a result, these products are not readily accessible (de Carvalho et al., 2015). Recently the advent of the conscious consumer has positively impacted the demand for sustainable products and thus there is been an uptake in specialised stores to cater for this offering (World Economic Forum, 2020; de Carvalho et al., 2015). Drawing from the above discussion and past evidence, it is posited that:

\[ H3: \text{Consumers' sustainability consciousness has a positive influence on intention to purchase sustainably, as far as the accessibility dimension is concerned} \]
<table>
<thead>
<tr>
<th>H/No.</th>
<th>Hypothesis Statement</th>
<th>Hypothesized Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2</td>
<td>Consumer sustainability consciousness has a positive influence on intention to purchase sustainably, as far as the trust dimension is concerned</td>
<td>CSC→TR (+)</td>
</tr>
<tr>
<td>H3</td>
<td>Consumer sustainability consciousness has a positive influence on intention to purchase sustainably, as far as the accessibility dimension is concerned</td>
<td>CSC→ACC (+)</td>
</tr>
</tbody>
</table>

Table 2: Summary of hypotheses

3.5 Chapter Summary

This chapter introduced the conceptual model for this research study highlighting both the independent and dependent variables. Additionally, it explained the development of the proposed hypotheses and its relevance to the current study.

Chapter Four: Research Methodology

4.1 Introduction

The upcoming chapter will provide an overview of the research methodology, research design, data collection and data analysis section. Essentially, providing an outline as to how the data will be collected and analysed.

4.2 Research Methodology

The purpose of research is to discover answers to questions through the application of scientific procedures (Kothari, 2004). In order to solve the proposed research question, research methodology is used as a systematic way to describe and explain how the research study will unfold (Goundar, 2012).

It is essential to select a suitable research methodology to ensure that valid and reliable results are achieved to directly address the research aims and objectives (Jansen & Warren, 2020). The research methodology will answer the following questions:
• What data to collect?
• Who to collect it from?
• What instruments will be utilised i.e. measurement items, source and measurement scale?
• How to collect it i.e. which data collection methods will be used?
• How to analyse it by selecting the appropriate data analysis methods?

**a. Research Paradigm**

A research paradigm is a basic belief system and theoretical framework that assists in the understanding of how problems should be understood and addressed (Rehman, 2016). There are three main approaches that are used when conducting educational research: Positivism, Interpretivism and Critical Theory (Patel, 2015; Rehman, 2016). These approaches are summarised in the following table (Patel, 2015; Rehman, 2016).

| **Positivism** | The Positivism paradigm is based on the belief that there is a single reality which can be measured and known. Hypotheses are put forward in a question form about the causal relation between phenomena. This paradigm is used when a quantitative study is conducted. |
| **Interpretivism** | The Interpretivism paradigm believes that truth and reality are created, not discovered. The reality is created by individuals within a group and therefore this paradigm is used when qualitative research studies are conducted. |
| **Critical Theory** | The Critical Theory paradigm believes that a reality exists however is influenced by cultural, political, ethnic, gender and religious factors which interact with each other to create a social system. This paradigm is used when open-ended surveys, open-ended observations and open-ended focus groups are conducted. |

**Table 3: Types of Research Paradigms**

The aim of the research study is to uncover what the main drivers of conscious consumption are towards sustainable purchase intentions amongst Gen Z within the South African retail market. This study sets out to examine the research question by testing the proposed hypotheses that were introduced in Chapter three and therefore based on the objective of this study, the Positivism paradigm will be utilised.
c. Research Approach

This body of work aims to test specific hypotheses that will examine the relationships between the independent and dependent variables to gain a better understanding of the research topic at hand. Therefore, a conclusive descriptive research design will be used as this type of design aims to test the hypotheses mentioned in Chapter three (Malhotra, 2010). The research findings will then provide meaningful insights that will help fashion retail brands make informed decisions when implementing sustainable offerings to the Gen Z South African consumer market.

There are three approaches to research: quantitative approach, qualitative approach, and a mixed approach where both quantitative and qualitative methods are used. A quantitative research approach is used when the study seeks to quantify the data and able to generalise the results from the proposed sample (Kothari, 2004; Malhotra, 2010). One of the main advantages of using quantitative data is that the results are easily able to be interpreted and analysed (Goundar, 2012). A qualitative approach is used when the research is focused on attitudes, opinions and behaviours. In this case, research is conducted based on the researcher’s insights and impressions (Kothari, 2004). Thus, the nature of the data is based on non-numerical, descriptive words and reasoning (Goundar, 2012). The recent advances in market research technology have made it possible to combine both the quantitative and qualitative approach for the same study (Osbaldeston, 2018). One of the main reasons that these approaches are combined is that they deliver significant benefits, enabling the researcher to compare and contrast results and gain much deeper insights (Osbaldeston, 2018).

This research study will use a quantitative approach as it seeks to understand conscious consumption from a Gen Z sample that will be representative of the population. In addition, this method provides a broader understanding of the proposed study (Goundar, 2012).

4.3 Research Design

The following section will include the sample design, questionnaire design and data collection techniques.
4.3.1 Sample design

A sample design is a fundamental part of statistics as it provides a framework as to how the research sample will be selected (Lavrakas, 2008). Samples are collected to gain a better understanding of the given population (Wills, Roecker & D’Avello, 2020). Thus, the sample design process is essential as it aids the researcher to gain a better understanding of the research topic at hand by examining the sample (Kothari, 2004). The sampling design section will consist of target population, sampling frame, sample size and sampling method.

- Target population, sample frame and sample size

The target population in a research study is the entire set of units for which the survey data will be making inference from. Therefore, the target population defines the units that the study is meant to generalise (Lavrakas, 2008).

According to United Nations (UN), the world population is made up of 3.6 billion people below the age of 30 years. In addition, 90.1% of the global population will be the under the age of 30 years which is forecast to live in emerging and developing economies (Sharma & Joshi, 2019). Thus, it is important for companies who targets this age category to understand this cohort in order to provide suitable offering catered to this groups’ needs (Islam, Sheikh, Khan & Azam, 2018; Naderi & Van Steenburg, 2018).

According to the 2019 mid-year population statistics published by Stats SA, the two largest age categories were children (aged 0-14) making up 28.8% and youth (aged 18–34) making up 35.5% of population. In total, young consumers making up 64.3% of the South African population. Thus, this consumer market is highly significant in terms of current and future consumer spend and important for brands to understand this market segment.

Based on the above information, the target population will focus on Gen Z consumers. The element and sampling unit will be Gen Z consumers aged between 18-24 years old. The extent would cover South Africa within the 2020-time period. Based on similar studies conducted by de Carvalho et. al (2015), Cheung (2017) and Sharma & Josh (2019) the minimum sample size will need to comprise of 160 respondents. In addition, a sample size calculator was used to statistically calculate the minimum responses for this study using the 5% margin of error with a 95% confidence level. The sample population size will comprise of UCT students aged between 18-24 years old and thus amounts to 16 699. Therefore, the recommended sample size is 376 respondents.
Sample method

There are two types of sampling techniques: non-probability and probability (Malhotra, 2010). The non-probability sampling technique is used when the researcher decides on which elements to include in the sample (Malhotra, 2010). This method is suitable to use when the population has similar traits, and the respondents are easy to access (Showkat, 2017). There are four main types of non-probability sampling techniques: convenience sampling, judgemental sampling, quota sampling and snowball sampling (Malhotra, 2010). Conversely, probability sampling is used when the sample is randomly selected and everyone in the population has an equal chance of being selected (Showkat, 2017). This technique is optimally applied when the population is diverse however finding respondents is not an easy process (Malhotra, 2010; Showkat, 2017).

The non-probability sampling technique was employed for this study as the researcher used their personal judgement to decide on which elements to include in the sample. The non-probability sampling technique took form of convenience sampling as the researcher chose the UCT student sample base as it was easily accessible, cost effective and least time-consuming. It was therefore essential to choose a survey method that complements the respective sampling technique to ensure that optimal responses are received.

The main aim of a survey method is to obtain the information received from the respective respondents (Malhotra, 2010). The survey method is optimally utilised when a structured data collection method is applied, and the formal survey is prepared in advanced (Malhotra, 2010). The survey method used to compile the data took form of a quantitative online survey which was administered by a free online survey software tool available to the researcher, named Qualtrics. The online survey method has several advantages including simple set-up, reliable data and the reduction in the variability of responses (Malhotra, 2010). This then allows the researcher to focus on the quality of responses and easily collect the data in preparation for the analysis phase.

4.4 Procedure for Data Collection

a. Measurement instrument

The online survey will take form of a questionnaire which will use the 19 items from the consumers’ sustainability consciousness construct and 11 items from the sustainable purchase
intention construct both developed by de Carvalho et. al (2015). The consumers’ sustainability consciousness construct is made up of the following items:

- Sense of Retribution (SR) – six scale items;
- Access to Information (AI) – four scale items;
- Labelling and Peer Pressure (LPP) – four scale items;
- Health (H) – three scale items; and
- Crisis Scenario (CS) – two scale items.

The sustainable purchase intention construct is made of the following dimensions:

- Trust (TR) – eight scale items; and
- Accessibility (ACC) – three scale items.

These measures will then answer the proposed research objectives. The questionnaire consisted of eight sections A, B, C, D, E, F, G and H and the respondent was be presented with five options for each question. A five-point Likert scale response was used with 1 = strongly disagree to 5 = strongly agree.
SECTION A: Respondent Profile

Section A requires that the respondents complete general and biographic questions. This allowed for the researcher to be able to draw a profile of the respondents and included the following questions:

1. Please indicate your age__________________

2. Current educational qualifications (please mark X on the corresponding line)
   - School-leaving Certificate
   - Matric Certificate
   - Diploma
   - Undergraduate Degree
   - Post-graduate Degree

3. Select which fashion brands you purchase from?
   - Cotton On
   - Donna
   - Exact
   - Fabiani
   - Foschini
   - Gstar
   - H&M
   - Markham
   - Mr Price
   - Sportscene
   - The Fix
   - Totalsports
   - Truworths
- Woolworths
- Zara

Below are statements which determine the respondents’ patterns of sustainable consumption. A definition for sustainable products was given to ensure that the respondent clearly understood what sustainable products entailed.

**SECTION B: SENSE OF RETRIBUTION**

Section B measured the respondents’ sense of responsibility and consumer sustainable consciousness by answering statements about consuming products that are good for the community and the environment. Examples of the questions include:

"**I started consuming more sustainably when ...**".

<table>
<thead>
<tr>
<th>I realised the superior quality of organic products</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I began to want to give my contribution to my local community or society</td>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I realised I could contribute to a better world by buying *Fairtrade products</td>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I started making an effort to buy products in recyclable packaging</td>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I started buying *Fairtrade products to help small communities to have better working conditions</td>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I stopped buying products tested on animals</td>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

**SECTION C: ACCESS TO INFORMATION**

Section C measured the respondents’ access to information and consumer sustainable consciousness. Examples of the questions include:

"**I started consuming more sustainably when ...**".

<table>
<thead>
<tr>
<th>I realised we were polluting or destroying nature</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>
I felt alert to the importance of social and environmental certifications | Strongly disagree | 1 2 3 4 5 | Strongly agree
---|---|---|---
I saw a documentary or shocking information that led me to be more careful about what I buy | Strongly disagree | 1 2 3 4 5 | Strongly agree
I saw information on the internet that led me to change my consumption patterns | Strongly disagree | 1 2 3 4 5 | Strongly agree

SECTION D: LABELLING AND PEER PRESSURE

Section D measured the respondents’ labelling and peer pressure and consumer sustainable consciousness. Examples of the questions include:

"I started consuming more sustainably when ...".

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>1 2 3 4 5</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>I began to be interested in information on product labels</td>
<td>Strongly disagree</td>
<td>1 2 3 4 5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I wanted to try products/practices that people close to me recommended</td>
<td>Strongly disagree</td>
<td>1 2 3 4 5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>The product labels called my attention to characteristics that fit with my values</td>
<td>Strongly disagree</td>
<td>1 2 3 4 5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I realised that I would buy sustainably even with a lower product quality</td>
<td>Strongly disagree</td>
<td>1 2 3 4 5</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

SECTION E: HEALTH

Section E measured the respondents’ health and consumer sustainable consciousness. Examples of the questions include:
"I started consuming more sustainably when ...".

| I started to pay more attention to my health | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| I began to consume more fruits and vegetables | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| I started following a vegetarian diet | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

SECTION F: CRISIS

Section F measured the respondents’ cautious and conscious spending and consumer sustainable consciousness. Examples of the questions include:

"I started consuming more sustainably when ...".

| I was shown that consuming South African products made more sense for the local economy | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| I personally suffered issues of the current crisis and had to pay more attention to what I really needed to buy | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

SECTION G: TRUST

Section G measured the respondents’ intentions to buy sustainable products using the trust dimension. Examples of the questions include:

"I would consume more sustainable products if":

| Were cheaper | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
|Were available in more stores | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
|Were available closer to home | Strongly | 1 | 2 | 3 | 4 | 5 | Strongly agree |
I trusted their certification and source of raw materials more

<table>
<thead>
<tr>
<th>disagree</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

Had better visibility in store

<table>
<thead>
<tr>
<th>disagree</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

Better understood their benefits

<table>
<thead>
<tr>
<th>disagree</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

I understood better what is written on the packaging

<table>
<thead>
<tr>
<th>disagree</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

I knew the brands better

<table>
<thead>
<tr>
<th>disagree</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

SECTION H: ACCESSIBILITY

Section H measured the respondents’ intentions to buy sustainable products using the accessibility dimension. Examples of the questions include:

"I would consume more sustainable products if

<table>
<thead>
<tr>
<th>They offered more opportunities for experimentation</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

I have had a better consumer experience in the past

<table>
<thead>
<tr>
<th>disagree</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

My day-to-day brand also offered this type of product

<table>
<thead>
<tr>
<th>disagree</th>
<th>Strongly disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

b. Data Collection Technique

A structured data collection method was applied using an online questionnaire to further unpack and answer the proposed research objectives. This method has been chosen as it will allow respondents to select from predetermined responses (Malhotra, 2010). In total, 211 responses were collected using an online questionnaire administered by Qualtrics.
4.5 Data Analysis

The purpose of data analysis is to examine the data, thereby converting it into useful information to help with the problem statement (Malhotra, 2010). Once the data has been collected the following data analysis steps are applied: data cleaning, choosing the relevant data analysis techniques and thereafter the results are interpreted (Pickel, 2019).

The data cleaning process is an important part of the data analysis procedure as it eliminates irrelevant data allowing the researcher to discern insights (Pickel, 2019). Once the data is cleaned, the data analysis process is then executed. In this research study the data analysis process took form in two parts:

Part one:

- Descriptive Statistics: Sample Profile
- Descriptive Statistics: Likert scale Results
- Reliability Results (Cronbach’s Alpha)
- Item statistics (Mean & Standard deviation)

Part two:

- Inferential statistics (Structural Equation Modeling (SEM); Confirmatory Factor Analysis (CFA) and Hypotheses Testing

To unpack the analysis, Statistical Package for the Social Sciences (SPSS) 24 and Analysis of Moment Structures (AMOS) 24 software were used for data analysis. SPSS 24 was used to calculate the descriptive statistics (sample profile and Likert scale results), reliability results through the Cronbach’s Alpha, Standard Deviation, and the Mean. The reliability and validity of the measurement instrument is key for the results of the study to be widely accepted. In addition, AMOS 24 was used for inferential statistics namely Structural Equation Modeling (SEM). SEM was done in two stages, first, the Confirmatory Factor Analysis (CFA) then hypothesis testing. The initial study by de Carvalho et. al (2015) used the statistical software package LISREL to conduct CFA however in this study, CFA will be assessed using AMOS 24. CFA allows the researcher to specify the constructs and the items used to measure them (de Carvalho et. al, 2015).
a. Data Processing and Analysis

It is essential that the data processing stage is carefully crafted as this process generates data into knowledge (Pink, 2019). According to Trochim (2007), many social research studies conduct data analysis using the following key steps:

- Cleaning and organising the data for analysis (data preparation)
- Describing the data (descriptive statistics)
- Testing Hypotheses and Models (inferential statistics)

**Step 1: Data preparation**

The data-preparation process is composed of the following stages (Malhotra, 2010; Pink, 2019):

- **Assessment of questionnaire**

  The first step is to perform a quality check on all questionnaires, ensuring that questions were completed (Malhotra, 2010; Pink, 2019).

- **Editing**

  This stage involves performing a preliminary check for data consistency with the main objective of increasing accuracy of the data (Malhotra, 2010; Pink, 2019). There are several questions that needs to be asked as part of this process (Trochim, 2007):

  ✓ Are the responses legible?
  ✓ Are the most important questions answered?
  ✓ Did the respondent answer all the questions?
  ✓ Is all the relevant contextual information included in the data: time and place?

- **Coding**

  Coding is conducted when a number is assigned to each question. The questionnaire can be pre-coded if it only contains structured questions or very few unstructured questions (Malhotra, 2010; Pink, 2019).
• Data Cleaning

The main aim of this process is to check for final consistency thus data that is out of range, inconsistent or logically inconsistent are identified (Malhotra, 2010; Pink, 2019).

**Step 2: Descriptive statistics**

Descriptive statistics provides the research study with an overview of the distribution of the data, detects outliers and helps identify associations amongst variables (Dhand, 2015). Hence, descriptive analysis provides a summary of the basic features of the data using simple graphical depictions to portray it (Trochim, 2007).

**Step 3: Scale evaluation**

A multi-item scale is evaluated for accuracy and applicability by running reliability and validity tests (Malhotra, 2010). The scores from the reliability and validity tests are important for this research study as it aims to provide marketers, academics, and fashion retail businesses important insights on sustainable consumption amongst the Gen Z consumer segment.

3.1 Reliability

Reliability refers to the extent to which a scale produces consistent results when the same method is applied to the same sample under the same conditions (Malhotra, 2010; Middleton, 2020). Reliability tests are applied to quantitative studies where the research questions are assessed using a Likert rating scale (Middleton, 2020). According to (Malhotra, 2010) there are three main types of reliability:

- **Test-retest reliability:** The same test is performed within a two to four-week period
- **Alternative forms reliability:** The same set of respondents are measured at two different times
- **Internal consistency reliability:** This test is used to assess the reliability where several scale items are added together to form a total score. The simplest form of internal consistency is using split-half reliability. This format takes place when the scale items are split into two sets. After the test is performed, the correlation between the two sets of responses is then calculated. Cronbach’s Alpha is then used to determine whether the
scale items are significant. The Coefficient ranges from 0-1 with the value of 0.6
Cronbach’s Alpha indicating a reliable scale/s is used in the study.

To assess the measurement item’s reliability, the Cronbach’s Alpha values and Composite
Reliability (CR) values were determined using the SPSS 24 and AMOS 24 software and will
be displayed and further explained in the next chapter.

3.2 Validity

Validity in research relates to the extent to which the survey measures the right elements
hence informing the researcher if the research method was accurately used (Dudovskiy, 2018;
Middleton, 2020). The main types of validity comprise of: Criterion Validity, Criterion
Validity and Construct Validity which is further divided into convergent and discriminant
validity. (Malhotra, 2010; Dudovskiy, 2018; Middleton, 2020).

➢ Content Validity:

Content validity is also known as face validity as assesses whether the researcher sufficiently
covers all aspects of the construct used within the research study. This type of validity is the
most basic type and is associated with a high level of subjectivity as it is not science based.

➢ Criterion Validity

This criterion involves a comparison of tests where the assessment is made with an
established or widely used test that is already considered valid.

➢ Construct Validity

This type of validity ensures that the method of measurement is suitable for the construct that
is being measured. Hence, answering whether the construct of consumers’ sustainability
consciousness has a positive impact on sustainable purchase intentions amongst Gen Z in the
South African fashion retail market.

Furthermore, construct validity is made up of convergent and discriminant validity.
Convergent validity is the extent to which the scale positively correlates with other measures
of the same construct. Discriminant validity is the extent to which there is no correlation
among differing constructs. Both convergent and discriminant validity of the proposed
research constructs were assessed by checking the inter-correlation between these constructs.
This was done by comparing the average variance (AVE) and shared variance (discriminate
validity). Convergent validity was determined by the following indicators: item total correlation values, item loading, and average variance extracted.

4. Inferential statistics

The main objective of using inferential statistics is to investigate questions, models and hypothesis (Trochim, 2007). It allows the researcher to take data from samples and make generalisations about the population thus using the sample to infer what the population thinks (Gonick, 2013). In this research study, inferential statistics is applied by using a popular statistical technique called Structural Equation Modeling (SEM) which takes form of hypotheses testing and Confirmatory Factor Analysis (CFA).

4.1 Model Fit

An important step in the data analysis process is ensuring that the regression model results in predicted values close to the observed data values (Martin, 2019). Confirmatory Factor Analysis will be used to examine if Model Fit is suitable for the data collected for the proposed study.

4.1.1 Confirmatory Factor Analysis

Structural Equation Modeling is made up of two parts: the measurement model and structural model (Malhotra, 2010). The measurement model is assessed by a multivariate statistical procedure called Confirmatory Factor Analysis (CFA) which tests how well the measured variables represents the number of constructs (Malhotra, 2010). CFA is used where the researcher stipulates which variables define each construct. In addition, it confirms if the variables that influence the constructs, supports the theory presented in the literature review section of the respective research study (Malhotra, 2010). Subsequently, the researcher is then able to test the proposed hypotheses. Model Fit indicators such as Chi-square, Goodness of Fit Index (GFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Composite Fit Index (CFI) and the Random Measure of Standard Error Approximation (RMSEA) will be used to assess the Model Fit.

In this research study, CFA is used to confirm that the five dimensions affect consumer sustainable consciousness construct, and the two dimensions affect sustainable purchase intentions. These findings will be discussed in the next chapter.
4.1.2 Path Modeling

Once the Model Fit has been assessed, this research study will proceed to perform Path Modeling using the AMOS 24 software package. Path Modeling is an important statistical technique tool for marketing researchers as it examines the structure of interrelationships allowing the researcher to assess causal relationships influencing the model’s constructs (Malhotra, 2010; Akter & Hani, 2003). SEM identifies both independent and dependent relationships amongst constructs (Malhotra, 2010). Furthermore, this technique is generally used for confirmatory techniques thus determining whether the model is suitable for the respective research study (Malhotra, 2010). In this body of work, SEM is used in order to confirm the relationships between the five dimensions of the consumers’ sustainability consciousness construct and the two dimensions of the sustainable purchase intention construct. Allowing the research findings to gain a better understanding of these relationships amongst Gen Z with the fashion retail market within South Africa.

4.6 Ethical Considerations

Ethical considerations play a crucial role in marketing research as there is the possibility for participants’ rights to be violated, intentionally or unintentionally and thus must be taken into consideration (Malhotra, 2010). Therefore, the research ensured that the rules set out by the university were fully complied with to ensure that the rights of the respondents refrain from being violated directly or indirectly.

This research study received ethical clearance that was issued by the university’s ethical committee before the questionnaire was sent into field research. In addition, the first page of questionnaire detailed that the participation was entirely voluntary and that the respondent may withdraw from the study at any point in time. It also informed the respondent that there is a choice to participate or to withdraw from the study which will have no adverse consequences. Furthermore, it assured the respondent that the data collection process is private and treated with confidentiality. Most importantly the language used was clear, concise and definitions were provided to help aid respondents when responding to questions. A copy of the ethical clearance letter that was issued by the University’s Ethical Committee can be found in the Appendix section.
4.7 Chapter Summary

This chapter introduced the research methodology including the research design, data collection and data analysis section. The research methodology section provided an overview of the research paradigm and approach. Thereafter, the research design outlined the process from sample design, understanding the target population, sample frame and sample size and lastly, the selected sampling method. The data collection procedure method then provided an overview of the measurements showcasing the actual questions used in the research questionnaire. Lastly, the data analysis process discussed the steps used in this procedure concluding with the selection of statistical methods that will be used to analyse the data.

Chapter Five: Data Analysis and Discussion

5.1 Introduction

This chapter will focus on the presentation and discussion of the research findings. The statistical techniques used to assess the data will be expanded upon in this section of the body of work. The software Statistical Package for the Social Sciences (SPSS) 24 and Analysis of Moment Structures (AMOS) 24 were used for data analysis. SPSS 24 was used to calculate the section on descriptive statistics (sample profile and Likert scale results), Reliability results using the Cronbach’s Alpha, Standard Deviation and the Mean. AMOS 24 was used for inferential statistics namely Structural Equation Modeling (SEM) where Confirmatory Factor Analysis (CFA) and Path Modeling were conducted. CFA was employed to check for Model Fit and the reliability and validity of the scales used in the research questionnaire. Finally, Path Modeling (PM) was used to assess Model Fit and test the proposed hypotheses of this study.

Chapter 5 will begin with providing an overview of the data screening process thereafter the data analysis procedure for this research study will be discussed. The discourse of the data analysis of the current study will include sample description, the test of measures employed, and accurate analytical statistics will be provided. The tests for the measure’s reliability and validity will be illustrated in order to show its accuracy. The reliability measure is evaluated using the Cronbach’s Alpha.

Confirmatory Factor Analysis (CFA) will then display how well the measured variables represents the number of constructs. Thereafter, the presentation of the research models fit is
shown by numerous indicators such as the Chi-Square Value, Goodness of Fit Index (GFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) used to determine if the research Model Fit the data. In conclusion, a summary of the chapter will be provided.

5.2 Data Screening

The process of data screening in multivariate analysis is crucial as it serves as the foundation for meaningful quantitative research (Abdulwahab, Dahalin & Galadima, 2011). This process ensures that the data has been carefully assessed by conducting consistency checks and treatment of missing responses (Malhotra, 2010). The key steps in the data cleaning process includes quality checking the questionnaire, editing, and coding. Thereafter the data is ready for further statistical analysis using SPSS where each data field is tested to detect any errors or potential outliers. SPSS conducts these tests by assessing the mean and standard deviation of the data resulting in the rectification of any known data errors (Malhotra, 2010).

5.3 Data Analytical Procedures

Several statistical methods were used to analyse the empirical data. The first process of the data analysis process took form of the assessing internal consistency of each construct. Thereafter data was analysed using the statistical software SPSS 24 and AMOS 24. The assessment of the final measures was performed by running Confirmatory Factor Analysis using AMOS 24. The reliability and validity measurement of scales were assessed using the Cronbach’s Alpha and Inter-Construct Correlation Matrix respectively.

The following figure illustrates the procedures of statistical analysis as well as the key tasks that will be undertaken in the chapter.

![Figure 4: Procedures of statistical analysis](image-url)
5.4 Descriptive Statistics

Once the data is collected, the first step of analysis is to describe the responses (Bhandari, 2020). The role of descriptive statistics is then to explain the basic features of the data in the study by providing simple summaries (Trochim, 2007). The descriptive statistics is illustrated in form of pie charts, or tables which display the basic data of the main components of the study (Malhotra, 2010). In this study, descriptive statistics will be used to display age, level of education and fashion retail brand preference.

5.4.1 Descriptive Statistics: Sample Profile

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 years</td>
<td>22</td>
<td>13.8</td>
<td>13.8</td>
<td>13.8</td>
</tr>
<tr>
<td>19 years</td>
<td>34</td>
<td>21.4</td>
<td>21.4</td>
<td>35.2</td>
</tr>
<tr>
<td>20 years</td>
<td>29</td>
<td>18.2</td>
<td>18.2</td>
<td>53.5</td>
</tr>
<tr>
<td>21 years</td>
<td>18</td>
<td>11.3</td>
<td>11.3</td>
<td>64.8</td>
</tr>
<tr>
<td>22 years</td>
<td>22</td>
<td>13.8</td>
<td>13.8</td>
<td>78.6</td>
</tr>
<tr>
<td>23 years</td>
<td>27</td>
<td>17.0</td>
<td>17.0</td>
<td>95.6</td>
</tr>
<tr>
<td>24 years</td>
<td>7</td>
<td>4.4</td>
<td>4.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Age of respondents
Table 4 and Figure 5 represent the results for the age of the respondents who participated in the study. Respondents aged 19 represent the largest age group as they account for 21% of the sample. This group is followed by 18-year olds, representing 20% of the sample. The third largest age group was that of 23-year-olds, which represented 17% of the sample. The fourth largest age groups were that of 18 and 22-year olds who both represented 13% of the sample. Lastly, the smallest age groups were that of 23 and 24-year olds who accounted for 17% and 4% of the sample, respectively. These results indicate that the respondents form part of the older Gen Z cohort. Therefore, fashion retail brands that markets to Gen Z consumers should partner with universities on offerings suitable for this market. An example would be to offer university students a shopping discount when they shop of their respective stores. The following section presents results for the groups’ educational level.
<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>School-leaving Certificate</td>
<td>2</td>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Matric Certificate</td>
<td>98</td>
<td>61.6</td>
<td>61.6</td>
<td>62.9</td>
</tr>
<tr>
<td>Diploma</td>
<td>3</td>
<td>1.9</td>
<td>1.9</td>
<td>64.8</td>
</tr>
<tr>
<td>Undergraduate Degree</td>
<td>41</td>
<td>25.8</td>
<td>25.8</td>
<td>90.6</td>
</tr>
<tr>
<td>Post-graduate Degree</td>
<td>15</td>
<td>9.4</td>
<td>9.4</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Educational level of respondents

Figure 6: Bar chart illustration: Educational level of respondents

Table 5 and Figure 6 represent the results for the educational level of the respondents. The majority of those who responded currently have a matric certificate as they account for 61.64% of the sample. The second largest group accounts for 25.79% have an undergraduate degree followed by 9.43% of respondents having post-graduate degrees. The smallest groups reported with only 1.89% having a diploma and 1.26% with a school leaving certificate, respectively. These findings indicate that the majority of the respondents are high school
leavers and have potentially just started their university academic journey. Future studies may focus on understanding the conscious consumption of a grade 12 learner in comparison to a university student as their fashion preferences may differ due to the change from wearing a uniform to their own clothing.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton On</td>
<td>120</td>
<td>75.5</td>
<td>75.5</td>
<td>75.5</td>
</tr>
<tr>
<td>Donna</td>
<td>2</td>
<td>1.3</td>
<td>1.3</td>
<td>76.7</td>
</tr>
<tr>
<td>Exact</td>
<td>8</td>
<td>5.0</td>
<td>5.0</td>
<td>81.8</td>
</tr>
<tr>
<td>Fabiani</td>
<td>1</td>
<td>0.6</td>
<td>0.6</td>
<td>82.4</td>
</tr>
<tr>
<td>Foschini</td>
<td>3</td>
<td>1.9</td>
<td>1.9</td>
<td>84.3</td>
</tr>
<tr>
<td>Gstar</td>
<td>1</td>
<td>0.6</td>
<td>0.6</td>
<td>84.9</td>
</tr>
<tr>
<td>H&amp;M</td>
<td>9</td>
<td>5.7</td>
<td>5.7</td>
<td>90.6</td>
</tr>
<tr>
<td>Markham</td>
<td>3</td>
<td>1.9</td>
<td>1.9</td>
<td>92.5</td>
</tr>
<tr>
<td>Mr Price</td>
<td>9</td>
<td>5.7</td>
<td>5.7</td>
<td>98.1</td>
</tr>
<tr>
<td>Totalsports</td>
<td>1</td>
<td>0.6</td>
<td>0.6</td>
<td>98.7</td>
</tr>
<tr>
<td>Truworths</td>
<td>1</td>
<td>0.6</td>
<td>0.6</td>
<td>99.4</td>
</tr>
<tr>
<td>Woolworths</td>
<td>1</td>
<td>0.6</td>
<td>0.6</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>159</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Table 6: Fashion retail brand preference**

The table above illustrates that 75.5% of the respondents chose Cotton On as their fashion retail brand preference. The remaining 24.5% brand preference were split across Exact (5%), H&M (5.7%) and Mr Price (5.7%) leading the lower preference brands. The interpretation of the data from this question only selected the respondent's first retail brand choice. Future studies should focus on interpreting the respondents’ selection across all retail fashion brand choices in order to categorise brands. An example of categorising fashion retail brands could be if majority of the respondents chose Exact, H&M and Mr Price it could be assumed that these respondents are value conscious shoppers as these are cost value-based brands.
5.4.2 Questionnaire Results

All research constructs were measured on a five-point Likert-type scale. There were a total number of 159 valid responses received. The consumers’ sustainability consciousness construct was made up of the following dimensions:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Number of scale items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of Retribution (SR)</td>
<td>Six scale items (SR1 - SR6)</td>
</tr>
<tr>
<td>Access to Information (AI)</td>
<td>Four scale items (AI1 - AI4)</td>
</tr>
<tr>
<td>Labelling and Peer Pressure (LPP)</td>
<td>Four scale items (LPP1 - LPP2)</td>
</tr>
<tr>
<td>Health (H)</td>
<td>Three scale items (H1 - H3)</td>
</tr>
<tr>
<td>Crisis Scenario (CS)</td>
<td>Two scale items (CR1 - CR2)</td>
</tr>
</tbody>
</table>

Table 7: Dimensions of the consumers’ sustainability consciousness construct

The sustainable purchase intention construct is made of the following dimensions:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Number of scale items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust (TR)</td>
<td>Eight scale items (TR1 - TR8)</td>
</tr>
<tr>
<td>Accessibility (ACC)</td>
<td>Three scale items (ACC1 - ACC3)</td>
</tr>
</tbody>
</table>

Table 8: Dimensions of the sustainable purchase intention construct

The results from the Likert scale responses will be displayed and explained in the following section.

Likert Scale Responses

This section pertains to the dimension of Sense of Retribution (SR) – six scale items (SR1 - SR6).

<table>
<thead>
<tr>
<th>Sense of Retribution 1</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>8</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Disagree</td>
<td>20</td>
<td>12.6</td>
<td>12.6</td>
<td>17.6</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>40</td>
<td>25.2</td>
<td>25.2</td>
<td>42.8</td>
</tr>
<tr>
<td>Agree</td>
<td>66</td>
<td>41.5</td>
<td>41.5</td>
<td>84.3</td>
</tr>
</tbody>
</table>
As observed in the table above, 8 out of 159 participants strongly disagreed with the statement that, “I started consuming more sustainably when I realised the superior quality of organic products” while 25 out of 159 strongly agreed with the statement. Majority of the responses agreed with this statement accounting for 41.5% of the respondents, followed by 25.2% of respondents moderately agreed with this statement. In total, 126 out of the 159 responses have a level of agreement with the proposed statement indicating that respondents agree that organic products have superior quality. Fashion retail brands offering products made from organic materials could potentially investigate better ways of raising awareness of these products to Gen Z consumers.

<table>
<thead>
<tr>
<th>Sense of Retribution 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>Disagree</td>
</tr>
<tr>
<td>Moderately agree</td>
</tr>
<tr>
<td>Agree</td>
</tr>
<tr>
<td>Strongly agree</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Key: SR1: I started consuming more sustainably when I realised the superior quality of organic products

The table above shows that 5.7% of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I began to want to give my contribution to my local community or society” and 17% strongly agreed with the statement. 35.2% of the responses agreed with the statement followed closely by 24.5% of the responses moderately agreed with the statement. 17.6% of the participants disagreed with the statement. Overall, 122 out of the 159 participants indicated a level of agreement with the statement. This statement reveals that
respondents are more inclined to support fashion retail brands if they donated towards their local community. This is an important insight as retail brands can involve Gen Z consumers in their decision-making process when they choose local social causes to support.

**Sense of Retribution 3**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>5</td>
<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
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<tr>
<td>Disagree</td>
<td>10</td>
<td>6.3</td>
<td>6.3</td>
<td>9.4</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>24</td>
<td>15.1</td>
<td>15.1</td>
<td>24.5</td>
</tr>
<tr>
<td>Agree</td>
<td>58</td>
<td>36.5</td>
<td>36.5</td>
<td>61.0</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>62</td>
<td>39.0</td>
<td>39.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

*Key: SR3: I started consuming more sustainably when I realised I could contribute to a better world by buying Fairtrade products*

The results from the table above indicates that 3.1% of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I realised I could contribute to a better world by buying Fairtrade products” and 39% strongly agreed with the statement. Following closely by, 36.5% of the participants agreed with the statement followed by 15.1% of the participants moderately agreed with the statement. Only 6.3% of the respondents disagreed with the statement. In total, 144 out of the 159 of the responses showed a level of agreement towards the statement. The overall response to this question was positive. South Africa’s leading food retailers Pick n Pay and Woolworths both sell Fairtrade products and thus poses an opportunity for these brands to develop an integrated marketing plan to communicate this offering to the Gen Z consumer. An example would be for the brands to partner with the universities and provide their student base with a product price offering on their Fairtrade products.
The findings from the above table indicates that 4.4 % of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I started making an effort to buy products in recyclable packaging” and 35.2% strongly agreed with the statement. 32.75% of the participants agreed with the statement followed by 14.5% of the participants moderately agreed with the statement. These results indicate that majority of the respondents indicated a level of agreement with the proposed statement. Only 13.2% of the respondents disagreed with the statement. This finding indicates that is an opportunity for fashion retail brands to focus on increasing their communication efforts on products sold with recyclable packaging and to also investigate ways to include the Gen Z consumer base to participate in recycling opportunities. An example would be for fashion brands to run a recycling packaging design competition where Gen Z consumers are able to submit their ideas. Subsequently, the top designs are then produced and sold in the respective fashion retail brand stores.
The results from the table above indicates that 5.7% of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I started buying Fairtrade products to help small communities to have better working conditions” and 27% strongly agreed with the statement. 33% of the respondents agreed with the statement followed by 22% of the respondents moderately agreed with the statement. A small portion of responses (11.9%) disagreed with the statement. In total, 131 out of the 159 of the responses showed a level of agreement towards the statement. A research report by Moorad (2012), revealed that Kraft Foods produced the first Fairtrade-certified confectionery brand in SA in form of the Cadbury Dairy Milk (plain). This product resulted in generating 29 million slabs sold (Moorad, 2012). These findings suggest that further research can explore the impact of the success of the introduction of Fairtrade products within an emerging market like South Africa.

### Sense of Retribution 6

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>10</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Disagree</td>
<td>29</td>
<td>18.2</td>
<td>18.2</td>
<td>24.5</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>26</td>
<td>16.4</td>
<td>16.4</td>
<td>40.9</td>
</tr>
<tr>
<td>Agree</td>
<td>30</td>
<td>18.9</td>
<td>18.9</td>
<td>59.7</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>64</td>
<td>40.3</td>
<td>40.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Key: SR6: I started consuming more sustainably when I stopped buying products tested on animals

The findings from the above table indicates that 6.3 % of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I stopped buying products tested on animals” and 40.3% strongly agreed with the statement. 18.9% of the participants agreed with the statement followed closely by 18.2% of the participants moderately agreed with the statement. These results indicate that the majority of the respondents indicated a
level of agreement with the proposed statement. This insight is significant for fashion retail brands that offers animal-based materials such as silk, leather, and wool. Local brands such as Poetry andFaithful To Nature offers vegan friendly merchandise as part of their product range. Thus, this is an opportunity for other brands to follow suit.

This section pertains to the dimension of Access to Information (AI) – four scale items (AI1 - AI4).

### Access to Information 1

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>2</td>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Disagree</td>
<td>7</td>
<td>4.4</td>
<td>4.4</td>
<td>5.7</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>14</td>
<td>8.8</td>
<td>8.8</td>
<td>14.5</td>
</tr>
<tr>
<td>Agree</td>
<td>42</td>
<td>26.4</td>
<td>26.4</td>
<td>40.9</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>94</td>
<td>59.1</td>
<td>59.1</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>159</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Key: AI1: I started consuming more sustainably when I realised we were polluting or destroying nature*

As observed in the table above, 2 out of 159 participants strongly disagreed with the statement that, “I started consuming more sustainably when I realised we were polluting or destroying nature” while 94 out of 159 strongly agreed with this statement. 26.4% of the respondents agreed with this statement followed by 8.8% of respondents moderately agreed with this statement. Overall, 150 out of the 159 responses have a level of agreement with the proposed statement thus making it meaningful. Given the wealth of information that is readily available, companies should make sure that these insights can be easily found in their marketing communications. It is also important that this information is found on the relevant media platforms that Gen Z consumes such as the brands’ website and social media platforms.
The findings from the above table indicates that 5% of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I felt alert to the importance of social and environmental certifications” whilst 40.9% strongly agreed with the statement. 27% of the participants agreed with the statement followed by 20% of the participants moderately agreed with the statement. Only 11% of the respondents disagreed with the statement. These results indicate that majority of the respondents indicated a level of agreement with the proposed statement. This finding supports that it is in fact important that brands display credible social and environmental certifications on their products. Brands can therefore increase their efforts by highlighting these certifications on their respective product packaging.

### Access to Information 2

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>8</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Disagree</td>
<td>11</td>
<td>6.9</td>
<td>6.9</td>
<td>11.9</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>32</td>
<td>20.1</td>
<td>20.1</td>
<td>32.1</td>
</tr>
<tr>
<td>Agree</td>
<td>43</td>
<td>27.0</td>
<td>27.0</td>
<td>59.1</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>65</td>
<td>40.9</td>
<td>40.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

*Key: AI2: I started consuming more sustainably when I felt alert to the importance of social and environmental certifications*

### Access to Information 3

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
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<tr>
<td>Strongly disagree</td>
<td>16</td>
<td>10.1</td>
<td>10.1</td>
<td>10.1</td>
</tr>
<tr>
<td>Disagree</td>
<td>27</td>
<td>17.0</td>
<td>17.0</td>
<td>27.0</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>29</td>
<td>18.2</td>
<td>18.2</td>
<td>45.3</td>
</tr>
<tr>
<td>Agree</td>
<td>50</td>
<td>31.4</td>
<td>31.4</td>
<td>76.7</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>37</td>
<td>23.3</td>
<td>23.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
**Key: AI3: I started consuming more sustainably when I saw a documentary or shocking information that led me to be more careful about what I buy.**

The table above shows that 10% of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I saw a documentary or shocking information that led me to be more careful about what I buy” and 23.3% strongly agreed with the statement. 31.4% of the responses agreed with the statement followed by 18.2% of the responses moderately agreed with the statement. 17% of the participants disagreed with the statement. Overall, a third of respondents indicated a level of disagreement with this statement and is the highest level of disagreement in comparison to the statements made before this. Brands should therefore consider co-branding initiatives with these documentaries, perhaps on their social media platforms. In addition, brands should closely align themselves as alternatives of good options as opposed to the current harmful options.

### Access to Information 4

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>10</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Disagree</td>
<td>15</td>
<td>9.4</td>
<td>9.4</td>
<td>15.7</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>30</td>
<td>18.9</td>
<td>18.9</td>
<td>34.6</td>
</tr>
<tr>
<td>Agree</td>
<td>50</td>
<td>31.4</td>
<td>31.4</td>
<td>66.0</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>54</td>
<td>34.0</td>
<td>34.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Key: AI4: I started consuming more sustainably when I saw information on the internet that led me to change my consumption patterns**

The findings from the above table indicates that 6.3 % of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I saw information on the internet that led me to change my consumption patterns” and 34% strongly agreed with the statement. 31.4% of the participants agreed with the statement followed by 18.9% of the participants moderately agreed with the statement. Only 9.4% of the respondents disagreed with the statement. These results indicate that majority of the respondents indicated a level of agreement with the proposed statement. Fashion retail brands should therefore focus their
communication efforts on the companies’ sustainable practices and offerings as it has a direct impact on Gen Z’s consumption patterns. An example would be to showcase the process of producing sustainable products from concept to disposal so that consumers are aware of the impact of their purchases on the environment once it gets disposed.

This section pertains to the dimension of Labelling and Peer Pressure (LPP) – four scale items (LPP1 – LPP4)

**Labelling and Peer Pressure 1**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>12</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Disagree</td>
<td>23</td>
<td>14.5</td>
<td>14.5</td>
<td>22.0</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>25</td>
<td>15.7</td>
<td>15.7</td>
<td>37.7</td>
</tr>
<tr>
<td>Agree</td>
<td>61</td>
<td>38.4</td>
<td>38.4</td>
<td>76.1</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>38</td>
<td>23.9</td>
<td>23.9</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>159</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Key: LPP1: *I started consuming more sustainably when I began to be interested in information on product labels*

The table above shows that 7.5% of the respondents strongly disagreed with the statement, “*I started consuming more sustainably when I began to be interested in information on product labels*” and 23.9% strongly agreed with the statement. 38.4% of the responses agreed with the statement followed by 15.7% of the responses moderately agreed with the statement. 14.5% of the participants disagreed with the statement. Overall, 77% of the responses displayed a level of agreement towards the statement. This indicates that there is a high level of interest in the information found on product labels and therefore essential for fashion retailers to focus on producing clear information found on the labels of their sustainable merchandise offerings.

**Labelling and Peer Pressure 2**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>7</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Disagree | 15 | 9.4 | 9.4 | 13.8
Moderately agree | 33 | 20.8 | 20.8 | 34.6
Agree | 69 | 43.4 | 43.4 | 78.0
Strongly agree | 35 | 22.0 | 22.0 | 100.0
Total | 159 | 100.0 | 100.0

Key: LPP2: I started consuming more sustainably when I wanted to try products/practices that people close to me recommended

The findings from the above table indicates that 4.4% of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I wanted to try products/practices that people close to me recommended” whilst 22% strongly agreed with the statement. 43.4% of the participants agreed with the statement followed by 20.8% of the participants moderately agreed with the statement. Only 9.4% of the respondents disagreed with the statement. These results indicate that majority of the respondents indicated a level of agreement with the proposed statement. This finding highlights the important role that close family and friends plays on the influence of consumers’ sustainable consumption. It is therefore important that brands identify individuals that are more likely to directly influence the Gen Z consumer market, thereby using these individuals as a conduit for their brand message.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>9</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Disagree</td>
<td>18</td>
<td>11.3</td>
<td>11.3</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>39</td>
<td>24.5</td>
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</tr>
<tr>
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<td>53</td>
<td>33.3</td>
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</tr>
<tr>
<td>Strongly agree</td>
<td>40</td>
<td>25.2</td>
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</tr>
<tr>
<td>Total</td>
<td>159</td>
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</tr>
</tbody>
</table>

Key: LPP3: I started consuming more sustainably when the product labels called my attention to characteristics that fit with my values
As observed in the table above, 9 out of 159 participants strongly disagreed with the statement that, “I started consuming more sustainably when the product labels called my attention to characteristics that fit with my values” while 40 out of 159 strongly agreed with this statement. 33.3% of the respondents agreed with this statement followed by 24.5% of respondents moderately agreed with this statement. Overall, 132 out of the 159 responses have a level of. It is therefore important for brands to gain a better understanding of the Gen Z consumer market as this cohort wants to influence and be influenced by others who share the same values. Gen Z consumers support brands that are socially and environmentally conscious and hence it is important for brands to communicate their responsible efforts on product labels. An example would be for brands to add a tag line such as ‘made from sustainable material’ on the product labels on their respective sustainable offerings.

**Labelling and Peer Pressure 4**

<table>
<thead>
<tr>
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</thead>
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<tr>
<td>Disagree</td>
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<td>25.8</td>
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<td>23.9</td>
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<td>Agree</td>
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</tr>
</tbody>
</table>

Key: LPP4: I started consuming more sustainably when I realised that I would buy sustainably even with a lower product quality

Interestingly the findings show that there was the same number of respondents who strongly disagreed and strongly agreed with the statement, “I started consuming more sustainably when I realised that I would buy sustainably even with a lower product quality”. 28.9% of the participants agreed with the statement closely followed by 23.9% of the participants moderately agreed with the statement. 25.8% of the respondents disagreed with the statement. Overall, over a third of the responses indicated a level of disagreement with the proposed statement. This finding appears that respondents were not completely sure about this statement. Consequently, this presents an opportunity to conduct future research by
examining the impact that the quality attributes of sustainable product offerings have on sustainable consumption.

*This section pertains to the dimension of Health (H) – three scale items (H1 – H2). The Cronbach’s Alpha value for Health (H) was 0.757. To achieve an acceptable reliability value for health (H3- I started following a vegetarian diet), was removed from analysis as it made this construct unreliable.*

### Health 1

<table>
<thead>
<tr>
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</tr>
</tbody>
</table>

Key: *H1: I started consuming more sustainably when I started to pay more attention to my health*

As observed in the table above, 6 out of 159 participants strongly disagreed with the statement that, “I started consuming more sustainably when I started to pay more attention to my health” while 49 out of 159 strongly agreed with this statement. 44% of the respondents agreed with this statement followed by 13.2% of respondents moderately agreed with this statement. Overall, 140 out of the 159 responses have a level of agreement with the proposed statement thus making it a vital statement. This finding indicates that health is a key factor to consuming sustainably within the Gen Z cohort. Furthermore, this finding significantly supports sustainable athleisure wear offered by fashion retail brands such as Sportscene, Adidas, Nike and Stella McCartney. Athleisure outfits offers a fashionable way to wear athletic wear such as wearing sneakers with dresses and going for dinner in jogger trackpants and a shirt. Therefore, this is a great opportunity for brands to expand on their athleisure range to include elements of sustainability in order to attract Gen Z consumers.
The findings from the above table indicates that 4.4% of the respondents strongly disagreed with the statement, “I started consuming more sustainably when I began to consume more fruits and vegetables” whilst 37% strongly agreed with the statement. 34% of the participants agreed with the statement followed by 16.4% of the participants moderately agreed with the statement. Only 8.2% of the respondents disagreed with the statement. These results indicate that majority of the respondents indicated a level of agreement with the proposed statement. This finding highlights the important role of choosing healthy food when consuming sustainably. Fashion retail brands may use this finding to collaborate with healthy food providers with the intention to attract Gen Z consumers to shop with them. An example of this would be for Pick n Pay and Woolworths to offer university students an exclusive clothing and healthy food promotional proposition which will then encourage this cohort to gain brand preference towards these brands.

The Cronbach’s Alpha criteria for the dimensions to be included in the analysis is that it should be >/0.60. The Crisis dimension had a Cronbach’s Alpha of 0.461 and was therefore removed from analysis as it failed to meet the required criteria for reliability. A possible explanation for this might be that the original study was developed in Portugal and therefore the Crisis dimension was applicable to a Global North market. Further limitations will be discussed in Chapter Six.
The sustainable purchase intention construct is made of the following dimensions:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Number of scale items</th>
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<tbody>
<tr>
<td>Trust (TR)</td>
<td>Eight scale items (TR1 - TR8)</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Three scale items (ACC1 - ACC3)</td>
</tr>
</tbody>
</table>

This section pertains to the dimension of Trust (TR) – eight scale items (TR1 - TR8)

### Trust 1

<table>
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<td>5.0</td>
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</table>

*Key: TR1: "I would consume more sustainable products if they were cheaper"

As observed in the table above, 2 out of 159 participants strongly disagreed with the statement that, "I would consume more sustainable products if they were cheaper" while 93 out of 159 strongly agreed with this statement. 35.2% of the respondents agreed with this statement followed by only 5% of respondents moderately agreed with this statement. The overall response to this statement were in favour of those who agreed. The two main objectives of setting product prices are for companies to earn a profit or to competitively position the respective product. Prices are determined by the demand and supply of the products therefore if there is a great demand for the product and the supplier is able to meet these demands, the economies of scale associated with producing the product will be more cost effective. It is therefore important for retail brands to conduct research on the feasibility of introducing sustainable products as part their product offering.
### Trust 2

<table>
<thead>
<tr>
<th></th>
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<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
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<tr>
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<td>1.9</td>
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<td>3.1</td>
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<tr>
<td>Moderately agree</td>
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</table>

**Key:** TR2: "I would consume more sustainable products if they were available in more stores"

What stands out in the table is that only 1.4% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if they were available in more stores" whilst an alarming 71% strongly agreed with the statement. This is an important issue for future research as it highlights a potential gap within the fashion retail sustainable market offering. Potential solutions could be for brands to collaborate with non-fashion retail stores such as gyms and health orientated restaurants so that the fashion brands’ sustainable products are more accessible. Furthermore, there is an opportunity for brands to expand their offering online given that the Gen Z consumer market is more digitally connected and able to access the information that they need in order to strengthen their purchase intentions.

### Trust 3

<table>
<thead>
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<td>.6</td>
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<td>5.7</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>17</td>
<td>10.7</td>
<td>10.7</td>
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<tr>
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<td>41</td>
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<td>25.8</td>
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<td>57.9</td>
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<tr>
<td>Total</td>
<td>159</td>
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<td></td>
</tr>
</tbody>
</table>

**Key:** TR3: "I would consume more sustainable products if they were available closer to home"
It is apparent from this table that very few that 0.6% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if they were available closer to home" whilst 57.9% strongly agreed with the statement. 25.8% of the participants agreed with the statement followed by 10.7% of the participants moderately agreed with the statement. Only 5% of the respondents disagreed with the statement. The most striking result to emerge from the data is that the majority of the respondents would increase their consumption on sustainable products if they were conveniently located. It is an interesting result as the Gen Z consumes information about sustainable products online which may not necessarily mean that they shop online. This statement needs to be further explored in future studies.

### Trust 4

<table>
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<td>Moderately agree</td>
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<td>Total</td>
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</tbody>
</table>

Key: TR4: "I would consume more sustainable products if I trusted their certification and source of raw materials more"

The findings from the above table indicates that only 1.4% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if I trusted their certification and source of raw materials more" whilst 41.5% strongly agreed with the statement. 28.9% of the participants agreed with the statement followed by 18.2% of the participants moderately agreed with the statement. Only 9.4% of the respondents disagreed with the statement. These results indicate that majority of the respondents indicated a level of agreement with the proposed statement. This finding shows that third party certifications such as the Proudly South Africa Initiative, Better Cotton Initiative and Ethical Trade Initiative are important to the Gen Z consumer cohort. Hence making it essential for fashion retail brands
to partner with credible third party institutions and communicating their partnership on the respective product label.

<table>
<thead>
<tr>
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<td>Disagree</td>
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<tr>
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<td>11.9</td>
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<tr>
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<td></td>
</tr>
</tbody>
</table>

Key: TR5: “I would consume more sustainable products had better visibility in store”

As observed in the table above, 6 out of 159 participants strongly disagreed with the statement that, "I would consume more sustainable products had better visibility in store" while 72 out of 159 strongly agreed with this statement. 29.6% of the respondents agreed with this statement followed by 11.9% of respondents moderately agreed with this statement. Overall, 138 out of the 159 responses have a level of agreement with the proposed statement thus making it an important aspect to sustainable consumption. This finding is crucial to fashion retail brands as they spend a large amount of time and effort on enhancing their retail store by creating visually appealing merchandising elements such as window displays, in-store banners and posters that would attract consumers. Therefore, greater emphasis needs to be placed on the display of sustainable products so that consumers are aware of the brands’ offering and in turn strengthen their intention to purchase these products.

<table>
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<td>16.4</td>
<td>16.4</td>
<td>30.8</td>
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</table>
The findings from the above table indicates that only 4.4% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if I better understood their benefits" whilst 37.1% strongly agreed with the statement. 32.1% of the participants agreed with the statement followed by 16.4% of the participants moderately agreed with the statement. Only 10.1% of the respondents disagreed with the statement. These results indicate that majority of the respondents indicated a level of agreement if they had a better understanding of the benefits of the sustainable product offering. It is therefore essential that the respective marketer creates an integrated sustainable marketing strategy to successfully communicate the sustainable product benefits across all the Gen Z consumer touch points.

Key: TR6: "I would consume more sustainable products if I better understood their benefits"

<table>
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<tr>
<th>Agree</th>
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<th>Cumulative Percent</th>
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Trust 7

<table>
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<tr>
<td>Disagree</td>
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<td>28.3</td>
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</table>

Key: TR7: "I would consume more sustainable products if I understood better what is written on the packaging"

The table above shows that 3.8% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if I understood better what is written on the packaging" and 30.2% strongly agreed with the statement. 27% of the responses agreed with the statement and 28.3% of the responses moderately agreed with the statement. 10.7% of the
participants disagreed with the statement. Overall, 85.5% of the responses displayed a level of agreement towards the statement. This indicates an essential aspect for fashion brands to display simplified wording on the respective sustainable product to ensure that the consumer fully understands what is written on it.

**Trust 8**

<table>
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<tr>
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<td>100.0</td>
<td></td>
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</tbody>
</table>

Key: TR8: "I would consume more sustainable products if I knew the brands better"

The table above shows that 6.9% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if I knew the brands" and 44.7% strongly agreed with the statement. 32.1% of the responses agreed with the statement followed by only 10.7% of the responses moderately agreed with the statement. Only 5.7% of the participants disagreed with the statement. Overall, 87.5% of the respondents indicated that brand awareness is a key aspect to sustainable consumption. Two of the key aspects to introducing new products to a market is to ensure that its product attributes are well communicated and that the brand resonates with the target market. Therefore, brands that are new to the sustainable product marketplace need to implement a strong brand building strategy to establish consumer trust. This can be done by partnering with well-established brands or use social media influencers to gain credibility. A recent example took place where the Australian fashion brand Country Road, partnered with a South African sustainable media platform, TWYG, to promote South African sustainable fashion designers.

**Accessibility 1**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
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<th>Valid Percent</th>
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<tr>
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<td>10.1</td>
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</table>
The findings from the above table indicates that only 3.8% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if they offered more opportunities for experimentation" whilst 25.2% strongly agreed with the statement. 27.7% of the participants agreed with the statement and 33.3% of the participants moderately agreed with the statement. Only 10.1% of the respondents disagreed with the statement. These results indicate that even though most of the respondents indicated a level of agreement, the highest number of respondents moderately agree with it. Fashion brands could potentially run an in-store activation allowing consumers to experiment with their sustainable offering. In addition, fashion brands could run an online competition and send the first 100 winners their respective sustainable product to test. These opportunities will then allow consumers to engage with the sustainable products and potentially increase their intention to purchase them.

### Accessibility 2

<table>
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<td>23.3</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>31</td>
<td>19.5</td>
<td>19.5</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The results from the table above shows that 5.7% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if I have had a better consumer experience in the past" and 19.5% strongly agreed with the statement. 23.3% of the responses agreed with the statement and 39% of the responses moderately agreed with the statement. 12.6% of the participants disagreed with the statement. Like the previous statement, most respondents indicated a level of agreement towards the statement with the majority moderately agree with it. One of the ways to competitively differentiate a brand is to provide superior customer service especially within the fashion retail space. Fashion brands could therefore invest in providing dedicated customer experience store assistants to proactively engage and promote their sustainable product range to consumers. This will then allow the consumer to receive a positive shopping experience and in turn strengthen the consumer’s intention to purchase.

### Accessibility 3

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>11</td>
<td>6.9</td>
<td>6.9</td>
<td>6.9</td>
</tr>
<tr>
<td>Disagree</td>
<td>11</td>
<td>6.9</td>
<td>6.9</td>
<td>13.8</td>
</tr>
<tr>
<td>Moderately agree</td>
<td>25</td>
<td>15.7</td>
<td>15.7</td>
<td>29.6</td>
</tr>
<tr>
<td>Agree</td>
<td>42</td>
<td>26.4</td>
<td>26.4</td>
<td>56.0</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>70</td>
<td>44.0</td>
<td>44.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Key: ACC3: "I would consume more sustainable products if my day-to-day brand also offered this type of product"

As observed from the table above, 6.9% of the respondents strongly disagreed with the statement, "I would consume more sustainable products if my day-to-day brand also offered this type of product" and 44% strongly agreed with the statement. 26.4% of the responses agreed with the statement and 15.7% of the responses moderately agreed with the statement. Only 6.9% of the participants disagreed with the statement. Overall, 86.1% of the respondents agreed with this statement thus making it significant for brands to explore ways to make it easy for their respective current Gen Z customer base to consume sustainably. An example of this could include a fast-moving consumer goods brand such as Unilever, to
partner with a youth fashion brand such as Sportscene, on providing a sustainable sneaker cleaning product that could be sold in both grocery stores and in Sportscene retail stores.

5.5 Reliability Results

Cronbach’s Alpha test (Cronbach α) was the approach employed to check for reliability of research measures used for this study. This test is also referred to as the Coefficient Alpha where the coefficient varies from 0 to 1 and a value less than 0.6 is considered unreliable (Malhotra, 2010). Higher values of Cronbach’s Coefficient Alpha represent higher reliability of the scale. The results of the reliability results are summarised below:

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s Alpha</th>
<th>Number of items</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of Retribution</td>
<td>0.802</td>
<td>Six</td>
<td>Reliable as it surpassed the required threshold of 0.6.</td>
</tr>
<tr>
<td>Access to Information</td>
<td>0.747</td>
<td>Four</td>
<td>Reliable as it surpassed the required threshold of 0.6.</td>
</tr>
<tr>
<td>Labelling and Peer Pressure</td>
<td>0.664</td>
<td>Four</td>
<td>Reliable as it surpassed the required threshold of 0.6.</td>
</tr>
<tr>
<td>Health</td>
<td>0.757</td>
<td>Two</td>
<td>Reliable as it surpassed the required threshold of 0.6.</td>
</tr>
<tr>
<td>Crisis</td>
<td>0.461</td>
<td>Two</td>
<td>Construct was removed from analysis as it failed to meet the required criteria for reliability</td>
</tr>
<tr>
<td>Trust</td>
<td>0.765</td>
<td>Eight</td>
<td>Reliable as it surpassed the required threshold of 0.6.</td>
</tr>
<tr>
<td>Accessibility</td>
<td>0.626</td>
<td>Three</td>
<td>Reliable as it surpassed the required threshold of 0.6.</td>
</tr>
</tbody>
</table>

Table 9: Reliability Results

The table above illustrates that all the constructs except for the crisis construct exceeded the threshold of 0.6 and consequently the crisis construct has been removed from the rest of the analysis.
5.6 Item Statistics

To gain a better understanding of the attributes of each variable, descriptive statistics analysis was utilised by assessing the Mean and Standard Deviation of each factor.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR1</td>
<td>3.50</td>
<td>1.061</td>
<td>159</td>
</tr>
<tr>
<td>SR2</td>
<td>3.40</td>
<td>1.131</td>
<td>159</td>
</tr>
<tr>
<td>SR3</td>
<td>4.02</td>
<td>1.040</td>
<td>159</td>
</tr>
<tr>
<td>SR4</td>
<td>3.81</td>
<td>1.181</td>
<td>159</td>
</tr>
<tr>
<td>SR5</td>
<td>3.64</td>
<td>1.165</td>
<td>159</td>
</tr>
<tr>
<td>SR6</td>
<td>3.69</td>
<td>1.332</td>
<td>159</td>
</tr>
<tr>
<td>AI1</td>
<td>4.38</td>
<td>0.912</td>
<td>159</td>
</tr>
<tr>
<td>AI2</td>
<td>3.92</td>
<td>1.158</td>
<td>159</td>
</tr>
<tr>
<td>AI3</td>
<td>3.41</td>
<td>1.289</td>
<td>159</td>
</tr>
<tr>
<td>AI4</td>
<td>3.77</td>
<td>1.196</td>
<td>159</td>
</tr>
<tr>
<td>LPP1</td>
<td>3.57</td>
<td>1.215</td>
<td>159</td>
</tr>
<tr>
<td>LPP2</td>
<td>3.69</td>
<td>1.055</td>
<td>159</td>
</tr>
<tr>
<td>LPP3</td>
<td>3.61</td>
<td>1.147</td>
<td>159</td>
</tr>
<tr>
<td>LPP4</td>
<td>3.03</td>
<td>1.188</td>
<td>159</td>
</tr>
<tr>
<td>H1</td>
<td>3.90</td>
<td>1.051</td>
<td>159</td>
</tr>
<tr>
<td>H2</td>
<td>3.91</td>
<td>1.122</td>
<td>159</td>
</tr>
<tr>
<td>TR1</td>
<td>4.50</td>
<td>0.710</td>
<td>159</td>
</tr>
<tr>
<td>TR2</td>
<td>4.62</td>
<td>0.745</td>
<td>159</td>
</tr>
<tr>
<td>TR3</td>
<td>4.35</td>
<td>0.908</td>
<td>159</td>
</tr>
<tr>
<td>TR4</td>
<td>3.99</td>
<td>1.073</td>
<td>159</td>
</tr>
<tr>
<td>TR5</td>
<td>4.03</td>
<td>1.139</td>
<td>159</td>
</tr>
<tr>
<td>TR6</td>
<td>3.87</td>
<td>1.151</td>
<td>159</td>
</tr>
<tr>
<td>TR7</td>
<td>3.69</td>
<td>1.125</td>
<td>159</td>
</tr>
</tbody>
</table>
Table 10: Means and Standard Deviations

The table above presents the item statistics of the Means and Standard Deviations for the study. It can be observed that all the Means are within a close range. The range is from 3.38 to 4.50 for all the constructs, showing that the data was normally distributed. The Standard Deviation values were all between the recommended threshold of -2 to +2 for normal distribution as they ranged from 0.745 to 1.196.

5.7 Validity Results

The Inter-Construct Correlation Matrix is used to check for discriminant validity of the research constructs. Discriminant validity ensures that the constructs being measured are distinct (Nunnally & Bernstein, 1994). Relationships among latent constructs were evaluated in order to see if they were lower than 1.0. A value lower than 0.7 for research constructs is recommended to confirm discriminant validity (Nunnally & Bernstein, 1994). The table below displays the correlations related to this study.

Inter-Construct Correlation Matrix

<table>
<thead>
<tr>
<th>Correlations</th>
<th>SR</th>
<th>AI</th>
<th>LPP</th>
<th>H</th>
<th>TR</th>
<th>ACC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of retribution</td>
<td>1</td>
<td>0.615**</td>
<td>0.582**</td>
<td>0.328**</td>
<td>0.173*</td>
<td>0.031</td>
</tr>
<tr>
<td>Access to information</td>
<td>0.615**</td>
<td>1</td>
<td>0.610**</td>
<td>0.370**</td>
<td>0.166*</td>
<td>0.100</td>
</tr>
<tr>
<td>Labelling and Peer Pressure</td>
<td>0.582**</td>
<td>0.610**</td>
<td>1</td>
<td>0.296**</td>
<td>0.202*</td>
<td>0.188*</td>
</tr>
<tr>
<td>Health</td>
<td>0.328**</td>
<td>0.370**</td>
<td>0.296**</td>
<td>1</td>
<td>0.218**</td>
<td>0.142</td>
</tr>
<tr>
<td>Trust</td>
<td>0.173*</td>
<td>0.166*</td>
<td>0.202*</td>
<td>0.218**</td>
<td>1</td>
<td>0.574**</td>
</tr>
<tr>
<td>Accessibility</td>
<td>0.031</td>
<td>0.100</td>
<td>0.188*</td>
<td>0.142</td>
<td>0.574**</td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 11: Inter-Construct Correlation Matrix
There is evidence from the table above indicates that there is discrimination validity as all the correlations are below 1. This shows that that all the constructs are distinctly different from each other.

5.8 Model Fit Results

The purpose of Model Fit is to assess how well the given data is represented by the model. According to Mishra (2016), a two-step technique is used to assess Model Fit which consists of Confirmatory Factor Analysis (CFA) and hypotheses testing.

5.8.1 Confirmatory Factor Analysis (CFA) Model

The illustration below is a depiction of the Confirmatory Factor Analysis Model (CFA) and shows the results using AMOS 24.

**Figure 7: Confirmatory Factor Analysis Model**
Key:
- SR = Sense of retribution
- AI = Access to information
- LPP = Labelling and Peer Pressure
- H = Health
- TR = Trust
- ACC = Accessibility

5.8.2 Model Fit

The table below provides a comprehensive view of the Model Fit results.

<table>
<thead>
<tr>
<th>Model Fit criteria</th>
<th>Chi-Square</th>
<th>GFI</th>
<th>CFI</th>
<th>NFI</th>
<th>IFI</th>
<th>TLI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index</td>
<td>1.081</td>
<td>0.875</td>
<td>0.982</td>
<td>0.809</td>
<td>0.983</td>
<td>0.977</td>
<td>0.023</td>
</tr>
</tbody>
</table>

**Table 12: Model Fit Results**

*Key: Chi-square, GFI: Goodness of Fit Index, CFI: Comparative Fit Index, NFI: Normed Fit Index, IFI: Incremental Fit Index, TLI: Tucker Lewis Index, RMSEA: Random Measure Standard Error Approximation.*

The results are explained using the table below and referenced by Parry (2020).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Cut-off for good fit</th>
<th>Results from study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>Assesses overall fit and the discrepancy between the sample and fitted covariance matrices.</td>
<td>Value over degree of freedom (χ²/df) of value between 1 and 3.</td>
<td>The chi-square value is 1.081 which shows an acceptable model fit.</td>
</tr>
<tr>
<td>Goodness of Fitness Index (GFI)</td>
<td>Indicates how well the model fits the observe data.</td>
<td>GFI ≥ 0.90</td>
<td>GFI is equal to 0.875 and thus shows moderate reliability.</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>A revised form of Normed Fit Index and used to compare the fit of a target model to the fit of an independent, or</td>
<td>CFI ≥ 0.90</td>
<td>CFI equals 0.982 thus reliable.</td>
</tr>
</tbody>
</table>
null, model. | Normed Fit Index (NFI) | Measures the inconsistency between the chi-squared value of the hypothesized model and the chi-squared value of the null model. | NFI ≥ 0.90 | NFI equals 0.809 thus moderately reliable.

NNFI is preferable for smaller samples. Sometimes the NNFI is referred to as the Tucker Lewis Index. | Tucker Lewis Index (TLI) | TLI ≥ 0.90 | TLI equals 0.977 thus reliable.

This measure assesses how well a model specified why the researcher fits relative to the null model where all observed variables are unrelated. | Incremental Fit Index (IFI) | IFI ≥ 0.90 | IFI equals 0.983 thus reliable.

Indicates how well the model, with indefinite but optimally selected parameter estimates would fit the populations covariance matrix. | Random Measure Standard Error Approximation (RMSEA) | RMSEA < 0.08 | RMSEA equals 0.023 thus reliable.

**Table 13: Explanation of Model Fit**

The results shown in the above table indicates the outcome from the Model Fit qualifies as an acceptable CFA measurement Model Fit. Therefore, the study proceeded to the hypotheses testing stage using Structural Equation Modeling with AMOS 24 software program.
5.9 Structural Equation Modeling

The validity of the measurement model has been established and therefore this section will focus on the structural model. The shifts entail moving the focus from relationships between the latent constructs and the observed variables to the extent of the relationship between constructs (Malhotra, 2010). These latent constructs are formed from theoretical relationships that are commonly transformed into hypothesis that can be empirically tested. Structural Equation Modeling is used to test these hypothesised relationships (Malhotra, 2010). Below is an illustration of the current study’s structural model.

Structural Model

![Diagram of structural model]

Figure 8: Structural Model

Key:

- SR = Sense of retribution
- AI = Access to information
- LPP = Labelling and Peer Pressure
- H = Health
- TR = Trust
- ACC = Accessibility
5.10 Discussion of Hypotheses Testing Results

The final part the Conceptual Model framework is to test the proposed hypotheses (Malhotra, 2010). A p-value is used in hypotheses testing to help the research support or reject the null hypothesis (Malhotra, 2010; Gonick, 2013). A small p (≤ 0.05) rejects the null hypothesis as it provides strong evidence that the null hypothesis is invalid thus means hypothesised relationship is significant (Gonick, 2013). Whereas a large p (> 0.05) means hypothesised relationship is not significant (Gonick, 2013).

Table 13 shows the results of Structural Equation Model Analysis

<table>
<thead>
<tr>
<th>Proposed Hypothesis</th>
<th>Estimate</th>
<th>P-value</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust → Sense of retribution</td>
<td>-0.008</td>
<td>0.841</td>
<td>Not supported and not significant</td>
</tr>
<tr>
<td>Trust → Access to information</td>
<td>0.014</td>
<td>0.761</td>
<td>Supported but not significant</td>
</tr>
<tr>
<td>Trust → Labelling &amp; Peer Pressure</td>
<td>0.071</td>
<td>0.063</td>
<td>Supported but not significant</td>
</tr>
<tr>
<td>Trust → Health</td>
<td>0.134</td>
<td>0.005</td>
<td>Supported and significant</td>
</tr>
<tr>
<td>Accessibility → Health</td>
<td>0.33</td>
<td>0.009</td>
<td>Supported and significant</td>
</tr>
<tr>
<td>Accessibility → Labelling &amp; Peer Pressure</td>
<td>0.274</td>
<td>0.039</td>
<td>Supported and significant</td>
</tr>
<tr>
<td>Accessibility → Sense of retribution</td>
<td>-0.203</td>
<td>0.212</td>
<td>Not supported and not significant</td>
</tr>
<tr>
<td>Accessibility → Access to information</td>
<td>0.124</td>
<td>0.473</td>
<td>Supported but not significant</td>
</tr>
</tbody>
</table>

Table 13: Results of Structural Equation Model Analysis

The hypotheses were tested by assessing the dimensions of consumers’ sustainability consciousness in relation to trust and accessibility. Below is a discussion of the outcome of the results shown in the table above.

H2: Consumers’ sustainability consciousness has a positive influence on intention to purchase sustainably, as far as the trust dimension is concerned.

The findings confirm that the health dimension of consumers’ sustainability consciousness is the only supported and significant positive influence on the intention to purchase sustainably, as far as the trust dimension is concerned. What is surprising is that this dimension asked specific questions around health status and the consumption of fruit and vegetables. A
possible explanation for these results may be the lack of adequate questions relating to health in relation to sustainable fashion consumption as it poses a generic statement as opposed to a more specific statement.

**H3: Consumers’ sustainability consciousness has a positive influence on intention to purchase sustainably, as far as the accessibility dimension is concerned.**

Interestingly, the health and labelling and peer pressure dimensions of consumers’ sustainability consciousness are the only supported and significant positive influences on the intention to purchase sustainably, as far as the accessibility dimension is concerned. The findings of the results on the health dimension do not support the previous research as accessibility was found to be associated with product store availability, lower priced products and products sold within proximity to one’s home (de Carvalho, et al., 2015). A possible explanation for this might be that the interpretation of health in relation to accessibility was limited to the two generic health questions. Conversely, the labelling and peer pressure dimension supports the findings of a previous study conducted by De Pelsmacker, Driesen & Rayp (2003). Findings from this research paper revealed that when the sale of ethical products are adequately promoted, the consumer then becomes aware of the product’s availability in-store and therefore increases their intent to purchase.

**5.11 Chapter Summary**

Chapter five provided a detailed report of the findings of the study, using the guidelines provided in Chapter four. A detailed discussion of the descriptive statistics, assessments of the reliability, validity, Model Fit as well as the testing of the hypotheses were presented. The infographic below provides a summary of the findings which was presented in Chapter five.
SUMMARY OF FINDINGS

Demographics
- 18-24 years old
- Gen Z

Consumer Sustainability Consciousness (CSC) Dimensions:
- Sense of retribution
- Access to information
- Labelling and peer pressure
- Health
- Crisis (not reliable)

Sense of retribution most reliable dimension of CSC
- 90.6%
  “I started consuming more sustainably when I realised I could contribute to a better world by buying Fairtrade products”

Sustainable Purchase Intentions (SPI) Dimensions:
- Trust
- Accessibility

Trust most reliable dimension of SPI
- 98.7%
  “I would consume more sustainable products if they were cheaper”

Consumer Sustainability Consciousness and Sustainable Purchase Intention: Hypotheses outcome
- Trust
- Accessibility

Figure 9: Infographic: Summary of Findings
Chapter Six: Conclusions, Implications and Future Research

6.1 Introduction

The objective of the current study was to determine consumers’ sustainability consciousness and its impact on sustainable purchase intention within the South African fashion retail market focusing on the Gen Z consumer segment. This chapter will provide conclusions, highlight managerial implications, overall research contributions, study limitations and finally state opportunities for future research.

6.2 Managerial Implications

The findings of this research provide insight for both academic literature and practical findings for businesses to implement. These insights will be shown by highlighting several key outcomes presented in Chapter five.

➢ The most reliable dimension of consumers’ sustainable consciousness: Sense of Retribution

The study contributes to our understanding of Gen Z’s conscious consumption with regards to purchasing sustainable products within the fashion retail industry. The most reliable dimension was found to be, sense of retribution, and was represented by the following statement, “I started consuming more sustainably when I realised I could contribute to a better world by buying Fairtrade products”. This insight provides South Africa’s leading retailers like Pick n Pay and Woolworths who both sell Fairtrade products with the opportunity to create a targeted Fairtrade product offering for the Gen Z consumer base. An example of this targeted offering could take form of providing all university students with a discount off their respective Fairtrade product range. Furthermore, this finding offers fashion retailers with the opportunity to investigate a potential partnership with Fairtrade such as launching an exclusive Fairtrade clothing collection.

➢ The most reliable dimension of sustainable purchase intention: Trust

This work contributes to the existing knowledge of sustainable purchase intentions by providing further insight into the trust aspect of it. 98.7% of the respondents agreed with the statement “I would consume more sustainable products if they were cheaper”. This finding presents a crucial opportunity for fashion retail brands to explore a relevant pricing strategy that is best suited for the Gen Z consumer cohort. There are three main types of pricing strategies: new-product pricing, product-mix pricing and price-adjustment that brands can
apply. The new product pricing strategy has been chosen to form part of this discussion. This strategy comprises of the following two pricing categories:

- Market-skimming pricing: This pricing plan entails setting a high price whereby a few but profitable sales are received
- Market-penetration pricing: This pricing plan entails setting a low price in order to attract a large number of buyers

Given that the consumer segment is the Gen Z market, the market-penetration pricing may be more applicable as majority of this cohort depend on their families for income required to make purchases. As mentioned in Chapter two, there are six forms of sustainable fashion; custom made, sustainable design and production, fair and ethically made, waste management, second hand and collaborative consumption. Retail brands could therefore investigate which form of sustainable fashion is the most cost effective to produce for the Gen Z consumer. An example would be for retailers to offer an online second-hand shop where the Gen Z market can purchase cost effective clothing. This allows the respective fashion retailer to generate a profit on the pre-loved apparel whilst connecting and establishing a meaningful relationship with the Gen Z consumer.

Due to the COVID-19 pandemic, there has been a focus on supporting local fashion brands and therefore a research opportunity to include ‘buying local’ as a seventh form of sustainable fashion. Buying local is considered sustainable due to the following reasons: reduces carbon footprint, increases accessibility and boosts job creation (Testa, Russo, Cornwell, McDonald & Reich, 2018). Ultimately, buying local supports sustainable production and consumption as it results in a reduction in environmental impact and stimulates economic activity. Consequently, there is an important opportunity to fulfil the gap of offering local cost-effective sustainable fashion.

➢ **H2: Consumers’ sustainability consciousness has a positive influence on intention to purchase sustainably, as far as the trust dimension is concerned.**

The findings from this study revealed that the health dimension of consumers’ sustainability consciousness is the only supported and significant positive influence on the intention to purchase sustainably, as far as the trust dimension is concerned. These findings will be of interest to retailers that offer both food and fashion such as Pick n Pay and Woolworths. There is an opportunity for these retailers to apply the product-mix pricing strategy in form of
the product bundle pricing whereby a healthy meal and sustainable fashion item is combined and offered at reduced price. These retailers could potentially customise their sustainable offerings to the Gen Z market by gaining a better understanding of this consumers’ health choices and potentially combine their food and clothing offering to increase Gen Z’s intent to purchase. An example would be for Pick n Pay to use the database of their smart shopper loyalty club of their older Gen Z shoppers (aged 18-24 years) to gain a better understanding of this cohort’s shopping behaviour. Thereafter, producing a customised sustainable food and clothing offering for the respective Gen Z consumer. Similarly, Woolworths could utilise their WRewards loyalty database of their older Gen Z shoppers to provide a sustainable product-mix to this consumer market.

➢ **H3: Consumers’ sustainability consciousness has a positive influence on intention to purchase sustainably, as far as the accessibility dimension is concerned.**

This study has identified that the health, labelling and peer pressure dimensions of consumers’ sustainability consciousness positively influences the accessibility aspect of the sustainable purchase intention. The research finding supports the work by de Carvalho et al. (2015) as the trust aspect of sustainable purchase intention relates to the consumers’ belief to know and gain product assurance which is developed by their understanding of product labels. The insights gained from this finding may be of assistance to South African fashion retailers that currently have sustainable offerings such as Poetry, Woolworths, The Foschini Group and Cape Union Mart. These findings could be applied when these retailers plan their sustainable offerings by focusing on introducing health aspects to their product offerings and ensuring that the labels of their sustainable range is well communicated. An example of this would be for The Foschini Group to collaborate with a healthy food provider such as the Food Lover’s Market on an exclusive sustainable collection. This collection could take form of selling a range of locally produced t-shirts that are made from ethically sourced cotton as part of the Better Cotton Initiative. The labelling aspect can be communicated by applying an exclusive colour to the price tag of the respective sustainable collection and also highlight the third-party, Better Cotton Initiative, that was used as part of this collaboration. Ultimately, strengthening the Gen Z consumers’ brand preference towards both the food and fashion retailer and increasing this cohorts’ intentions to purchase.

6.3 Research Contributions
This work contributes to existing knowledge on consumers’ sustainability consciousness by providing research insights into the impact this construct on sustainable purchase intention amongst Gen Z in the South African fashion retail market. Therefore, these findings will be of interest to the field of both academia and to businesses who currently offer or intend to offer sustainable fashion offerings. The findings from this study make several contributions to the current literature on understanding conscious consumer behaviour within the field of sustainability. These results provide a holistic view of the conscious Gen Z consumer in the rapidly expanding field of sustainability. Furthermore, the new understanding of consumers’ sustainability consciousness within an emerging market should help to improve predictions of the impact of the Gen Z consumer market and their sustainable consumption behaviour.

6.4 Limitations and Future Research

The scope of this research was limited in terms of the scale of the study. Given that this survey was distributed to the University of Cape Town student population within a pandemic, many students had challenges accessing the survey online. As a result, only 211 responses were received with only 159 valid responses. Although the current study is based on a small sample of participants, the findings suggest there is scope to develop a better understanding of the dimensions of consumers’ sustainability consciousness by re-looking the crisis aspect and explore if there are additional dimensions to consumers’ sustainability consciousness within an emerging market context. Furthermore, this study took place within South Africa where eleven languages are practiced and thus could have resulted in representative bias as the survey was only conveyed in English. The study should therefore be repeated with a larger sample size using more than one South African official language. A natural progression of this work is to examine Gen Z’s sustainable consumption actual purchase behaviour as this study was limited to understanding this cohorts’ sustainable purchase intentions.

6.5 Chapter Summary

In conclusion, the present study was designed to determine consumers’ sustainability consciousness impact on sustainable purchase intention within the South African fashion retail market focusing on the Gen Z consumer segment. The key aspects of this chapter focused on the practical implications of the study by providing managerial implications, contributions to research, highlighting limitations and providing recommendations for future studies.
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Appendix A: The Consumers’ Sustainability Consciousness Model
Appendix B: Questionnaire

Participant Information Sheet

An investigation of consumers’ sustainability consciousness amongst Gen Z in the South African fashion retail market.

Good day,

My name is Mymoena Williams and I am conducting research towards Master’s Degree in Marketing and would like to invite you to participate in this academic questionnaire. The purpose of this questionnaire is to gather information to uncover what the main drivers of conscious behaviour of sustainable consumption are amongst Gen Z South African consumers. The research is purely for academic purposes in fulfilment of my degree and has been approved by the Commerce Ethics in Research Committee.

Participation in this study is entirely voluntary and you may choose to withdraw from the study at any point in time. Please note that the choice not to participate or to withdraw from the study will have no adverse consequences. Pleased be assured that the data collected from this study will remain private and treated with confidentiality. In order to ensure that your right to anonymity is respected please do not put your name anywhere on the questionnaire.

The questionnaire consists of eight sections A, B, C, D, E, F, G and H thus should take approximately ten minutes of your time. Please complete all the questions in order to ensure that the questionnaire can be used. You will be presented with five options for each question. Please indicate the response that you find most appropriate from 1 (strongly disagree) to 5 (strongly agree). There are no correct or incorrect answers, however please only indicate one answer per statement.

Thank you in advance, your participation is greatly appreciated.

Researcher: Mymoena Williams
Research Supervisor: Lebogang Mototo

Contact details: 084 414 6772 072 907 9943

Wllmym001@myuct.ac.za lebogang.mototo@uct.ac.za
UNIVERSITY OF CAPE TOWN
School of Management Sciences

Questionnaire

SECTION A: Respondent Profile

This section includes some general and biographical questions. Please indicate your answer by marking (X) where appropriate.

1. Please indicate your age________________

2. Current educational qualifications (please mark X on the corresponding line)
   ___ School-leaving Certificate
   ___ Matric Certificate
   ___ Diploma
   ___ Undergraduate Degree
   ___ Post-graduate Degree

3. Select which fashion brands you purchase from?
   - Cotton On
   - Donna
   - Exact
   - Fabiani
   - Foschini
Below are statements which determine your patterns of sustainable consumption. 
Sustainable products include; made locally, made from recycled material or can be recycled, sourced ethically and made from environmentally friendly raw material etc.

SECTION B: SENSE OF RETRIBUTION

Below are statements about consuming products that are good for the community and the environment, you are required to indicate the extent to which you agree or disagree with the statement by marking (X) the appropriate number where:

*Fair Trade is a movement aimed to help producers in developing countries to work in better social and environmental conditions.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Moderately agree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>
Please indicate your level of agreement with the following statement:

"I started consuming more sustainably when ...".

| I realised the superior quality of organic products | Strongly disagree 1 2 3 4 5 | Strongly agree |
| I began to want to give my contribution to my local community or society | Strongly disagree 1 2 3 4 5 | Strongly agree |
| I realised I could contribute to a better world by buying *fair trade products | Strongly disagree 1 2 3 4 5 | Strongly agree |
| I started making an effort to buy products in recyclable packaging | Strongly disagree 1 2 3 4 5 | Strongly agree |
| I started buying *fair trade products to help small communities to have better working conditions | Strongly disagree 1 2 3 4 5 | Strongly agree |
| I stopped buying products tested on animals | Strongly disagree 1 2 3 4 5 | Strongly agree |

SECTION C: ACCESS TO INFORMATION

Below are statements about Access to Information when choosing to buy a sustainable product, you are required to indicate the extent to which you agree or disagree with the statement by marking (X) the appropriate number where:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Moderately agree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

Please indicate your level of agreement with the following statement:

"I started consuming more sustainably when ...".

<p>| I realised we were polluting or destroying nature | Strongly disagree 1 2 3 4 5 | Strongly agree |
| I felt alert to the importance of | Strongly 1 2 3 4 5 | Strongly agree |</p>
<table>
<thead>
<tr>
<th>social and environmental certifications</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I saw a documentary or shocking information that led me to be more careful about what I buy</td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>I saw information on the internet that led me to change my consumption patterns</td>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>

SECTION D: LABELLING AND PEER PRESSURE

Below are statements about **Labelling and Peer Pressure behaviour when you consume sustainably**, you are required to indicate the extent to which you agree or disagree with the statement by marking the appropriate number where:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Moderately agree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

Please indicate your level of agreement with the following statement:

"I started consuming more sustainably when ...".

<table>
<thead>
<tr>
<th>I began to be interested in information on product labels</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wanted to try products/practices that people close to me recommended</td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>The product labels called my attention to characteristics that fit with my values</td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>I realised that I would buy</td>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>
sustainably even with a lower product quality

SECTION E: HEALTH

Below are statements about your Health – making choices that are good for you and the planet. You are required to indicate the extent to which you agree or disagree with the statement by marking the appropriate number where:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Moderately agree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

Please indicate your level of agreement with the following statement:

"I started consuming more sustainably when ...".

| I started to pay more attention to my health | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| I began to consume more fruits and vegetables | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| I started following a vegetarian diet | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

SECTION F: CRISIS

Below are statements about cautious and conscious spending, you are required to indicate the extent to which you agree or disagree with the statement by marking the appropriate number where:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Moderately agree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

"I was shown that consuming South...".

| I was shown that consuming South | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

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2021 AMA Marketing and Public Policy Conference

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African products made more sense for the local economy  

I personally suffered issues of the current crisis and had to pay more attention to what I really needed to buy  

SECTION G: TRUST  
Section G measured the respondents’ intentions to buy sustainable products using the trust dimension. Examples of the questions include:

"I would consume more sustainable products if":

<table>
<thead>
<tr>
<th>Question</th>
<th>Agreement Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Were cheaper</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Were available in more stores</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Were available closer to home</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I trusted their certification and source of raw materials more</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Had better visibility in store</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Better understood their benefits</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I understood better what is written on the packaging</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I knew the brands better</td>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

SECTION H: ACCESSIBILITY
Section H measured the respondents’ intentions to buy sustainable products using the accessibility dimension. Examples of the questions include:

"I would consume more sustainable products if"

<table>
<thead>
<tr>
<th>They offered more opportunities for experimentation</th>
<th>Strongly disagree</th>
<th>1 2 3 4 5</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have had a better consumer experience in the past</td>
<td>Strongly disagree</td>
<td>1 2 3 4 5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>My day-to-day brand also offered this type of product</td>
<td>Strongly disagree</td>
<td>1 2 3 4 5</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

THE END

Thank You!
Appendix C: Ethics Letter

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06/08/2020

Mynoena Williams
School of Management Studies
University of Cape Town

REF: REC 2020/08/003

An investigation of consumer sustainability consciousness amongst Gen Z
in the South African fashion retail market

We are pleased to inform you that your ethics application has been approved. Unless otherwise
specified this ethical clearance is valid until 31-Aug-2021

Your clearance may be renewed upon application.

Please be aware that you need to notify the Ethics Committee immediately should any aspect of
your study regarding the engagement with participants as approved in this application, change.
This may include aspects such as changes to the research design, questionnaires, or choice of
participants.

The ongoing ethical conduct throughout the duration of the study remains the responsibility of
the principal investigator.

We wish you well for your research.

Jacques Rousseau
Commerce Research Ethics Chair
University of Cape Town
Commerce Faculty Office
Room 2.26 | Leslie Commerce Building

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"Our Mission is to be an outstanding teaching and research university, educating for life and addressing the challenges faced
in society."
ANXIETY UNDER A PANDEMIC: A GENDER LENS ON YOUNG ADULTS’ COPING AND SUBSEQUENT REGULATION OF VICE FOOD AND BEVERAGE CONSUMPTION

Contact Information: For further information, please contact David Jaud, Assistant Professor of Marketing, Kedge Business School (david.jaud02@kedgebs.com) or Renaud Lunardo, Associate Professor of Marketing (renaud.lunardo@kedgebs.com).

Keywords: Anxiety; Coping; Acceptance; Positive reinterpretation; Vice consumption.

Description: This research employs a large field study conducted in France (N = 1,023) to show that young adults engage in unhealthy consumption because their anxiety prevents them from accepting and positively reinterpreting the situation.

EXTENDED ABSTRACT

Research Question – More than half of the population (54%) exhibited mental health problems during the COVID-19 lockdown (Fullana et al. 2020). The pandemic has particularly affected young adults aged 18–34 because they struggle more than older adults do with feelings of isolation (Mumphrey and Sinco Kelleher 2020). Beyond mental health, the COVID-19 pandemic has also affected eating habits. Considering such negative impact of the COVID-19 pandemic on well-being, we aim in this research to investigate the effect of anxiety on vice food and beverage consumption. People might aim to deny or focus on the negative aspects of the crisis (Torales et al. 2020) and gender might play a role in the regulation of vice food consumption (Rolls, Fedoroff and Guthrie 1991). However, no evidence exists about either the underlying roles of specific acceptance and positive reinterpretation of a situation in the relationship between anxiety and vice consumption or the moderating role of gender in these effects. Therefore, this article aims to investigate the effect...
of anxiety on vice consumption through the serial mediating roles of acceptance and positive reinterpretation, and account for the moderating role of gender.

**Method and Data** – Students (N = 1023; 91.8%; Mage = 22.38, SD = 3.71; 61.3% female) from a major French business school were recruited online in April 2020. After having read a cover letter, participants were asked to complete a series of measures, among which:

- a measure of vice consumption (r = .37, p < .01; “Over the past 3 weeks, have you consumed more or less of the following foods/drinks compared with usual weeks?” (1) “Soft drinks or sodas”; (2) “Cookies, pastries, burgers, pizzas, candies, chocolate, ice cream”; anchored with “1. Much less” to “7. Much more”);

- a 4-item measure of anxiety (Sego and Stout 1994; α = .81; e.g., “When thinking about COVID-19 ... “I often feel anxious”; “1. Strongly disagree” to “7. Strongly agree”).

- 3-item measures of acceptance (Carver et al. 1989; α = .81; e.g., “I accepted that this has happened and that it can't be changed”) and positive reinterpretation (Strutton and Lumpkin 1994; α = .87; e.g., “I came out of the experience better than I went in”; “1. Not at all” to “5. A lot”).

**Summary of Findings** – A serial mediation indicated that anxiety increases the consumption of unhealthy food and beverages (p < .001). Anxiety decreases acceptance (p < .001), then acceptance increases positive reinterpretation (p < .01), which in turn decreases vice consumption (p < .05). Finally, there was a positive and significant serial indirect effect of anxiety on vice consumption through (1) acceptance and (2) positive reinterpretation (95% CI = .0001, .0036). These results bring support to our hypotheses regarding the mediating roles of acceptance and positive reinterpretation on the effect of anxiety on vice consumption.
We next investigated the moderating role of gender. The results revealed that when anxiety is low, females engage more in positive reinterpretation and vice consumption, and engage less in such consumption when the level of anxiety is high. However, when the level of anxiety increases, females accept the pandemic more than males. Hence, although females consume more unhealthy foods than males when they are not anxious, this trend reverses when females experience high levels of anxiety and use acceptance to regulate their anxiety.

Statement of Key Contributions – This research first contributes to further understanding the effect of pandemic-related anxiety on vice consumption by investigating both the underlying mechanisms of this effect and its boundary conditions. As such, this research extends results from the literature on negative emotions and unhealthy eating behavior (Macht 2008; Macht and Simons 2000; Tice, Bratslavsky, and Baumeister 2001; Wallis and Hetherington 2009). Second, by testing the serial mediating roles of acceptance and positive reinterpretation, this research answers a recent call from Han, Duhackek, and Agrawal (2015) to test coping models that involve more than a single coping strategy. This research then contributes to the field of consumer coping theory (Duhacheck 2005; Duhachek, Agrawal, and Han 2012; Han et al. 2015; Han, Duhacheck, and Agrawal 2016) by better understanding when and why consumers engage in two coping strategies successively. Finally, for policy makers, our results suggest that because acceptance and positive reinterpretation appear to be effective strategies to cope with anxiety – especially amongst young male adults –, we recommend policy makers and social marketers stimulate the practice of mindfulness activities to prevent engagement in unhealthy food consumption during a pandemic.

References are available upon request
Birds of a feather stick together. How CEO-CMO duos influence differentiation

Author: Johanna Alfs, University of Muenster

Contact Information: j_alfs01@uni-muenster.de

Keywords: Chief Marketing Officer, Chief Executive Officer, Upper Echelons, Differentiation

Description: The paper examines how homogenous CEO-CMO duos influence differentiation

EXTENDED ABSTRACT

RESEARCH QUESTION

Despite the extensive empirical research on differentiation strategy and its outcomes, there is a limited understanding of how the characteristics of the CEO and CMO influence the decision-making process. Our research addresses this gap by drawing on the upper echelons and marketing strategy literature to posit that homogenous CEO-CMO duos influence differentiation strategy depending on the specification of their characteristics.

METHOD AND DATA

To test our hypothesis, we gathered a sample of all U.S. firms included in the S&P 500 in the 12-year period between 2006 and 2017 for at least three consecutive years. We focus our research on larger firms because of the low prevalence of CMOs in smaller firms. We used the firms' annual Form-10K submissions, proxy statements, annual reports, and other publicly available sources such as executives' professional biographies, articles in the press, company
websites, and executive's social media profiles (e.g., LinkedIn) to collect the data regarding the personal characteristics of the CMO. In total, we get 1,120 observations.

Our model includes a wide array of control variables that have the potential to influence decisions regarding marketing strategy. To decide which variables to include in our models, we follow existing research on CEO and CMO characteristics, marketing strategy, and CEO and CMO presence outcomes. We conduct a fractional probit regression to test our models on marketing strategy and prove the robustness of our models with various robustness tests.

SUMMARY OF FINDINGS

We find that duos consisting of young managers positively influence differentiation. We also examine the influence of shared high educational degrees and find a positive association with differentiation. Moreover, we examine how CEO-CMO male duos influence differentiation and show that they positively influence differentiation, as we expect because males tend to more risky strategic decisions. CEO-CMO duos consisting of two marketing experienced professionals are positively related to differentiation, indicating the relevance of marketing experience for advertising investments. Besides marketing experience, the firm-specific experience deriving from an outsider or insider status plays an essential role in succession decisions. According to our results, CEO-CMO outsiders negatively influence differentiation.

STATEMENT OF KEY CONTRIBUTION

The elaborated findings enhance the existing upper echelons research by analyzing the influence of homogeneity among the CEO and CMO. We add to the research on specific CxOs and their functional strategies. We show that homogeneity in specific characteristics is a significant predictor of strategy. This study contributes to the overarching link between
upper echelons research and marketing. We contribute with our findings to marketing strategy research by showing that the CEO-CMO duo characteristics are antecedents of differentiation. Hence, we contribute to the limited knowledge of marketing leadership for organizational outcomes such as strategic decisions.

References are available upon request.
BLOCKCHAIN AND THE TRANSFORMATION OF PUBLIC POLICY IN MARKETING

Sunil Erevelles, PhD, University of North Carolina at Charlotte

Shery Ramezanian, LitPRO, LLC

Chastin Bassingthwaighte, University of North Carolina at Charlotte

Suzanne Collins, DBA, University of North Carolina at Charlotte

For further information, please contact Sunil Erevelles, PhD, University of North Carolina at Charlotte (sunil.erevelles@uncc.edu)

Key words: blockchain, social change, public policy, marketing, e-commerce

Description: The authors present a framework with key foundational premises for public policy considerations in the new blockchain marketplace.

EXTENDED ABSTRACT

Research Question - A blockchain is a secured record of assets and transactions between parties (blocks), chronologically connected together (chained) with previous blocks and governed by a consensus mechanism to form an open, immutable, transparent and decentralized ledger of marketing activity. While the paradigm associated with the Internet, and Big Data in particular, is focused on the sharing of information, the paradigm associated with the blockchain is focused on the sharing of value. Consumer trust in institutions is currently at critically low levels. As this crisis, partially caused by institutions that have misused sensitive consumer data or have failed to adequately protect that data, blockchain is rapidly emerging as a solution to restore trust, as well
as security, authenticity, disintermediation and privacy in marketing activities. Additionally, in both developed and developing countries, millions of people have been shut out of prosperity because of barriers imposed by institutional intermediaries. Despite the potentially large impact of blockchain in marketing, relatively little thought has been given to critical public policy issues related to the future of blockchain in marketing. To fill this gap, the authors present a framework with key foundational premises for public policy considerations in this rapidly emerging blockchain-based marketplace.

**Summary of Findings** – The blockchain represents a seminal paradigm shift that is likely to radically transform marketing and improve people’s lives. In a world where trust in institutions has reached critically low levels, the blockchain represents a lifeline that may help restore consumer trust by helping organizations to better manage the welfare of their stakeholders, and especially their customers. In this paper, we propose an initial public policy framework to assist in helping the blockchain grow, while protecting the interests of customers and other stakeholders that use it as a marketplace. The initial public policy framework includes foundational premises related to the oversight of consumer trust, consumer security, product authenticity, channel disintermediation and consumer identity. Specifically, foundational premises are developed to provide public policy insight to oversee the shift from subjective consumer trust in centralized institutions to objective consumer trust in the blockchain, to address new and emerging consumer security gaps in distributed blockchain networks and to address the oversight and verification of blockchain-based product authenticators and their sources. Further, public policy foundations to ensure oversight as the blockchain disintermediates channel intermediaries, and the tracking and oversight of pseudonymous consumer identities are also suggested.
Statement of Key Contributions - While Big Data has allowed marketers to gain unprecedentedly rich insight about consumers, it also has allowed companies and governments to misuse sensitive consumer data, resulting in pervasive violations of consumer trust. Moreover, sufficient care has not been taken to safeguard this personal data, with 7.9 billion consumer data breaches occurring in 2019. Blockchain is rapidly developing as a solution to restore trust and to enhance consumer welfare. This paper provides a proactive public policy framework to help oversee the emerging blockchain marketplace. Blockchain has the potential to substantially improve human lives and benefit the disadvantaged, who cannot participate in the rewards of a market-driven society because they have been disenfranchised by intermediary institutions, such as credit agencies and banks. The blockchain provides them with a means to bypass these intermediaries and potentially partake in prosperity. This paper provides an initial framework for academics and practitioners of public policy to help support these game-changing attributes of blockchain while providing the necessary oversight. No doubt, further research needs to be carried out before a more comprehensive public policy framework for the blockchain marketplace can be realized. This paper serves as a reasonable first step in the realization of that goal.

References are available upon request.
CARBON TAX EFFECTS ON GASOLINE PRICE COMPETITION

Syed Mohammad Ali Shah, McMaster University

Ruhai Wu, McMaster University

For further information contact: PhD Candidate Syed Mohammad Ali Shah, DeGroote School of Business, McMaster University (shahs77@mcmaster.ca)

Keywords: carbon tax, gasoline, price competition, price strategy

Description: This research explores the impact of a carbon tax on price competition in the retail gasoline market

EXTENDED ABSTRACT

Research Question

Amid significant opposition, but in line with its plan for a greener future, the federal government in Canada imposed a controversial carbon tax on gasoline in Ontario on April 1st 2019. The impact of the carbon tax in a competitive market and how it affects retail price competition are not clear. It is important to gain an in-depth understanding of this issue since retailer pricing has an impact on retailer profits and consumer surplus. Tax imposition raises costs for retailers and compels them to pass on higher prices to consumers. The amount of price hike passed to consumers is determined by competition. In this study, we focus on how heterogeneous sellers adjust pricing strategies under tax imposition and how tax reshapes seller competition among competing retailers. More specifically, we investigate the effect of the carbon tax on gas station pricing by observing its moderating effect on important factors that shape gas stations’ pricing
strategies such as (i) intensity of competition, (ii) the type of consumer, and (iii) brand affiliation.

**Method and Data**

The data for this study comes from 79 gas stations in the city of Hamilton in Ontario, Canada. We used 16 weeks of data, eight weeks before and after the tax imposition, to understand the impact of policy change. Starting February 2019, price data for regular-grade gasoline was collected hourly at each of the gas stations in our sample. This was combined with demographic data from Statistics Canada to yield a richer data set. Furthermore, we collected daily wholesale gasoline price supplied to the city of Hamilton. The resulting rich data set can be analyzed using panel data methods. The Hausman test result of the panel data was significant at the 5% level, suggesting the fixed effect model should be used for the analysis. Since our measures of retail competition such as location, brand, competitive intensity etc., are time-invariant, their effect on the gasoline retail price cannot be estimated separately. However, their impacts on the gas stations’ response to the carbon tax are measurable in the fixed-effect model through the interaction of tax indicator variable with time invariant characteristics.

**Summary of Findings**

Our study shows that after the imposition of the tax, the average gasoline price rises, and the price dispersion among gas stations becomes lower. It implies that gas stations compete more intensively in price. Moreover, the ability of gas stations to raise prices after the tax imposition is negatively correlated to the number of their local competitors. Furthermore, the carbon tax affects disadvantaged consumers disproportionately. Consumers in areas with higher household incomes face a lower increase in prices post-tax compared to those residing in areas with lower
household incomes. It suggests that the 4-cents-per-liter carbon tax significantly stimulated the consumer search activities in the high-income area and restrained gas stations’ ability to raise prices. Our findings also suggest that branded chain stations pass on a lower tax burden to consumers compared to independent gas stations.

**Key Contributions**

Our research offers a new perspective to investigate the impacts of specific taxes. Although the carbon tax applies to all gas stations and consumers equally, high-income consumers take a lower burden of the tax than low-income ones due to the reaction of market competition. The tax is essentially regressive for consumers. Marketing practitioners and policymakers can benefit from this research. With growing concern around the environment, an increasing amount of policy instruments such as carbon taxes are expected to be adopted. This study showcases how these policies reshape competition among retailers and shows managers how to adjust pricing strategies under such policies according to local competition, demographics, and retailer characteristics. The research will also help policymakers better anticipate the consequences of similar policies in retail markets. Our results suggest that carbon tax is not only disadvantageous for lower-income consumers, but also has a disproportionate effect on independent retailers who are not affiliated with larger branded chains, which may run counter to policy objectives.

References are available upon request
CDC PROTECTIVE RECOMMENDATIONS FOR COVID-19 IN ADVERTISED MESSAGING: CONDITIONAL MEDIATION DUE TO CONSUMER COVID-19 CONCERN ON RESTAURANT PATRONAGE INTENTIONS

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Keywords: COVID-19; advertising disclosures; consumer attitudes; patronage intentions

Description: In two studies, we examine the direct and indirect effects of advertised prevention messaging recommended by the CDC to reduce the spread of COVID-19 for dining inside and takeout restaurant settings.
EXTENDED ABSTRACT

Research Question

Over the past year, while many industries have been negatively impacted by the COVID-19 pandemic, the restaurant industry has been hit particularly hard and has witnessed drastic declines in customer patronage. In an effort to regain customer patronage, many restaurants are utilizing advertisements to communicate and promote the protective actions that they have implemented to minimize the spread of COVID-19. While both the protective actions and the messaging used are often informed by the CDC, the protective actions vary depending on the extent and frequency restaurant employees interact directly with customers (CDC 2020). The purpose of this research is to examine how advertised efforts and procedures implemented by a retail restaurant that make salient different COVID-19 protective actions, as they relate to a specified party, affect attitudes and patronage intentions. In two studies, we examine the direct and indirect effects of advertised prevention messaging recommended by the CDC in dine inside and takeout restaurant settings on customer patronage intentions. Additionally, we examine these effects across varying levels of consumer concern about the COVID-19 virus. Our results should be of interest to restaurants operating in geographic areas where COVID-19 remains a high risk, as well as to public policy organizations.

Method and Data

In Study 1, participants viewed one of four COVID-19 prevention ad messages. Informed by CDC provided examples (2020), we used three different message orientations: firm (employee)-centric, customer-centric, and community-centric, as well as a no-COVID prevention (control) message condition. The control condition mentioned nothing about COVID-
19 prevention strategies and noted that inside dining was available. Four hundred and three Cloud Research approved MTurk responses were collected. Multi-item outcome measures included attitude toward the restaurant and concern for the consumers’ well-being drawn from prior research (Newman et al. 2014). We measured patronage intentions for more and less extensive contact (e.g., dining inside the restaurant and takeout). We also measured consumer’s concern about COVID-19, a measure modified from prior literature (Menon et al. 2002). Study 2 was also an ad-based experiment that used a similar sample, procedures, and measures but extended the analysis of customer contact levels to patio dining. This study recruited four hundred and two Cloud Research approved MTurk participants and employed a 2 (voluntary protection disclosure: present vs. absent) x 2 (message emphasis: dine-in vs. takeout) x 3 (dining service: dine inside vs. dine on outdoor patio vs. takeout) mixed experimental design with dining service as the within-subjects factor.

**Summary of Findings**

In study 1, there were substantial differences between the COVID-19 ad prevention messaging and the no prevention message control, but there were few differences in the effects of source positioning of the prevention message. The direct effects of the COVID prevention messaging had little effect on dining inside the restaurant, while the effects for takeout were favorable regardless of the message source. The strength of the proposed mediation effects (i.e., moderated mediation) increased as the level of concern about COVID-19 heightened. In sum, results show direct and indirect effects of the advertised prevention messaging that should be favorable for restaurants. Despite differences in design and persuasive communication in Study 2 (also including patronage for dining on an outdoor patio), the pattern of findings was consistent...
with Study 1. The disclosure and COVID-concern again moderated the effects on outcomes, and similar to the CDC’s communications, the outdoor patio dining was shown as an intermediate alternative between dining inside and takeout. Notably, when concern about COVID-19 was high, intentions to dine inside or eat on the patio were lower than for those whose concern was low. Additionally, when concern was high (vs. low), participants were more likely to prefer takeout.

**Key Contributions**

Implications for struggling restaurants are clear; using ad messaging that promotes socially responsible practices to minimize COVID transmission is beneficial, but direct effects on dining inside during COVID were limited, particularly for those with greater COVID concerns. Yet, there are favorable *indirect* effects on patronage intent through perceptual and attitudinal outcomes. The examination of such effects in serial mediation models extends conceptual understanding and offers practical implications for advertising during a pandemic. Our results suggest that restaurants offering a takeout option while voluntarily advertising COVID-19 protective practices result in the highest levels of patronage intentions regardless of the consumers’ COVID-19 concern. This suggests a win-win for restaurants struggling to stay open when consumers’ concern levels can be impacted by various information sources. Given large differences, restaurants may wish to use a tiered trial and extension strategy that promotes using takeout now, then outdoor patio dining, followed by indoor dining when COVID concern dissipates. As the COVID pandemic has evolved since our data collections in Fall 2020, longitudinal research addressing these issues is highly relevant. Further, as case numbers
decrease and vaccines become more widely administered, understanding the changing role of our measure regarding concern about COVID should be useful.

References are available upon request.
CHANGE AGENT OR THREAT?: THE EFFECT OF NFL BLACK QUARTERBACKS ON SOCIAL COHESION

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Keywords: intergroup contact, status threat, social identity, hate crimes, racial bias

Description: This paper investigates if exposure to outgroup celebrities could alleviate prejudice and bias toward the outgroup in general by estimating the effect of National Football League (NFL) black quarterbacks on racial relations in the US using hate crimes, the unemployment gap between black and white, and anti-black slur search percentage within NFL teams' home cities.
EXTENDED ABSTRACT

Research Question

We explore how the increasing prevalence of black quarterbacks in the NFL may affect social cohesion in the US. Sports are often claimed to be a force for unification. The race of NFL quarterbacks represents a pertinent test of this claim given that a black quarterback represents (1) a prominent celebrity in a high stature position that commands esteem, and therefore (2) a potential threat to the perceived racial hierarchy that persists from a prior era when blacks were formally restricted from occupying positions of authority. How does society react to a black quarterback given these associations with the quarterback position and the race? The extant literature on racial relations provides credibility to the possibility of enhanced social cohesion, based on the contact hypothesis, and of enhanced conflict, based on threat theory. The contact hypothesis predicts that a black quarterback could engender greater racial harmony if NFL fans’ admiration for the individual diffuses to other people who share his racial identity. Threat theory, however, predicts that some people in dominant positions of social hierarchy respond to threats to the hierarchy by harming others in the lower position of the hierarchy as a means to protect and reassert their perceived dominance.

Method and Data

We examine anti-black bias, discrimination, and violence with three variables: hate crimes, the unemployment rate gap between black and white, and anti-black slur search percent. Hate crimes are gathered from the Federal Bureau of Investigation (FBI). We collect the total number of annual hate crimes reported in each of the NFL teams' home cities and convert them to per 100,000
residents. We extract black-white unemployment data from the US Census Bureau. For our analysis, we use a black to white unemployment rate ratio to see whether or not the gap widens depending on the presence of black quarterbacks. Our third dependent variable, an anti-black slur search percent, is computed by taking search interest in black racial slurs relative to white racial slurs and Asian-Hispanic racial slurs after gaining the data from Google Trends. We examine the race of NFL quarterbacks by classifying all the starting quarterbacks as non-black or black using The Big Book of Black Quarterback and a List of Starting Black NFL Quarterbacks from Wikipedia. To test our hypothesis, we use fixed effects panel regression and cluster our results at the city level because our hypothetical experiment randomizes the race of the quarterback across cities and years.

**Summary of Findings**

We aim to further enhance the data set with additional control variables and greater precision around the timing of player transactions, the NFL seasons, and when our dependent variables occur. As of now, given our current data, our analysis lends moderate support for the possibility that there were negative reactions to black quarterbacks. With a black quarterback playing in a city, the black-white unemployment rate gap in the city turned out to widen by 0.18 ~ 0.24 ratios and internet searches for anti-black slur went up by 1.32 ~ 1.81 percent relative to white and Asian-Hispanic racial slur internet searches. There was not a statistically significant effect of the race of the city’s NFL quarterback on hate crimes. Directionally, hate crimes were higher in cities with black quarterbacks. Even successful black quarterbacks did not drive a decrease in anti-black bias. Cities with high-performing black quarterbacks were estimated to have 2.89 ~ 3.28 additional hate
crimes per 100,000 residents. Lastly, it appears the black and white unemployment gap in cities with black NFL quarterbacks narrowed by 0.37 ~ 0.39 ratios during the Trump Presidency.

**Statement of Key Contributions**

Adding to an emerging stream of research on the contact hypothesis and threat theory, our research explores the effect of black quarterbacks on social cohesion from several different angles. We identify black quarterbacks as an interesting combination of race and position that allows for a simultaneous examination of the two theories in US society. Furthermore, it offers potential insight into how consumption impacts social behavior. Typically, consumer research studies focus on how social factors affect consumption, but in the present research, we explore how the consumption of sports entertainment impacts anti-black bias, discrimination, and violence. We do not observe evidence that black quarterbacks mitigate the ongoing racism in US society. Of the two theories, the data examined so far are more consistent with threat theory. If this is confirmed by further research, it indicates that society cannot take for granted that exposure to high-status black celebrities will translate into more social cohesion. Our analyses extend previous findings and demonstrate the challenge of building harmony through exposure to celebrities from different backgrounds. Policymakers may need to seek more direct measures to enhance social harmony as well as be on the lookout for potentially racist reactions to the presence of black quarterbacks.

“References are available upon request.”
CLEAN LABELING: IS IT ABOUT PRESENCE OF BENEFICIAL OR ABSENCE OF DETRIMENTAL, HEALTH OR ENVIRONMENT-FRIENDLY? CONSUMER RESPONSE TO PERSONAL CARE CLAIMS

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Keywords: clean labeling, front-of-package claims, message framing, health, environmental friendliness

Description: By examining different personal care and cosmetics claims, our research shows the superiority of absence (e.g., “free from”) vs. presence-framed (e.g., “with”, “contains”) claims for both health and environmental-based messages in influencing attitude and purchase intention.

EXTENDED ABSTRACT

Research Question

The personal care industry is gradually shifting its promises toward health and environmental-based messages, promoting either the addition of beneficial ingredients or processes, or the removal of potentially deleterious additives or procedures (Lee 2011). A key challenge in
expressing health or environmental values to consumers is building the most efficient communication architecture. To influence attitude and behavior, message framing has proven a valuable tool in promoting distinct meanings and perceptions, and thus emphasizing particular attributes (e.g., Levin and Gaeth 1988; Levin, Schneider, and Gaeth 1998; Janiszewski, Silk, and Cooke 2003). Subsequently, several questions arise: first, what is the impact of presence and absence claims referring either to health or environmental friendliness on attitude and behavioral intention toward personal care products? Second, are there any perception differences pertaining to with vs. free from, health vs. environment-friendly products? Third, are there differences as per consumer profile (concerned with health, the environment, personal appearance, peer pressure, or with disparate levels of front-of-package (FOP) literacy)?

Method and Data

Based on Ajzen’s (1985) Theory of Planned Behavior that originally tackles the influence of attitude, subjective norms and perceived behavioral control on intention, we enriched it with both internal (egoistic (concerns with health and personal appearance) and altruistic (concerns with the environment)) and external (perceived credibility of framed claims) variables to measure attitude and purchase intention towards personal care displaying framed claims.

A between-subjects design has been used. 325 participants were recruited through social networks of a cosmetics and personal hygiene brand in Quebec, Canada, and answered our experimental questionnaire. They were randomly assigned to one of our four groups and were presented an identical shampoo bottle where only the main claim has been changed (i.e., alternatively “with avocado oil” (positive + health), “paraben free” (negative + health), “made with recyclable plastic” (positive + environment), “certified for reduced environmental impact”
(negative + environment)). A shampoo bottle has been chosen as the experimental personal care product for its suitability for all kinds of consumers, indiscriminately of sex, age or other characteristics. The research model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM).

**Summary of Findings**

Our study highlights the conditions under which consumers are more reactive to positively vs. negatively framed messages when purchasing personal care emphasizing health or environmental attributes. This research shows the superiority of claims focusing on the absence of a component or process, compared to claims advertising the presence of an ingredient or practice, for both environmental and health-based claims, in order to build consumer attitude and buying behavior toward a personal care product. Even if claims relating to the environment are more efficient than those relating to health in generating favorable attitude toward the product, through perceived claim credibility and attitude toward it, health-based claims are also relevant in shifting a positive attitude into purchase intention.

**Statement of Key Contributions**

Fundamentally, our study contributes to research on consumer quest for well-being. Although individuals are increasingly preoccupied by their health and the consequences of their choices on the planet, few studies have focused on these pre-requisites when consuming personal care commodities (Photcharoen, Chung, and Sann 2020). Research mostly concentrates on micro level analyses, such as on “green” or “organic” attributes (e.g., Hsu, Chang, and Yansritakul 2017). Specifically, our work draws from the theory of planned behavior and framing theory.
From a managerial and public policy perspective, by demonstrating that absence-framed claims are superior to presence-based messages in generating positive attitude and buying intention, our research illustrates personal care companies should focus on communicating about the removal of conceivably detrimental components or processes, confirming “paraben free” and “certified for reduced environmental impact” claims are valuable tools in initiating consumer action.

However, even though addition and removal claims are flooding the market and consumers seem to strongly engage with the latter, neither the FDA nor Health Canada control these. Yet it has been proven, by both the academe (Hastak and Mazis 2011) and European regulators, brands often communicate on acceptable yet potentially misleading messages. Consequently, cosmetic claims should be regulated and more attuned to market trends.

*References are available upon request.*
EXTENDED ABSTRACT

COMMITMENTS AND BADGES AS NUDGES TO LOW-CARBON FOOD SHOPPING BASKETS

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RESEARCH QUESTION

There is increasing concern over the carbon footprint of grocery shopping. Part of the problem could be ascribed to the limited self-control of consumers whilst food shopping. Traditionally, governments introduce regulation to curb self-control failures which could lead to societal challenges, such as obesity. However, there is increasing consumer interest in making sustainable choices. Therefore, we take a novel approach by researching nudges government could enforce or retailers could implement to encourage their consumers to implement which will assist in pursuing their corporate sustainability goals. Commitments have been seen to facilitate self-control in field experiments (Baca-Motes et al. 2013) and a badge could provide further motivation by rewarding the achievement of a sustainability goal. We explore whether the presence of a performance-based badge can additionally motivate consumers. This research presents an experiment testing how commitment and virtual badges could be effective nudges to reduce the carbon footprint of grocery shopping baskets online. We are not aware of prior research that studies nudges targeting consumer self-control on an online grocery shopping platform. The research question asks will a commitment to a sustainable shopping trip, or virtual badge, motivate consumers to lower the carbon footprint of their grocery shopping?

METHOD AND DATA

The hypotheses were pre-registered for the 2 (virtual badge vs. no virtual badge) x 3 (no commitment vs. forced commitment vs. voluntary commitment). We measure the change in carbon dioxide equivalent as the dependent variable. In June 2019 we ran a field experiment similar to Panzone et al (2018), using an online supermarket which could be accessed on any Internet device. Participants could choose from over 900 products supplied by a major British
supermarket. Participants were given a virtual budget of £25.00 for each week of shopping. Participants did two shopping trips, in the first week to collect baseline data and in the following week the participant is randomly assigned to a treatment. The choices are more realistic because participants physically receive the groceries for one week of shopping, which is randomly chosen by the computer, at the end of their week two of shopping. Depending on the treatment, we ask or impose on participants to agree to commit to checking out with a basket within a threshold of 180g CO₂e/100g. This threshold was determined a suitably challenging yet achievable amount based on a pilot study.

SUMMARY OF FINDINGS

725 people from the general public the Northeast of England participated and completed data collection. A Kruskal-Wallis test showed no statistical significance, suggesting that the randomisation of the participants across treatments worked. In the overall sample, 84% of participants are professionals, of which 60% of are 25-44 year olds. Over two thirds of participants (69%, n=500) are female and the most common education level is an undergraduate degree. The Ordinary Least Squares regressions show that having a participant commit to an environmental threshold before shopping leads to a reduction in the mean average total CO₂e of the shopping basket (-2,539gCO₂e, p=0.00). There is no statistical significance in the difference between the type of commitment, therefore, suggesting that a voluntary commitment did not have a larger reduction in CO₂e, compared to a forced commitment. The virtual badge did not have a statistically significant reduction in CO₂e on its own or alongside a commitment.

KEY CONTRIBUTIONS

These results indicate that commitment mechanisms are effective in consumers applying commitment to a goal of shopping sustainably. Therefore, online retailers can facilitate large-scale changes in behaviours towards more sustainable consumption. Rather than regulation, policymakers, such as environmental agencies, can consider influencing supermarkets to encourage to put the onus on their consumers to make commitments to sustainable choices. We further empirical research in commitments for sustainable behaviours (Baca-Motes et al. 2013) and methodologically we add to literature of interventions with feedback of real-time CO₂e (Kanay et al., 2021) Panzone et al (2018).
**Keywords:** Consumer behaviour, goal commitment, sustainability, voluntary, forced.

**Description:** An online supermarket where participants received the groceries, with commitment or badge nudges to see lower carbon footprint.

References are available upon request.
COMPARING SUICIDE-BASED AND RETAIL-BASED FIREARM PROXIES TO LEGAL FIREARM PREVALENCE IN MASSACHUSETTS

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Keywords: Firearm Acquisitions; Firearm Prevalence; Firearm Policy; Firearm Proxies; Firearms; Guns; Policy Research; Proxy Research

Description: This paper compares various suicide-based and retail-based proxies in their ability to proxy for legal firearm prevalence in Massachusetts.

Extended Abstract

Research Question

Valid measures of legal firearm prevalence are needed to evaluate firearm acquisition policies. Existing proxies for firearm prevalence combine legal and illegal prevalence, but legal prevalence is more directly affected by firearm restrictions than illegal prevalence. We define Legal Firearm Prevalence (LFP) as a behavioral measure based on the population of firearm licensees in Massachusetts over a 12-year period. How well do suicide-based and retail-based proxies explain legal firearm prevalence based on Massachusetts data from 2010-2017? Does proxy choice influence empirical research conclusions?
Method And Data

We evaluate the most frequent proxy for firearm prevalence in the literature, the proportion of firearm suicides, abbreviated as FSS. We also evaluate its two components, firearm suicides and total suicides.

For retail proxies, we analyze the population of firearm acquisitions registered with the state of Massachusetts, the population of firearm sales intermediated by an anonymous online firearm retail platform, and the population of federally licensed firearm retailers.

We evaluate each proxy’s performance across cross-sectional, longitudinal, and panel research designs common in the firearms literature. We calculate cross-sectional correlations between legal firearm prevalence and each proxy. We then compare time series data and calculate state-level time series correlations for each proxy and legal firearm prevalence. We also run county-year panel and county-month panel regressions that include county and time fixed effects to better control for unobserved variables. We assess proxy effect sizes and explanatory power.

We update a classic study researching the relationship between firearm prevalence and homicide using recent 2010 to 2017 panel data. We keep the methods constant but only switch the proxy for firearm prevalence to see if proxy choice affects qualitative research findings.

Summary of Findings

Firearm acquisitions is the best proxy for LFP in all research designs tested. FSS performs well cross-sectionally but not in intertemporal or panel designs. FBI background check data track LFP reasonably well but are not available at the county level and therefore cannot be tested in cross-sectional or panel designs. We find that proxy choice is important enough to change qualitative
research findings, holding data and methods constant. We hope these results help to inform future researchers about how candidate proxies for LFP perform in a variety of research designs.

**Statement of Key Contributions**

We establish a new, behavioral, population-level measure of legal firearm prevalence and find multiple reliable proxies for it.

We find firearm acquisitions to be the best available proxy for legal firearm prevalence in all research designs tested. Therefore, we recommend systematic public collection and reporting of firearm acquisitions to better inform evidence-based firearm policy.

The research sheds light on how researchers and policy makers should interpret published studies of firearm prevalence based on existing proxies. It also can help inform future researchers about what proxies might be most appropriate for a particular research design of interest.
Competitive Exclusion in Retail Category Captain Arrangements

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Keywords: Category captain arrangements, category management, retail management, competition, public policy

Description: The authors investigate (1) the underlying characteristics that have raised competitive concerns for category captain arrangements, (2) the types of exclusionary conduct that may be engaged in by category captains, and (3) the countermeasures that may be deployed by retailers and others to defend against this exclusion.

EXTENDED ABSTRACT

Research Question

Category management is a significant development in retailing, affecting hundreds of billions of dollars in sales each year. However, the most common approach, whereby decisions about how to manage a retail category are outsourced to one manufacturer (the “category captain”), has raised persistent concerns among marketing practitioners and competition authorities in the U.S. and abroad. They fear a category captain will misuse its role to exclude competition and harm consumers. Academic research offers insights for understanding the competitive implications of category captain arrangements. However, this research has not organized or detailed the different forms of exclusionary conduct that may occur or the countermeasures that may be deployed to safeguard these arrangements from competitive exclusion. While acknowledging the potential for competitive exclusion, public policy toward category captains also remains unsettled. Addressing this gap, the authors investigate the
underlying characteristics of these arrangements that give rise to competitive concerns, the types of exclusionary conduct that may be engaged in by a category captain, and the countermeasures that may be deployed by retailers to defend against exclusion.

Summary of Findings

The authors investigate the underlying characteristics that have raised competitive concerns for Category captain (“CC”) arrangements, the types of exclusionary conduct that may be engaged in by CCs, and the countermeasures that may be deployed by retailers and others to defend against this exclusion. Past research has offered insights for understanding the competitive implications of CC arrangements. However, this research has not organized or detailed the ways in which competitive exclusion can occur or investigated the managerial countermeasures that can be used to safeguard against this conduct. The current research investigates competitive exclusion in detail and develops organizing frameworks and practice tools to assist marketing and public policy practitioners in understanding, detecting, and safeguarding against its occurrence in CC arrangements.

Statement of Key Contributions

This research investigates (1) the underlying characteristics that have raised competitive concerns for CC arrangements, (2) the types of exclusionary conduct that may be engaged in by CCs, and (3) the countermeasures that may be deployed by retailers and others to defend against this exclusion. Past research has offered insights for understanding competitive exclusion in CC arrangements. However, this research has not organized or detailed the ways in which such conduct can occur or investigated the managerial countermeasures that can be used to safeguard against this conduct. The current research advances understanding of CC arrangements by studying competitive exclusion in detail and developing conceptual frameworks and practice
tools to assist in understanding, detecting, and safeguarding against its occurrence in CC arrangements. For retailers and manufacturers, our research offers insights and guidance for maximizing the managerial performance of CC arrangements. For lawmakers, competition enforcement authorities, and other legal practitioners, our research offers insights and guidance for maximizing the public policy performance of CC arrangements. For academic researchers, this information should be useful to scholars studying category management involving CCs and academics working to better understand and maximize their overall performance.
CONSUMER HEALTH AND WELL-BEING: CASE STUDY ON MILITARY COUPLE FINANCIAL RESILIENCY APPLIED TO COVID-19.

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Keywords: Military couples, resilience, temporal vulnerability, buying habits, COVID-19

Description: Several protective factors limit the financial exposure of military couples, and thus, increase the resilience and financial health of the partners; these results can benefit the general populace to determine factors that can also benefit the financial well-being of non-military couples during times of uncertainty, such as the COVID-19 pandemic.
EXTENDED ABSTRACT

Research Question

Marketing scholars have studied vulnerable populations for many years. The literature on consumer vulnerability posits lack of personal control as a primary cause of vulnerability. During COVID-19 many families faced lack of control in their personal and financial situations. Strong evidence in the mental health and marriage and family therapy literature regarding the adverse effects of deployment and stressors related to reintegration, including financial strain/stressors, impaired mental/cognitive functioning, and strained marital and family relations, makes a compelling case that military personnel and their families represent a vulnerable consumer population. Many military families encounter months of separation altering the decision-making structure of the family nucleus. Our exploratory research will provide insight and knowledge on our three overarching research questions: (1) What are common relationship dynamics dyads for military couples both in deployment and in reintegration? (2) What challenges have military couples faced during deployment/reintegration, and how have they coped with those challenges? (3) How can strategies used by military couples help others be more resilient especially during unpredictable situations such as COVID-19? Based on our case study with military couples and existing literature, we have developed strategies around purchasing habits, communication and financial stressors/conflict that may translate to the general population during and post COVID-19.

Method and Data
The methodology of this study utilizes mixed-method research that includes both a qualitative ethnography, demographic information and a quantitative assessment measuring relationship satisfaction globally and across 10 specific relationship dimensions with military couples. The qualitative ethnographic semi-structured interview was used to better understand military couples’ experiences during deployment and post-deployment upon reintegration. Specific areas of inquiry focused on their experiences regarding finances and communication, as well as experiences of purchasing habits. Word-of-mouth and snowball sampling were used to recruit participants from all branches of the military in southern California and Oahu, Hawaii. Participants completed a demographic questionnaire, a conjoint 1.5-hour interview, and completed the Marital Satisfaction Inventory-Revised (MSI-R) individually. Qualitative research methods utilize an “emergent design,” which means that the research process or questions may change after the researcher begins collecting data. This methodology also allows for themes in participants’ responses to be asked about in later interviews with other participants as data collection proceeds toward saturation. A total of nine ethnographic interviews have been conducted thus far with predominantly Caucasian identifying participants between the ages of mid-twenties to mid-fifties. Participants were given a $50 gift card for completion of the study. Participants had to meet the following criteria to be eligible for participation in the study, where at least one partner was in the military: 1) Must be in a long-term committed relationship (at least 1 year), 2) the couple has been separated for 6 months or longer due to deployment or other military service at some point during relationship. Seven of the nine interviews were conducted conjointly with both partners. The other two interviews consisted of only one partner. Summary of Findings
The following themes related to consumer health and well-being arose in the larger ethnographic study of military couples: (1) Financial System for Couples, (2) Financial Resiliency, Interpersonal Communication and Relationship Stability, (3) Stability of Buying Habits, and (4) Financial Trust Between Partners.

Due to COVID-19, many couples are facing new and unexpected financial challenges. Similar to military families, unexpected challenges can be detrimental to a family’s health and well-being. Using the military couple’s strategy of establishing an agreed-upon financial system would benefit the general populace as they endure COVID-19 because it decreases financial vulnerability that can come with unexpected circumstances. In addition, relationships are interconnected with communication and vulnerability, which reveals how well a couple will cope with unpredictability in deployments. Couples reported that having good communication, relationship commitment/stability, and being older when married and deployed made them less vulnerable to being exploited by marketing campaigns or making large unplanned purchases. Another theme reported was that being on the same page in regard to buying habits reduced the number of financial struggles and arguments. Trust between partners plays a role in the overall health and well-being of a couple when facing difficult financial circumstances like COVID-19.

Statement of Key Contributions

Military couples represent a population with increased vulnerability to health and well-being due to the unpredictability of military life. Their resilience strategies found in financial, emotional, and communication components appear to be interrelated factors that can impact the military couple’s health and well-being. COVID-19 created a shift in consumer vulnerability and facing the new normal which may include economic challenges and job loss. This study
spotlights the positive strategies that couples can embrace during times of unpredictable challenges, such as those that consumers may find during COVID-19. Not surprisingly, research in this area has yet to be explored, given a lack of studies that look at pandemics and the effects on consumer vulnerability, relationships, health and well-being.

Based on our military couple study, we recommend couples can put into place communication strategies and be flexible to overcome challenges that may arise. With a financial communication system and stable buying habits in place, couples will enable interconnectedness and strengthen trust to overcome obstacles that are faced during unprecedented challenging times. As we continue our research on military couples, we will share additional strategies enabled by military couples that can help build the financial health and well-being of all couples, particularly in a post-COVID-19 world.

References are available upon request
CONSUMER KNOWLEDGE, EDUCATION, AND SELF-PROTECTION AGAINST MISLEADING PRODUCT CLAIMS

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Keywords: consumer knowledge, education, misleading claims, ambiguity, advertising

Description: This research demonstrates that knowledgeable consumers are less likely to be persuaded by misleading product claims, because they are better able to perceive differences in the ambiguity of product information.

EXTENDED ABSTRACT

Research Question

Marketers often omit relevant information from the product claims they make, and when they do, policy research demonstrates that consumers are frequently misled into forming erroneous product beliefs. Regulators cannot fully protect consumers from these types of claims, because they are ubiquitous, and typically legal. As a result, Boush, Friestad, and Wright (2015) have called for a “self-protection” perspective, and the development of theories regarding how consumers can protect themselves against being persuaded by misleading claims. Given the potential for consumer education, product knowledge is one consumer factor that has received considerable attention in this area. However, null effects are consistently found.

We uncover the benefits of product knowledge in this context, by theorizing and testing 1) a mechanism that drives the effect of knowledge on product evaluations, and 2) the role of perceived knowledge in education intervention effectiveness. Our first prediction is that being
knowledgeable helps consumers protect themselves against being misled, because they will be better able to perceive differences in claim ambiguity. Building on this idea, our second prediction is that education will also aid consumers in perceiving differences in ambiguity, but only if they are given the confidence to rely on their new knowledge.

**Method and Data**

To test our predictions, we conducted four experiments spanning three domains (experiment 1: cameras, experiment 2: smoothies, experiments 3-4: loans). Each experiment manipulated between-subjects whether participants evaluated an advertised product which made claims that either omitted, or included relevant information. For example, the loan advertisement either omitted or included important loan conditions like the APR. After evaluating the product, we tested our theorized mechanism by asking participants to report their perceptions of product claim ambiguity.

In our first three experiments we tested our first prediction. In these studies, participants evaluated the assigned advertisement and product, and then took a knowledge quiz (either on cameras, nutrition, or loans). In experiment 4 we tested our second prediction. Before participants evaluated the loan, we manipulated their loan knowledge by providing either a rudimentary, or detailed education intervention. Afterwards, we either bolstered or diminished their confidence in their new knowledge, through feedback given under the guise of a future learning opportunity. Participants were then randomly assigned to examine one of the aforementioned loan advertisements, which resulted in a 2(omitted claim information/included claim information) X 2(high objective knowledge/low objective knowledge) X 2(high perceived knowledge/low perceived knowledge) between-subjects design.
Summary of Findings

In our first three experiments we found support for our first prediction, where in each study, we found a significant interaction between our claim information factor and participants’ product knowledge, predicting their perceptions of claim ambiguity. Johnson-Neyman analyses demonstrated that only participants who were sufficiently knowledgeable perceived the claims that were missing relevant information to be significantly more ambiguous than the advertised claims which included that information. In addition, we found that perceived ambiguity mediated the effect of this interaction on consumers’ product evaluations, such that knowledgeable consumers who perceived differences in ambiguity evaluated the product advertised with omitted information more negatively.

In support of our second prediction, we found in our fourth experiment that consumers in the high loan knowledge condition who received the detailed education intervention perceived the loans claims that were missing information to be more ambiguous, but only if they also received confidence boosting feedback. Lastly, we uncovered an unexpected finding. Specifically, the participants who received the rudimentary education intervention and the confidence diminishing feedback also perceived the claims that were missing information to be more ambiguous. This pattern of effects suggests another factor which may aid consumers in self-protection: knowledge calibration.

Key Contributions

While many researchers have proposed that product knowledge influences consumer evaluations of misleading product claims, there is a lack of empirical evidence for the benefits of knowledge in this context. In this work we advance theory on consumer self-protection, by
explicating the ability to perceive differences in information ambiguity as a theoretical mechanism through which knowledgeable consumers can efficiently protect themselves against being persuaded by misleading claims. In addition, advertising research generally finds that consumers perceive ambiguity-eliciting claims to be informative and persuasive. Our findings also contribute to the ambiguity literature by demonstrating that when consumers are knowledgeable, negative product evaluations are more likely.

Lastly, by uncovering that the effectiveness of education programs in this context depends on whether consumers are also confident in the knowledge they acquire, we identify perceived knowledge as an important boundary condition of this self-protection framework. This finding also contributes to consumer education theory on the efficacy of education programs. Specifically, we recommend that government agencies and NGOs can more effectively aid consumers in self-protection by providing knowledge calibrating feedback during education, and by avoiding interventions that encourage positive consumer behaviors by bolstering consumer confidence alone, and thus, miscalibrating their knowledge.

References are available upon request.
CONSUMER PERCEPTIONS OF, AND THE “HEALTH HALO” SURROUNDING, PLANT-BASED MEAT ALTERNATIVES

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Keywords: alternative meat, plant-based meat alternatives, lab-grown meat, cultured meat, sustainability, health, policy.

Description: This research explores consumer perceptions of plant-based meat alternatives and finds the presence of a “health halo” surrounding these products, in which consumers believe PBMA’s are much healthier than, and reduce disease risk relative to, real meat.
EXTENDED ABSTRACT

Research Question

Despite the explosive growth of the plant-based meat alternative (PBMA) sector, little is known about consumers’ perceptions of these products. Further, as PBMAs become readily available in restaurants around the world, it is important to understand the inferences consumers make about the attributes of PBMAs relative to other options, particularly in limited information environments like restaurants. Despite being promoted as a healthier alternative to traditional meat, nutritionally speaking, PBMA patties are not notably dissimilar from beef patties, with comparable calorie and protein levels and small differences in saturated fat, though PBMAs often contain a greater amount of sodium. We explore consumer perceptions of meat alternatives, including whether they believe them to be healthier than traditional meat, along with ways to attenuate these biased perceptions with the disclosure of objective nutrition information disclosure.

Method and Data

Participants for all studies were recruited through MTurk.

Summary of Findings

Study 1 provides evidence that PBMA burgers are viewed as healthier than beef burgers. Interestingly, those seeing a plant-based burger viewed the product as relatively healthy (compared to those evaluating beef burgers), even when the calorie levels in both conditions were equivalent. Study 2 replicates the finding showing a misperception regarding PBMAs healthfulness, while
further demonstrating that a nutrition information disclosure alone is not enough to mitigate consumers’ [mis]perceptions that PBMAs are healthier than beef, despite the focal PBMA burger being objectively less healthy. However, we demonstrate that this health halo may be mitigated when nutrition information is disclosed in a way that provides consumers with meaningful context (i.e., a comparison between the nutritional content of beef and PBMA burgers).

**Key Contributions**

Given the increasing demand for PBMA restaurant offerings, it is an important and timely topic for the marketing, public policy, and public health communities. Our results suggest that in low information environments (e.g., restaurants), many consumers believe that PBMAs are healthier. We show that, although many consumers correctly associate meat alternatives with being more environmentally friendly, this strong, unwarranted “health halo” surrounding PBMAs persists. These misconceptions may be challenging to mitigate. The currently accepted menu-based intervention of using calorie labels does not appear to mitigate the health halo, nor does a full nutritional panel. However, providing nutritional information side-by-side with a similar, traditional meat offering makes the nutritional parity between traditional meat and PBMAs salient.
Debunking Misinformation in Advertising
Jessica Fong, Tong Guo, Anita Rao*
May 20, 2021

Abstract
Many brands differentiate themselves by highlighting the absence of certain ingredients (e.g. no GMO) with some going as far as to deceptively claim those ingredients are toxic. Because such claims can spread misinformation among consumers, various interested parties – regulators, the media and competitor brands - aim to debunk such misinformation. However little is known whether a) such misinformation in advertisements alters consumers’ willingness to buy a product and b) if so, whether debunking can effectively revert the effect of misinformation. This paper aims to empirically understand the impact of misinformation and that of debunking in the context of three ingredients in product categories in which misinformation is prevalent: aluminum in deodorants, fluoride in toothpastes, and GMOs in food. We find that an additional exposure to misinformation can further alter consumers’ willingness-to-pay, and debunking from a trustworthy source plays an important role in correcting consumers’ misbeliefs. Because existing theories on how people update beliefs yield different predictions on who is most impacted by debunking, we also elicit beliefs to understand whether debunking works for those with the most misinformed beliefs. We find debunking does correct even the strongest misinformed beliefs, a promising finding for policymakers aiming to correct such misbeliefs in the marketplace.

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1 Introduction

Misinformation in advertisements is a widespread issue. Between 2015 and 2020, the FTC filed 172 cases regarding misleading advertising and marketing, with settlements up to $191 million (FTC, 2019a, 2020). While the misinformation directly harms consumers who purchase the product, such ads spread misinformation about the entire product category creating negative spillovers into other products. For example, Kopari, a relatively new entrant in the deodorant market states their product is “aluminum-free” and is therefore non-toxic, as shown in their Instagram post, displayed in Figure 1. Consumers who view this post may form new beliefs that aluminum in deodorants (the main active ingredient to stop sweating) is harmful, and may increase their willingness-to-pay for aluminum-free products, even though the claims are not supported by scientific evidence. The digital era magnifies the severity of this problem, especially in the social media context, as it is difficult to identify and remove misleading ads before it is seen by a potentially large number of consumers.

Regulators, the media, and competitors have taken an active role in debunking such misinformation. For example, Speed Stick, on its website, highlights the lack of scientific evidence suggesting aluminum in antiperspirants and deodorants are harmful (Speedstick, 2020). However, little is known whether such debunking messages are effective on average and whether various sources (media vs regulator vs competitor) differ in their abilities to alter consumers’ behavior led by misperceptions. Moreover, because of the fast-spreading nature of such misinformation, the extent of misinformed beliefs in the current population might be large, and it is unclear whether debunking would work on consumers with pre-existing strong (mis)beliefs.

The research questions in this paper are two-fold. First, the paper aims to understand whether advertising content that intends to spread misinformation and/or exploit consumers’ existing misperceptions influences consumers’ preferences and willingness-to-pay. Second, this paper examines whether debunking is effective at correcting misinformed preferences and whether the effect of debunking varies by the source of the debunking message and by the level of consumers’ existing beliefs about the focal ingredient’s harmfulness.

Empirically measuring the impact of misinformation and debunking is challenging for two reasons. First, there exists almost no exogenous variation in when brands present this information. For example, new entrants enter markets with “chemical-free” labels and ads, making it hard to disentangle whether demand is driven by unique attributes of the product or by the label and/or ad. Even if there is variation in when they place such messages (e.g. Chipotle recently announced no GMO ingredients), such introduction might coincide with an uptick in demand making it hard to disentangle consumer trends from message-induced
demand. Second, it is almost impossible to run a field experiment in this setting because of the inherent deception involved. Debriefing those who were exposed to the deceptive ads (an IRB requirement) is practically infeasible. We therefore design an incentive compatible choice-based conjoint experiment to understand the impact of misinformation as well as of the debunking messages.

The experiment is designed to elicit preferences for various attributes including the ingredient in question (e.g. aluminum) under exposure to various treatments. Participants are first assigned to one of two advertising conditions: a control condition with a regular advertisement, which highlights an attribute unrelated to the ingredient in question, or a treatment condition with an ad containing misinformation about the ingredient in question. Each participant is then randomly assigned into one of four debunking conditions: the control group sees an unrelated factoid from “How Stuff Works”, and the three treatment groups see debunking messages from the media, regulator or a competing firm. By design, the debunking messages across the three sources are identical; they differ only in the source. Furthermore, to understand whether consumers’ ex-ante beliefs about the harmfulness of the ingredient influences their responsiveness to misinformation and debunking, we design an additional survey to elicit beliefs before and after exposure to treatment.

Different theories for how individuals update their beliefs based on presented information lead to differing predictions on whether debunking would be effective for these types of individuals. On one hand, a standard Bayesian updating framework predicts that consumers with the most different ex-ante beliefs from the presented information change their willingness-to-pay the most. The standard Bayesian framework would therefore predict that those with the most misinformed beliefs about the ingredient increase their willingness-to-
pay the most upon seeing new information from debunking messages. On the other hand, 
confirmation bias literature demonstrates that individuals tend to ignore information that 
conflicts with their existing beliefs (Nickerson, 1998). It therefore predicts that debunking 
messages would be the least effective for consumers with strong pre-existing misinformed 
beliefs. This dimension of heterogeneity is important because they have different policy im-
lications: one implies that debunking works for those with misinformed beliefs (an ideal 
outcome for a policy maker) and the other implies that debunking merely re-affirms beliefs 
for those without misinformed beliefs.

We define misinformation as any message that does not follow the federal law which 
states “an ad must be truthful, not misleading, and, when appropriate, backed by scientific 
evidence” (FTC). Nyhan and Reifler (2010) define misinformation to be statements that 
are “not supported by clear evidence and expert opinion”. In our context, ads that state 
“xyz is toxic for you” or imply that their products are “xyz-free and therefore good for 
you” without scientific evidence supporting the same will be considered to be spreading 
misinformation. We investigate three ingredients where misinformation regarding the safety 
of these ingredients is widespread: fluoride, aluminum, and GMOs, with a separate survey 
for each ingredient. For each ingredient, we selected a product category that has firms 
advertising their products are free of the ingredient in question and has both 1) a firm 
within the category that circulated ads containing misinformation, and 2) a firm, regulator, 
and media that debunks the misinformation. These criteria led to the following firms and 
products: Risewell and fluoride-free toothpaste, Kopari and aluminum-free deodorant, and 
Orgain and GMO-free nutritional shakes. To replicate the field setting to the extent possible, 
the ads shown in the advertising conditions are taken from actual social media posts by firms 
in each category, and the debunking messages are summarized from arguments presented in 
actual news articles, regulatory websites and competitors’ websites.

We find that exposure to misinformation in ads can substantially decrease consumer 
williness-to-pay for the ingredient in question in some product categories, but not others. 
The largest impact of the ad with misinformation on willingness-to-pay was for fluoride, with 
a $1.37 (42% of the baseline WTP) decrease, while the misinformation in ads had no signif-
ificant effect for aluminum and GMOs. We also find substantial heterogeneity across product 
categories in consumers’ baseline willingness-to-pay: with consumers preferring fluoride in

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1 For more information about the misinformation around aluminum in deodorants, see https://www.
et al. (2019) find a high proportion of Instagram posts mentioning fluoride contain misinformation. 
Regarding GMOs, in 2018, 49% of Americans believe that genetically-modified foods are worse for one’s health 
than non-genetically-modified foods (Funk et al., 2018).

2 Ideally, the debunking messages would contain exact text from the debunking source. However, the 
sources’ debunking messages are too long, so we summarize them for brevity in the experiment.
toothpaste but wanting to avoid aluminum and GMO in products.

Second, we find that debunking increases the willingness-to-pay across all three ingredients, and is able to undo the damage caused by an additional dose of misinformation. Specifically, debunking increases the willingness-to-pay for aluminum by $1.30 (65%), and by $1.00 (51% of the reduced WTP after exposure to misinformation) for fluoride, after the experimental exposure to misinformation. The effect of debunking after misinformation, while positive, is not statistically significant for GMOs. Moreover, debunking is also able to eradicate the ex-ante aversion for aluminum by up to 71%. Although we find that regulator messages are directionally the most effective, followed by media and lastly by competitors, the differences across these sources are not statistically significant. We caveat this finding with the acknowledgment that in a real-world setting where misinformation spreading ads are ubiquitous and debunking messages might be harder to access, the damage created by misinformation might be more severe.

Finally, we find that debunking is able to correct consumers’ misinformed beliefs and that it is most effective for those who think the ingredient is harmful, both in terms of stated beliefs and revealed preferences, a prediction consistent with standard Bayesian updating. This finding is encouraging for policymakers who would want their debunking messages to have an impact on the most misinformed.

The rest of the paper proceeds as follows. We review the literature and highlight this paper’s contributions in Section 2. We provide a theoretical framework of how misinformation and debunking can impact beliefs in Section 3. Section 4 describes the experiment design and Section 5 describes the survey details and the data. Section 6 reports the demand estimates. We discuss our findings and conclude in Section 7.

2 Literature Review

Advertising has been theoretically and empirically well researched. The vast majority of this literature has focused on truthful advertising with deceptive advertising only recently receiving empirical attention. Recent work has focused on review fraud (Mayzlin et al., 2014; Luca and Zervas, 2016; He et al., 2020) and false claims (Rao and Wang, 2017; Avery et al., 2013; Chiou and Tucker, 2018; Rao, 2020).

Empirically measuring causal effects of false information is challenging because creating exogenous variation that spreads misinformation is not feasible: the FTC strictly prohibits such deceptive advertising, and the IRB requires debriefing anyone exposed to the ad, which might not be feasible in a field setting. Therefore, most empirical work uses a policy change that eliminates the source of misinformation, such as a regulator- or platform- induced ban
(Rao and Wang, 2017; Chiou and Tucker, 2018; Rao, 2020). Although such policy changes provide exogenous variation in the amount of misinformation in the marketplace, such cases are rare. Moreover, we do not know if the effect of removing misinformation is symmetric to the effect of direct exposure to misinformation, a primary focus of our paper. We contribute to this area by directly measuring the causal effect of an additional exposure of misinformation on demand in a controlled experiment\(^3\), which enables exogenous manipulation of debunking and debriefing.

Current efforts in combating misinformation in ads generally take one of three approaches. The first eliminates the source of misinformation via bans, shutdowns and downvotes (e.g. Chiou and Tucker, 2018; Pennycook and Rand, 2019a). However, it is difficult, if not impossible, to remove misinformation before it is seen by a potentially large audience online, especially in the social media setting. For example, a recent study found that it can take up to 22 days for the platform to downgrade and issue warning labels on Covid-related misinformation, creating 117 million exposures before cracking down (Avaaz 2020). The second aims to inoculate the audience against misinformation by nudging (Thaler and Sunstein, 2009), such as reminding people to think about accuracy of the COVID-19-related headline (Pennycook et al., 2020). Most nudge interventions, however, involve interactions between the message sender and receiver, with the goal being to achieve reflection on the part of the consumer (e.g. Lorenz-Spreen et al. 2020; Pennycook et al. 2020) which might be harder to achieve in the context of social media. Another means of inoculation involves tagging questionable content by fact checkers. While widely adopted by platforms, recent research has shown that fact-checking tags not only can be ineffective (Guess et al., 2018) but also can backfire by causing readers to assume that non-tagged articles are true (Pennycook et al., 2020).

The third approach provides corrective messages by credible sources to directly debunk misinformation in advertising. See Walter and Murphy (2018) and Wilkie et al. (1984) for a comprehensive review of the effect of corrective information across many contexts. Most of this work, which focuses on “self-correction” by the firm (as a result of FTC lawsuits) or corrections directly from the FTC, demonstrates a small but positive effect of corrective advertising on the reduction of stated misbeliefs, both in the lab (Mazis and Adkinson, 1976; Dyer and Kuehl, 1974) and in the field (Bernhardt et al., 1986; Armstrong et al., 1983). We contribute to this literature by studying debunking messages across various sources (competitor, media and regulator) and investigating heterogeneous responses to debunking by the extent of consumers’ existing (mis)beliefs in the marketplace.

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\(^3\)Early work in marketing has also studied the impact of exposing individuals to misinformation, but on stated purchase intentions (e.g. Olson and Dover (1978); Dyer and Kuehl (1978)).
Different theories on how consumers update their beliefs provide different predictions on which consumer is most impacted by the debunking message. On one hand, psychological theories suggest that corrections that are incompatible with existing (mis)beliefs tend to be processed less fluently, and are therefore less likely to be accepted (Lewandowsky et al., 2012; Nickerson, 1998). Jindal and Aribarg (2021) further document that participants underreact to new information in price searches when updating their price beliefs. On the other hand, economic theories suggest that individuals update their beliefs in a bayesian fashion (Grether, 1980; El-Gamal and Grether, 1995; Holt and Smith, 2009; Coutts, 2019) suggesting corrections that are different from existing (mis)beliefs may have the highest efficacy. We illustrate the differing predictions through a simple theoretical model and compare the empirical results to the model predictions, enabling us to test between these contradictory predictions.

Our work extends the literature on debunking misinformation in ads in the following ways. First, we measure the causal impact of corrective messaging on purchase decisions through an incentive compatible conjoint setting, rather than stated beliefs. This enables us to directly quantify the impact of debunking on demand controlling for brand and price effects. Second, we explore whether the efficacy of debunking messages varies by pre-existing beliefs, allowing us to comment on the mechanism by which individuals process the corrections to misleading claims in advertising. Third, we explore heterogeneity of debunking by source. To our knowledge, no study has compared the effectiveness of debunking by competitors to that from regulators or mainstream media. While competitor advertising is more accessible than messages by regulators and media, it may be perceived as a competitive attack to the rival brand therefore carrying little weight in correcting misbeliefs. Finding empirical evidence for or against the efficacy of competitor debunking has direct welfare and policy implications. Fourth, by experimentally creating variation in exposure to misinformation before debunking, we are able to evaluate whether debunking can “repair” the change in willingness to pay created through misinformation in ads.

Broadly, our work is also related to measuring consumer responses to information on nutrition and ingredient labels (e.g. Ippolito and Mathios 1990, 1995; Dhar and Baylis 2011; Liaukonyte et al. 2013; Fernbach et al. 2019; Scott and Rozin 2020). We contribute to this literature by studying the impact of false information pertaining to various ingredients. Moreover, our paper focuses on the immediate outcomes after exposure to misinformation and debunking, especially meaningful in the online setting and social media context because platforms can precisely target consumers at the point of purchase and deliver messages when it is the most consequential. For work on the long-term effects of misinformation and debunking see Skurnik et al. (2005); Schwarz et al. (2016); Schwarz and Jalbert (2020);
Hovland and Weiss (1951); Pratkanis et al. (1988). Finally, our work is related to the voluminous literature on misinformation in the health, journalism and political domain (e.g. Flynn et al. 2017; Lazer et al. 2018; Vosoughi et al. 2018; Guess et al. 2019; Pennycook and Rand 2019b; Bago et al. 2020; Dias et al. 2020; Guess et al. 2020; Linvill and Warren 2020; Pennycook et al. 2020; Walter et al. 2020; Martel et al. 2020; Simonov et al. 2020; Bursztyn et al. 2020; Barrera et al. 2020).

3 Theoretical Framework

In this section, we provide a framework of how ads and debunking influence beliefs, and why debunking effectiveness can vary both across debunking sources and individuals. We model a consumer’s decision to purchase a product $j$, where the decision depends on whether the product contains the ingredient that is deceptively advertised. To formalize this model and illustrate how beliefs about the ingredient directly affect consumers’ utility, let consumer $i$’s utility for purchasing product $j$ be

$$u_{ij} = \beta_i x_j + Z_j \gamma + \epsilon_{ij} \tag{1}$$

where $x_j \in \{0, 1\}$ indicates whether $j$ contains the focal ingredient, $Z_j$ are the product’s other attributes (such as brand, price, packaging, flavor, scent, etc), and $\epsilon_{ij}$ is an idiosyncratic shock that varies at the consumer-product level, assumed to be i.i.d. The coefficient of interest is $\beta_i$, i.e. $i$’s preference for the focal ingredient. For example, if the product is deodorant, then $x$ indicates whether the deodorant contains aluminum, and $\beta_i$ is $i$’s preference for aluminum in deodorant.

Advertisements containing (mis)information and debunking messages about the focal ingredient can change $i$’s preference by changing $i$’s beliefs about whether the ingredient is harmful to one’s health. Specifically, let the data generating process for $\beta_i$ be

$$\beta_i = \tau + \delta \theta_i + \eta_i \tag{2}$$

where $\theta_i \in [0, 1]$ is $i$’s belief that the ingredient is harmful. $\delta$ represents the population average preference for harm, which is most likely negative. $\tau$ is the population average inherent preference for the ingredient, which can be either positive or negative.$^4$ $\eta_i$ are

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$^4$For example, consumers may prefer deodorant with aluminum because aluminum in deodorant is effective at preventing sweat buildup. Consumers may prefer fluoride in toothpaste as it is the key ingredient to prevent cavity. They may prefer nutrition shakes made from GMO crops because GMO crops generates smaller environmental impact.
individual-level differences in the preferences for the ingredient that are unexplained by \( \theta_i \).

Below we describe a simple sequence of events that leads to \( \theta_i \). Let the (mis)information in the message content be denoted by \( d \), where \( d = \text{claim notharmful} \) represents the scenario when the message claims “the ingredient is not harmful”, and \( d = \text{claim harmful} \) when the message claims “the ingredient is harmful”:

1. \( i \) has a prior belief that the ingredient is harmful, denoted by \( \theta_i^0 \).
2. \( i \) can be exposed to an ad that claims that a specific ingredient is harmful (\( d = \text{claim harmful} \)). If she sees this ad, \( i \) then updates her belief about ingredient toxicity to \( \theta_i^{ad} \) after viewing the ad. If she does not see this ad, her belief remains \( \theta_i^0 \).
3. \( i \) can then be exposed to a debunking message. If she is exposed to debunking, she updates her belief to \( \theta_i = \theta_i^{ad,d} \) if she previously saw the ad, and \( \theta_i = \theta_i^{0,d} \) if she did not see the ad prior to debunking. Similarly, if she is not exposed to debunking, then \( \theta_i = \theta_i^{ad} \) (if she sees the ad) or \( \theta_i = \theta_i^0 \) (if she did not see the ad).

Note that \( \theta_i^0 \) is a Bernoulli prior, where \( i \)’s uncertainty is represented by how far \( \theta_i^0 \) is from 0 or 1 (e.g. if \( \theta_i^0 = 0.5 \), \( i \) is uncertain whether \( x \) is harmful). We abstract away from uncertainty around this prior to simply the model for ease of exposition. The extent that \( i \) updates her posterior in response to a misinformed ad or a debunking message depends on \( i \)’s evaluation of the “trustworthiness” of the source making the harmfulness claims. We define trustworthiness in the following way. Let the trustworthiness of a source in making harmfulness claims be \( \pi \in [0, 1] \). If the source is completely trustworthy (i.e. \( \pi = 1 \)), then the source always truthfully reports. More formally, let \( H \) denote the true state of the world where the ingredient can be “harmful” or “not harmful”. Trustworthiness can then be defined by the following:

\[
\begin{align*}
p(d = \text{claim harmful}|H = \text{harmful}) &= \pi \\
p(d = \text{claim not harmful}|H = \text{harmful}) &= 1 - \pi \\
p(d = \text{claim not harmful}|H = \text{not harmful}) &= \pi \\
p(d = \text{claim harmful}|H = \text{not harmful}) &= 1 - \pi
\end{align*}
\]

Equation 3 states that if the ingredient is harmful, then the source claims that the ingredient is harmful with probability \( \pi \). Similarly, Equation 5 states that if the ingredient is not harmful, the source claims it is not harmful with probability \( \pi \). Equation 5, therefore, captures our notion of debunking where in all instances we study the focal ingredient is not harmful. Conversely, Equation 6 states if the ingredient is not harmful, then the source
Table 1: Posterior Beliefs under Bayes’ Rule

<table>
<thead>
<tr>
<th>Sees Ad with Misinformation?</th>
<th>Sees Debunking Message?</th>
<th>Posterior</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>$\theta_i^0$</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>$\frac{\pi^a \theta_i^0}{\pi^a \theta_i^0 + (1 - \pi^a)(1 - \theta_i^0)} = \theta_i^{ad}$</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>$\frac{(1 - \pi^d) \theta_i^0}{(1 - \pi^d) \theta_i^0 + \pi^d(1 - \theta_i^0)} = \theta_i^{0,d}$</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>$\frac{(1 - \pi^d) \theta_i^0}{(1 - \pi^d) \theta_i^0 + \pi^d(1 - \theta_i^0)} = \theta_i^{ad,d}$</td>
</tr>
</tbody>
</table>

Notes: The posterior beliefs about whether the ingredient is harmful, given the ad and debunking message the consumer receives. $\pi^d$ is the trustworthiness of the debunking message and $\pi^a$ is the trustworthiness of the harmfulness message in the ad regarding ingredient. $\theta_i^0$ is the prior belief that $x$ is harmful, before the consumer has viewed any ad or debunking message in the experiment.

claims that it is harmful with probability $1 - \pi$. Equation 6, therefore, captures our definition of misinformation. We denote consumers’ evaluation of the trustworthiness of the toxicity message in the ad as $\pi^a$. The evaluated trustworthiness for a debunking message from a source is denoted by $\pi^d$.

### 3.1 Bayesian Updating

According to Bayes’ rule, the posterior belief that the ingredient is harmful after receiving information $d = \text{claim harmful}$, given a prior $\theta_i^0$, is the following.

$$
\theta_i^{post} = p(H = \text{harmful}|d = \text{claim harmful}) \\
= \frac{p(d = \text{claim harmful}|H = \text{harmful})p(H = \text{harmful})}{p(d = \text{claim harmful})} \\
= \frac{\pi \theta_i^0}{\pi \theta_i^0 + (1 - \pi)(1 - \theta_i^0)}
$$

Given that individuals may be exposed to misinformation in ads and/or debunking, this creates four distinct sequences of events that lead to different posterior beliefs and willingness-to-pay for the focal ingredient. The posterior beliefs about whether the ingredient is harmful given misinformation and/or debunking are displayed in Table 1.

To illustrate how information impacts beliefs, Figures 2a and 2b illustrate the posterior belief and willingness-to-pay after an individual is exposed to a debunking message ($d = \text{claim not harmful}$), based on her prior belief and the debunking source’s trustworthiness.
Figure 2: Bayesian Posterior Beliefs and WTP after receiving a debunking message

(a) Posterior Beliefs
(b) Posterior WTP
(c) Difference between Posterior and Prior Beliefs

Notes: Figures 2a and 2b display $\theta_{post}$, an individual’s posterior belief that the ingredient is harmful, and her corresponding WTP, respectively, for the ingredient after she sees a debunking message for varying levels of the debunking source’s trustworthiness. The posterior belief is derived from the equations in Table 1, and the WTP is derived from the posterior belief at the following parameter values $\gamma = 1$, $\tau = 0$, and $\delta = -1$.

Her WTP is a linear transformation of her beliefs and is given by:

$$WTP = \frac{\tau + \delta \theta_{post}}{|\gamma|} \quad (10)$$

These figures depict scenarios when $\pi \in [0.5, 1]$ which are of interest: $\pi = 0.5$ when the signal from the source is noisy and is of no informational value, $\pi = 1$ when the information is completely trustworthy. Values below 0.5 occur when consumers interpret the source’s message in a directly opposite manner and are not relevant to our setting (e.g., consumers see a message stating aluminum is harmful and believe that aluminum is not harmful).

The figures illustrate the intuition that the more trustworthy the debunking source is, the closer the posterior belief is to 0 (i.e., the ingredient is Not Harmful). Similarly, the more trustworthy the debunking source is, the higher the WTP the individual has for the ingredient. Figure 2c depicts the change in beliefs relative to the prior after receiving a
debunking message. It indicates that if individuals update their beliefs according to Bayes’ rule after seeing a trustworthy message, generally, the update is larger for those who believe the ingredient is more likely harmful. However, when the source is not 100% trustworthy, the level of updates becomes non-monotonic with regard to the prior belief: debunking will be less effective for those with strong priors that the ingredient is harmful ($\theta^0 = 1$) compared to those who are more uncertain ($\theta^0 \in [0.5, 1]$). Nonetheless, even in this scenario with lower levels of trustworthiness, those who consider the ingredient to be harmful ($\theta^0 \in [0.5, 1]$) are the ones who update their beliefs the most as evidenced by the right-skewed nature of the curve.

3.2 Confirmation Bias

Confirmation bias can manifest in one of the following ways: individuals can seek out information that is consistent with their hypothesis, and individuals overweight evidence that confirms their hypothesis and underweight evidence that conflicts with their hypothesis (Nickerson, 1998). Our study context is more in line with the latter. Specifically, we model the weighting of evidence by how trustworthy the individual perceives the source to be; individuals view a source to be less trustworthy the more the source’s information differs from their priors.

To provide an example of how beliefs are updated under confirmation bias, we apply the following functional form of how a source’s trustworthiness is perceived. If an individual’s prior belief is that the ingredient is definitely not harmful ($\theta^0 = 0$) and she receives information that the ingredient is not harmful ($d = \text{claim not harmful}$), then her perceived trustworthiness of the source, denoted by $\tilde{\pi}$, is 1. However, if her prior is that the ingredient is definitely not harmful and she received information that the ingredient is harmful ($d = \text{claim harmful}$), then $\tilde{\pi} = 0.5$, or in other words, the source’s information is completely uninformative. The more the information conflicts with her prior, the less trustworthy she perceives the source to be, therefore the less weight she puts on the information. Formally, the perceived trustworthiness, $\tilde{\pi}$, is updated to a value in the range $[0.5, 1]$ as a function of the prior and the provided information:

$$\tilde{\pi} = \begin{cases} \frac{\theta^0}{2} + 0.5 & d = \text{claim harmful} \\ \frac{1-\theta^0}{2} + 0.5 & d = \text{claim not harmful} \end{cases}$$

(11)

The posterior is updated in the same procedure in Table 1 with $\pi$ being replaced with $\tilde{\pi}$. While there exist other models of confirmation bias\footnote{Examples of other ways that confirmation bias has been specified is by assigning a non-zero probability}, we chose to specify the biased

5 Examples of other ways that confirmation bias has been specified is by assigning a non-zero probability
Figure 3: Confirmation Bias Posterior Beliefs and WTP

(a) Posterior Beliefs
(b) Posterior WTP
(c) Difference between Posterior and Prior Beliefs

Notes: Figures 3a and 3b display $\theta_{\text{post}}$, an individual’s posterior belief that the ingredient is harmful, and her corresponding WTP, respectively, for the ingredient after she sees a debunking message. The posterior belief is derived from the equations in Table 1, the individual’s perceived trustworthiness in Equation 11, and the WTP is derived from the posterior belief at the following parameter values $\gamma = 1$, $\tau = 0$, and $\delta = -1$. Weighting of information through the trustworthiness of the source in order to make both the confirmation bias and Bayesian updating frameworks in this paper comparable. Figure 3 plots the posterior beliefs, posterior WTP, and change in beliefs when individuals update in complete accordance with confirmation bias. Figure 3c, which displays the change in beliefs relative to the prior, shows that individuals who ex-ante believed that the ingredient is not harmful but are uncertain are the most responsive to debunking. A noteworthy feature of Figure 3c is the left-skewed nature of the curve, compared to the right skewed curve of Figure 2c. This left-skewed curve captures the intuition that according to confirmation bias, those whose beliefs are not that opposed to the content of the debunking message are willing to update whereas those whose beliefs are contradictory to the content of the debunking message are less willing to update.

that an individual misreads conflicting information to be supporting his prior (Rabin and Schrag, 1999), and through bounded memory, in which individuals can recall a finite number of pieces of information when updating beliefs, and are more likely to recall information that supports their priors (Wilson, 2014).
Figure 4: Change in Beliefs for Bayesian Updating vs. Confirmation Bias

(a) Misinformation Effect
(b) Debunking Effect

Notes: Figures 4a and 4b plot the change in beliefs (posterior - prior) relative to the prior when the individual is exposed to misinformation ($d = \text{claim toxic}$) and debunking ($d = \text{claim not toxic}$), respectively. For ease of illustration, the trustworthiness of the source is set to be 0.55 and 0.9 in the posteriors updated via Bayes rule.

3.3 Comparing Model Predictions on Posterior Beliefs

Figure 4 compares the changes in beliefs under two frameworks. The most notable differences between the two frameworks are which individuals the treatment is the most effective for, based on their priors. Summarizing these differences, the frameworks make the following predictions.

Prediction 1 (BU): If individuals fully follow Bayes rule, individuals with priors $\theta^0 > 0.5$ update their posteriors the most in response to debunking, and individuals with priors $\theta^0 < 0.5$ update their priors the most in response to misinformation.

Prediction 2 (CB): If individuals fully follow confirmation bias, individuals with priors $\theta^0 < 0.5$ update their posteriors the most in response to debunking, and individuals with priors $\theta^0 > 0.5$ update their priors the most in response to misinformation.

Prediction 3 (Trustworthiness): When the source’s trustworthiness is low, Bayes rule and conformation bias lead to similar posteriors.

Prediction 3 guides the experimental design: to be able to disentangle the two frameworks empirically, the information must come from a trustworthy source. In the following sections, we use Predictions 1 and 2 to guide the interpretation of our empirical results.
4 Experiment Design

Misinformation is a large and prevalent problem in society today. Articles containing misinformation can be quickly and easily shared across large audiences. For example, in 2019, an article claiming that “ginger is 10,000x more effective at killing cancer than chemo” generated over 800,000 engagements (Zadrozny, 2019). As another example, NatureCity, LLC, which faced an FTC complaint in 2019, claimed their aloe-based product is an effective treatment for chronic pain, diabetes, etc (FTC, 2019b). In this setting, we define misinformation to be scientifically unfounded claims about an ingredient (e.g. aluminum is toxic). Such misinformation might not only cause consumers to form new (and wrong) beliefs about the ingredient in question, but also cause them to increase their willingness-to-pay to products that do not contain that ingredient. Therefore, it is important to debunk misinformation not only on the specific product itself but also more generally about the ingredient.

However, measuring the effectiveness of debunking methods is challenging in the field setting, as it is difficult to separate the timing of ads containing misinformation and debunking messages with general changes in public opinion and demand using observational data. Additionally, field experiments are also not feasible due to the deceptive nature of the ads. Therefore, we implement an incentive-compatible choice-based conjoint experiment that separately measures the effect of misinformation in advertising and the effect of debunking on consumer preferences and demand. More specifically, we measure whether debunking messages impact demand, how this effect varies by the source of the debunking message, and whether debunking can “undo” the demand effects resulting from misinformation.

Three decisions had to be taken involving 1) the choice of product categories, 2) implementation of treatment conditions and 3) the method of capturing the outcome of interest, i.e., purchase.

4.1 Choice of Product Categories

We identified categories where certain products market themselves as containing “no XYZ”, with the implication that “XYZ” is harmful to humans. Moreover, “XYZ” is a prominent ingredient in almost all products in that category. We further restricted attention to categories based on the presence of debunking messages from competitors, media and regulators.

These criteria helped us identify three product categories and the ingredient in question: 1) deodorants and aluminum, 2) toothpastes and fluoride, 3) nutritional shakes and GMO. In the deodorant category, Kopari states that their deodorants are aluminum-free and implies that other deodorants are toxic. See Figure 6b for an example. Competitors (Speed Stick), the media (MSN) and regulators (CDC) have provided information to consumers that
aluminum, when used topically, constitutes little to no harm. In the toothpaste category, Risewell highlights their toothpastes are fluoride-free and encourages consumers to avoid the toxic ingredients found in traditional fluoride toothpastes (Figure 7b), while competitors (Colgate), the media (NBC News) and the CDC have all highlighted why fluoride is beneficial and how fluoride-free toothpastes can actually harm oral health. In nutritional shakes, Orgain highlights that their products are GMO-free and therefore contains only the good-stuff, implicitly stating that products with GMO are bad (Figure 8b). Competitors (Soylent), the media (NBC) and the regulator (FDA) have pointed out that genetically modified plants are not only safe to consume but can actually be beneficial to the environment. Table 2 reports the category, product/firm making the false claims and the debunking sources used in this study.

<table>
<thead>
<tr>
<th>Category (Product)</th>
<th>Firm</th>
<th>Media</th>
<th>Regulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deodorant (Kopari)</td>
<td>Speed Stick</td>
<td>MSN News</td>
<td>CDC</td>
</tr>
<tr>
<td>Toothpaste (Risewell)</td>
<td>Colgate</td>
<td>NBC News</td>
<td>CDC</td>
</tr>
<tr>
<td>Shakes (Orgain)</td>
<td>Soylent</td>
<td>NBC News</td>
<td>FDA</td>
</tr>
</tbody>
</table>

### 4.2 Treatment

Figure 5 displays the between-subject experimental design, in which survey participants are randomized into an ad group and a debunking group. All ads and debunking messages are displayed as Tweets, because the products’ predominantly promote their products through social media.

Participants are first randomized into receiving either a control ad or a treatment ad. Participants randomized into the treatment ad group receive an ad that contains misinformation about the focal ingredient, while those randomized in the control group receive an ad for the same product that does not mention the focal ingredient, and may advertise a different product attribute. The ads in both groups are actual content from the company. Although not tagged as ads on the platform, we refer to such content as ads because they are messaging that highlights the firm’s products, is aimed at consumers, and comes directly from the brand. The control ad is explicitly chosen such that it does not include misinformation, is an actual firm-broadcast message and highlights another attribute (such as scent or flavor) which can be controlled for in the empirical analysis. A control ad which just excludes the misinformation would not only be a much shorter message but would also be
asymmetric to the treatment ad in that it would not highlight any attribute. Figures 6 - 8 display the control and treatment ads across all three products.

Not all firms’ ads were on Twitter: some were released on Facebook or Instagram. We are agnostic about the social media platform (Twitter, Facebook or Instagram). To ensure that our experiment does not vary the platform of the advertisement, we decided to use Twitter as the consistent platform across all products because 1) Facebook was facing controversies in 2020 and 2) after Facebook, Twitter is reported to be the most popular social media platform for news consumption. We also ensure other aspects of the ad, such as the picture, timestamp, and likes and retweets for both ads, are identical across control and treatment advertisements.

Participants are then randomized into one of the following debunking sources: control, competitor firm, media, or regulator. For a given debunking source, with the exception of the control group, the participant sees a Tweet from the source that debunks the notion that the focal ingredient in the product is toxic. For example, in the toothpaste/fluoride survey, a participant in the competitor firm, media, or regulator group sees the message “Fluoride-containing toothpastes are safe. Fluoride in toothpastes prevents cavities and scientific studies have found no conclusive evidence that it causes adverse health effects.” The message is accompanied by a link that leads to a real article from the source with the same overall message. These debunking messages were taken from actual articles across all sources. To ensure that across all treatment arms only the source varies, we hold the content of the debunking message constant. Figure 9 presents an example of the debunking message, as seen by the participant. After the ad and treatment exposures, we conduct verification checks to check whether the participant can recall the source of the ad and the debunking message.

The control debunking message is a factoid presented to the participant and contains no debunking information. This factoid was presented as a Tweet from the website “How Stuff Works”. Table B1 in the Appendix displays the debunking messages for all products and treatment groups. Table 2 reports the sources for each product and debunking type. Note that ideally, the source would be the same across all products. However, to ensure external validity to the extent possible, the criteria for selecting the source was that the source must have an actual article that debunks the misinformation about the focal ingredient. For instance, we were unable to find an article from the CDC that debunks misinformation about GMOs, and therefore, used an article from the FDA instead.

6 Youtube is listed as the second most popular, and Twitter is third, but original medium of the firms’ ads are not videos, and thus, we are not able to display the ads via Youtube. https://www.forbes.com/sites/petersuciu/2019/10/11/more-americans-are-getting-their-news-from-social-media/?sh=43032b553e17, accessed November 2020.
Figure 5 summarizes the experimental setup, which is a 2x4 design. This design allows us to measure the misinformation and debunking effects separately. Misinformation effects are quantified by comparing measured preferences for the focal ingredient between the Control Advertisement + Control Debunking and Misinformation Advertisement + Control Debunking groups, because participants in these two groups are not exposed to debunking, and differ only by the ad content they were exposed to. Debunking effects for a given source are measured by comparing those in the “Misinformation Advertisement + Debunk” group for the given source with the “Misinformation Advertisement + Control”. This design also allows us to measure whether debunking is effective for participants who were not exposed to misinformation in this survey, but perhaps already had existing misconceptions about the ingredient prior to the survey. If debunking works even without exposure to misinformation, this will be evidenced in the difference between the “Control Ad + Debunk” and “Control Ad + Control” groups.

Towards the end of the survey, we conduct further verification checks by asking participants to recall content of both the ad and the debunking message. These verification checks are placed after the conjoint questions, instead of immediately after treatment, because we did not want respondents to be mistakenly “treated” by the choices presented in these verification checks. Lastly, we debrief the participants after survey completion. Tables B2-B5 display all of the post-conjoint questions in the surveys.

Figure 5: Experiment Design: Flow of Treatment and Various Treatment Arms
Figure 6: Ads in Aluminum Survey

(a) Control Ad

Our deodorant is made with a unique blend of coconut water, coconut oil, and sage oil that conditions and soothes even the most sensitive underarms. It's like skincare for your pits.

(b) Treated Ad

Don't let your deodorant hold you down with toxic ingredients - Get on the natural side of things with our aluminum-free Coco Deo!

Notes: An additional treated ad shown in Appendix, Figure B2 was also used. Because the results across the two treatment ads did not differ we collapse them into one for analyses/description.

Figure 7: Ads in Fluoride Survey

(a) Control Ad

Featured in BeautyNewsNYC: “The taste is delicious and unlike any you have experienced in a toothpaste. You will want to lick your lips after use.”

(b) Treated Ad

Trying to avoid the toxic ingredients found in traditional fluoride toothpastes? Try Risewell, the fluoride-free toothpaste that's scientifically proven to work.
4.2.1 Power Calculation

Before launching the survey for each product category, we ran a pilot survey with 10 respondents to determine the sample size required to conduct inference. The pilot was deployed with one control ad arm and one treatment ad arm (both under control debunking) and was used to determine the standard deviation and effect size of the ingredient attribute. This
process helped determine the required sample size as 75 per treatment arm for aluminum, 200 for fluoride, and 100 for GMOs. In the survey implementation, we doubled the required sample sizes to be conservative. These are documented in the pre-registration links created before the survey at aspredicted.org.

### 4.3 Incentive Compatible Conjoint Design

To measure consumer preferences, we designed an incentive compatible conjoint survey. See Green and Srinivasan (1978, 1990) for an overview of the conjoint literature and Ding et al. (2005) for a discussion on incentive-aligned conjoint analysis.

After exposure to the two treatment conditions, participants were presented with 10 conjoint choice tasks. Participants were asked to choose a product from 3 options, or none of the options. The products were unique combinations of four attributes: brand, whether it contains the focal ingredient, price, and a balancing attribute (“Whitening” for toothpaste; “Scented” for deodorant; and “Flavor” for nutritional shakes). Figure 10 provides an example of the choice task faced by participants in the fluoride survey. Table 3 details the product attributes used in the conjoint.

To ensure that the conjoint elicits participants’ true preferences, the conjoint is designed to be incentive compatible. Participants were told that they had a 1-in-20 chance to win a bonus worth $10, which includes one of the products they selected. If they were selected to win the product, they would receive the product that they selected for the given price and the remaining $10-(selected price) as additional payment. For example, if a participant won and had selected a Crest toothpaste with whitening and fluoride for $0.99, they received a bonus worth $10.

---

7AsPredicted #47372, #48205 and #49760, respectively
8For the GMO survey, this was 1-in-20 chance to win a bonus worth $20 to accommodate the higher price of the dozen-pack of nutritional shakes.
Table 3: Product Attributes

<table>
<thead>
<tr>
<th>Product</th>
<th>Brand</th>
<th>Has Ingredient</th>
<th>Price</th>
<th>Other Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deodorant</td>
<td>Dove, Speed</td>
<td>Has Aluminum:</td>
<td>1.99, 2.99, 3.99</td>
<td>Scented: Yes/No</td>
</tr>
<tr>
<td></td>
<td>Stick, Kopari*</td>
<td>Yes/No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>Colgate, Crest, Risewell*, Tom’s of Maine</td>
<td>Has Fluoride: Yes/No</td>
<td>0.99, 1.99, 2.99</td>
<td>Whitens Teeth: Yes/No</td>
</tr>
<tr>
<td>Nutritional Shakes</td>
<td>Ensure, Orgain*, Soylent</td>
<td>GMO-free: Yes/No</td>
<td>1, 1.25, 1.50†</td>
<td>Flavor: Choco-late/Vanilla</td>
</tr>
</tbody>
</table>

Notes: This table displays conjoint attributes for all products.

*: Denotes the advertised brand
†: Price per bottle. Due to logistics of reward distributions, lottery winners in the shake/GMO survey received a dozen shakes, so the conjoint selections are for a dozen pack of shakes.

Towards the end of the survey, we elicited information about participants’ usage of the product, their opinions about the focal ingredient, and demographics. Tables B2-B5 in the Appendix list all the questions asked in this section of the survey. For the remainder of this paper, we refer to these 3 surveys (aluminum, fluoride, and GMO) as the “ingredient surveys”.

4.4 Eliciting Beliefs

As illustrated in our Theory section, confirmation bias and Bayesian updating produce different predictions on how different consumers react to misinformation and debunking depending on their existing beliefs about the ingredient. However, we cannot test these theories without a direct measure of beliefs. Using preferences in the control group as a metric for beliefs, while feasible, has the typical preferences vs. beliefs confound: a consumer might like aluminum (preference) but believe it is toxic (belief), making preference a poor proxy of belief. Manski (2008) suggests directly eliciting beliefs from respondents to circumvent this issue.

We therefore design another survey which elicits consumers’ beliefs about ingredient toxicity before they respond to the choice questions. For the remainder of this paper, we refer to this survey as the “beliefs survey”.

To avoid creating a demand effect (where consumers see belief questions about the in-
gredient, infer this survey has something to do with ingredient toxicity and change their responses to satisfy the researcher), we ask beliefs questions for all other attributes included in the survey. Following probabilistic elicitation of beliefs suggested by Manski (2008), participants are asked to respond to “What do you think is the percent chance that <attribute> is harmful to your health?” with the following possible options” 0-20% (Definitely not harmful); 20-40% (Likely not harmful); 40-60% (Not sure, either way); 60-80% (Likely harmful); 80-100% (Definitely harmful).

Eliciting beliefs and measuring responses is also important from a policy maker’s perspective. Does debunking have the most impact on consumers with the most misinformed beliefs, a prediction consistent with Bayesian updating and an ideal outcome for a policy maker? Or does debunking have little to no impact on those with the most misinformed beliefs, a prediction consistent with confirmation bias.

5 Survey Implementation and Data Description

5.1 Implementation

The surveys were distributed through Prolific\(^9\), an online platform for survey administration and data collection. The ingredient surveys were launched sequentially in September and October 2020\(^10\) Such a sequential launch enabled us to exclude participants who had already taken any previous survey. We explicitly did so to avoid any possibility of familiarity with the survey and treatment conditions. The beliefs survey was launched in March 2021.

The participant pool for each survey are limited to those in the United States and those who did not participate in any of the other surveys in this study. Participants received $1.50 USD for survey completion. As previously described in Section 4.3, to ensure incentive compatibility in the conjoint, participants also had a chance to win an additional bonus, which includes a product they selected in the conjoint and additional payment.

5.2 Data

In this section, we describe the data for the ingredient surveys. Discussion on the beliefs survey data is in Section 6.1. In total, 6,558 individuals completed the ingredient surveys, with 1,797 participants in the aluminum survey, 3,202 in the fluoride survey, and 1,559 in the GMO survey. The sample sizes, which differ across surveys, were determined based on

\(^9\)https://www.prolific.co

\(^{10}\)Specifically, the surveys were launched on three Wednesdays: September 9, September 23, October 21, 2020.
the pilot data for each survey, as described in Section 4.2.1. Table 4 displays the sample size for each treatment group for each survey.

Table 4: Sample Size for Each Treatment Group

<table>
<thead>
<tr>
<th>Ad</th>
<th>Debunk</th>
<th>Aluminum*</th>
<th>GMO</th>
<th>Fluoride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Control</td>
<td>155</td>
<td>171</td>
<td>401</td>
</tr>
<tr>
<td>Control</td>
<td>Competitor</td>
<td>146</td>
<td>217</td>
<td>407</td>
</tr>
<tr>
<td>Control</td>
<td>Media</td>
<td>140</td>
<td>195</td>
<td>405</td>
</tr>
<tr>
<td>Control</td>
<td>Regulator</td>
<td>161</td>
<td>204</td>
<td>406</td>
</tr>
<tr>
<td>Treatment</td>
<td>Control</td>
<td>296</td>
<td>215</td>
<td>411</td>
</tr>
<tr>
<td>Treatment</td>
<td>Competitor</td>
<td>292</td>
<td>190</td>
<td>386</td>
</tr>
<tr>
<td>Treatment</td>
<td>Media</td>
<td>300</td>
<td>187</td>
<td>379</td>
</tr>
<tr>
<td>Treatment</td>
<td>Regulator</td>
<td>307</td>
<td>180</td>
<td>407</td>
</tr>
</tbody>
</table>

Notes: The sample size is the number of participants who completed the surveys in each treatment group.
*: For the aluminum survey, the two ad treatment groups are grouped together, resulting in a total of approximately 300 participants in the treated ad-debunking groups. That is, 150 participants in the control debunking group saw a control ad, 150 saw one of the treatment ads, and 150 saw the other treatment ad.

Table 5: Demographics Compared to US Population

<table>
<thead>
<tr>
<th></th>
<th>Participants</th>
<th>US Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prop. Women</td>
<td>0.53</td>
<td>0.51</td>
</tr>
<tr>
<td>Median Age</td>
<td>30.00</td>
<td>39.70</td>
</tr>
<tr>
<td>Prop. HS Degree or higher</td>
<td>0.99</td>
<td>0.88</td>
</tr>
<tr>
<td>Prop. White</td>
<td>0.75</td>
<td>0.76</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.10</td>
<td>0.13</td>
</tr>
<tr>
<td>Prop. Democrat</td>
<td>0.49</td>
<td>0.31</td>
</tr>
<tr>
<td>Prop. Republican</td>
<td>0.16</td>
<td>0.31</td>
</tr>
<tr>
<td>Prop. Unemployed</td>
<td>0.18</td>
<td>0.37</td>
</tr>
</tbody>
</table>


While the participant pool is similar to the US population in terms of gender and race, the survey participants tend to be younger, more educated, and are less likely to be unemployed compared to the general US population, as shown in Table 5. Additionally, a higher proportion of survey participants self identify as Democrats relative to the US population. Randomization checks for covariate balance across treatment groups are reported in Tables B6 and B7 in the Appendix.

The title of our survey stated the product category explicitly, the goal being to recruit participants interested in and familiar with that category. In the aluminum survey, 67% of
Table 6: Choice Share for Products with the Focal Ingredient

<table>
<thead>
<tr>
<th></th>
<th>Control Ad, No Debunking</th>
<th>Misinfo Ad, No Debunking</th>
<th>Misinfo Ad, Debunking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>0.29</td>
<td>0.28</td>
<td>0.39</td>
</tr>
<tr>
<td>Fluoride</td>
<td>0.67</td>
<td>0.56</td>
<td>0.64</td>
</tr>
<tr>
<td>GMO</td>
<td>0.31</td>
<td>0.29</td>
<td>0.31</td>
</tr>
</tbody>
</table>

Notes: This table displays the share of the selected options containing the focal ingredient among each product category and treatment condition. We group all the debunking sources into one for ease of interpretation.

participants report using deodorant daily, 96% of participants brush their teeth at least once daily, and 36% of participants in the GMO survey report purchasing nutritional shakes in the month prior to the survey.

Additionally, we find that the vast majority of participants pass the verification checks for both the ad and debunking sources and content. For instance, 80%-91% of participants answer the debunking source verification check correctly, and about 90% answer the debunking content verification check correctly. We do not see systematic patterns in which sources have lower or higher pass rates across the surveys. As a robustness check, we conduct analysis on both the entire sample and only those who passed the verification checks. The verification check responses are reported in Tables B8 and B9 in the Appendix.

Table 6 displays the share of selected options in the conjoint questions for which the product contains the focal ingredient across various treatment conditions. First, in the control condition (Table 6, Col. 1), 29% of the selected options contained aluminum, 67% contained fluoride, and 31% contained GMOs. This suggests that there exist pre-existing preferences towards or against these ingredients that vary by products. In general, consumers avoid aluminum in deodorant and GMOs in food, but prefer fluoride in toothpastes.

Second, we find that the share of options with the focal ingredient is lower after individuals are exposed to ads containing misinformation (Table 6, Col.2), indicating that misinformation regarding the focal ingredient potentially reduces preferences for the ingredient. Among the group exposed to debunking after misinformation (Table 6, Col.3), the choice share increases relative to Col.2, suggesting that debunking after exposure to misinformation may be effective at reducing the damage created by misinformation. In the following section, we formally estimate the treatment effects, controlling for brand and price effects.

6 Results

Recall that the decision process in the conjoint studies is as follows. After exposure to an ad (control or treated) and a debunking message from a randomly-chosen source (s ∈ \{control, firm, media, regulator\}), each individual i is presented with 10 sets of product
profiles in a sequence. In each set $J$, the individual compares across 3 random product profiles and the “none” option, and chooses the one that gives her the highest utility in that set. Formally, the probability of individual $i$ choosing product profile $j$ from set $J$ is:

$$Pr(j)_i = \frac{e^{v_{ij}}}{\sum_{k \in J} e^{v_{ik}}}$$

(12)

in which the utility from product profile $j$ conditional on individual $i$’s ad and debunking exposure is specified as a series of interaction terms between the ingredient dummy, $x_j$, and dummies of exposure to control vs. treated ad ($I^C_i, I^T_i$) and dummies of debunking messages from a given source $s(I^s_i, s \in \{control, firm, media, regulator\})$:

$$u_{ij} = v_{ij} + \epsilon_{ij} = \sum_s \beta^s_1 x_j I^C_i I^s_i + \sum_s \beta^s_2 x_j I^T_i I^s_i + \alpha \text{Price}_j + Z_j \gamma + \epsilon_{ij}$$

(13)

We control for preferences for brands and other balancing attributes via brand fixed effects and balancing attribute fixed effects in $Z_j$. $\epsilon$ is assumed to be iid and has an extreme value type 1 distribution. $\beta^s_1$ captures the average partworth for the debated ingredient (i.e. aluminum for deodorant, fluoride for toothpaste, and GMOs for nutritional shakes) under debunking source $s$ across participants in the control ad condition, while $\beta^s_2$ captures the average partworth for the debated ingredient in the treatment ad condition under debunking source $s$. We normalize the utility of the outside option, which is selected when the participant selects “None of the above”, to 0. We first present the results from the ingredient surveys, and present the results from the belief survey in Section 6.1.

Table 7 reports the maximum likelihood estimation results for each product category under such operationalization of utility specification using the ingredient survey data. We group the two versions of treatment ad for deodorant for the ease of interpretation, as they give substantively the same conclusions. We report the original deodorant results with three ad versions in Table B11 in the Appendix. In the sections below, we describe the effects in detail. We focus on the effect of the treatments on the willingness-to-pay (WTP) of the focal ingredient, rather than the ingredient coefficient itself, so that the effect sizes are comparable across products.\textsuperscript{11}

**Baseline preferences** Our empirical results show that baseline preferences (Table 7, row 1) vary significantly across the three product categories. The average WTP for aluminum, fluoride and GMO are -$1.93 (Table 7 column 1, -0.819/0.425), +$3.27 (Table 7 column 2,

\textsuperscript{11}Because we vary prices in the survey, we can derive the willingness-to-pay (WTP) for the focal ingredient across treatment groups, which is the ingredient coefficient divided by the absolute value of the price coefficient.
1.426/0.436) and -$3.60 (Table 7 column 3, -0.614/0.171), respectively. In other words, prior to the experimental manipulation, participants are on average averse to aluminum and GMO and are willing to pay $1.93 more for a 2.7oz deodorant without aluminum, as opposed to deodorant with aluminum, and $3.60 more for a standard case of a dozen GMO-free shakes, as opposed to shakes that are not GMO-free. For fluoride however, participants are willing to pay an additional $3.27 for a standard 4oz tube containing fluoride. Figure 11a plots these baseline WTPs across all three ingredients.  

**Effect of misinformation**

Misinformation can alter consumers’ preferences in the following ways. If the presented information (ingredient is harmful) is different from what she already believes (ingredient is not harmful), the consumer will reduce her WTP for the ingredient if she updates in a Bayesian fashion. It can also lead to no change in her WTP if she chooses to ignore the conflicting information (confirmation bias). If the presented information (ingredient is harmful) is consistent with what she already believes (ingredient is harmful), it can lead to further aversion of the ingredient or no change (ceiling effect).

Figure 11b (Col 2) shows that, for aluminum and GMOs, there is no significant change in WTP after exposure to misinformation. However, the ad containing misinformation causes a statistically significant $1.37 (42%) decrease in the WTP for fluoride.

An explanation for why misinformation decreases WTP for fluoride, but not for aluminum and GMOs may be due to the differences in the baseline preferences across the ingredients: consumers are ex-ante negatively inclined towards aluminum and GMO, but have a strong ex-ante preference for fluoride (Figure 11a). Therefore, an absence of response to misinformation does not necessarily imply that consumers are immune to misleading information: it might merely mean that consumers have strong prior misinformed beliefs, and the additional exposure in this experiment does not shift these beliefs. Debunking such misinformation can play an important role in either of these scenarios.

---

12 Our WTP estimates are comparable to the real-world price differences: a 2.6oz Dove aluminum-free deodorant is priced $2.60 higher than the version with aluminum, a 12 pack of Ensure protein shakes without GMOs is priced $6.06 higher than the version with GMOs, and a 4oz. Tom’s of Maine toothpaste with fluoride is priced $1.28 higher than the version without fluoride. As of November 2020 on Amazon.com, a 2.6oz aluminum-free Dove deodorant is $7.49, and a 2.6oz deodorant with aluminum is $4.89; the Ensure shake without GMO is $0.25/fl. oz, and the Ensure shake with GMOs is $0.20/fl. oz; the Tom’s of Maine peppermint toothpaste without fluoride is $0.72/oz, and the one with fluoride is $1.04/oz.
Effect of debunking after experimental exposure to misinformation

Column 3 in Figure 11b displays the net effects of misinformation and debunking. This column allows us to answer whether debunking is able to “undo” the impact of an additional dose of misinformation on WTP. An effect that is significantly less than zero indicates that the net WTP is lower than the ex-ante WTP, and thus, debunking is not able to revert preferences back to the level before the misinformation exposure. We find that debunking almost entirely reverts consumers to their baseline preference for fluoride. The net WTP is lower in magnitude than the average WTP in the control group, but is not significantly different. Moreover, debunking is able to increase the WTP for aluminum, eradicating some of the ex-ante aversion for aluminum.\(^{13}\)

Lastly, Column 1 of Figure 11b displays the effect of debunking, without an exposure of misinformation (Control Ad - [Regulator, Competitor, Media] Debunking compared to Control Ad - Control Debunking). We find that debunking by itself is effective for aluminum, and not effective for fluoride, perhaps because the majority of consumers do not have ex-ante misinformed fluoride beliefs, and for GMOs.

Debunking effectiveness by source

Next, we compare the effectiveness of debunking across the sources: competitor firm, media, and regulator. We find overall that regulator debunking causes the largest increase in WTP, followed by media debunking and then by competitor debunking (Figure 12) although these differences across sources are not statistically significant. The only debunking source that is effective at increasing WTP for GMOs is the competitor firm. A potential rationale for the effectiveness of only competitors for GMOs is the high levels of debunking efforts by the media and regulators already in the market. Competitor debunking may be more novel, relative to the others, and therefore, more effective.\(^{14}\)

\(^{13}\)Our findings are directionally consistent with the meta-analysis of the general effect of misinformation and debunking in studies of fake news (Chan et al., 2017).

\(^{14}\)Google Trends data shows that keyword searches for GMOs in media and from regulators is generally greater than the number of keyword searches in aluminum and fluoride from media and regulators. Google Trends results for the ingredients from regulators can be found at https://trends.google.com/trends/explore?date=all&geo=US&q=aluminum%20cdc,gmo%20fda,fluoride%20cdc and from news at https://trends.google.com/trends/explore?date=all_2008&geo=US&gprop=news&q=aluminum,gmo,fluoride, accessed May 2021.
Figure 11: Estimated Ad Effects and Debunking Effects on Willingness-to-Pay.

(a) Baseline WTP

Note: This figure reports the mean and 95% CI of the willingness-to-pay estimates from the focal ingredients: aluminum (2.7oz deodorants), fluoride (4oz toothpastes), GMOs (12-bottle nutritional shakes). Estimates are obtained from individuals in the control ad control debunking condition, with price, brands and other attributes controlled for.

(b) Change in WTP.

Notes: This figure displays the average change in the WTP for different treatment conditions. “Ad Effect (Misinfo)” is the effect of seeing misinformation (comparing participants in the “Misinformation Ad + Control Debunking” relative to the “Control Ad + Control Debunking”). “Debunk Effect (Control Ad)” is the effect of debunking on WTP for participants who did not see an ad with misinformation (“Control Ad + Competitor/Media/Regulator Debunking” relative to “Control Ad + Control Debunking”), and “Debunk Effect (Misinfo Ad)” is the effect of debunking for participants who saw an ad with misinformation (“Misinformation Ad + Competitor/Media/Regulator Debunking” relative to the “Misinformation Ad + Control Debunking”). Error bars represent the 95% confidence intervals.
Figure 12: Estimated Debunking Effects on Willingness-to-Pay by Source and Ingredient.

Notes: This figure displays the average change in the WTP from different debunking sources for participants who saw an ad with misinformation. The comparison baseline is “Misinformation Ad + Control Debunking”. Error bars represent the 95% confidence intervals.
Table 7: Main Results for Demand Estimates

<table>
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<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
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<tr>
<td>Aluminum Fluoride GMOs</td>
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<td></td>
<td></td>
</tr>
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<td>ingredient * controlad</td>
<td>-0.819***</td>
<td>1.426***</td>
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<td>(0.126)</td>
<td>(0.0792)</td>
<td>(0.0893)</td>
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<td>0.408**</td>
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<td>(0.176)</td>
<td>(0.109)</td>
<td>(0.118)</td>
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<tr>
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<td>0.312*</td>
<td>0.103</td>
<td>0.0569</td>
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<tr>
<td></td>
<td>(0.178)</td>
<td>(0.110)</td>
<td>(0.121)</td>
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<td>0.0327</td>
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<td>(0.166)</td>
<td>(0.109)</td>
<td>(0.122)</td>
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<td>(0.0810)</td>
<td>(0.0806)</td>
<td>(0.0823)</td>
</tr>
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<td>0.349***</td>
<td>0.230**</td>
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<td>(0.116)</td>
<td>(0.108)</td>
<td>(0.116)</td>
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<td>(0.112)</td>
<td>(0.121)</td>
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<td>(0.0121)</td>
<td>(0.00622)</td>
</tr>
</tbody>
</table>

Control dummies balancing attributes, brands

N: 1,797 3,202 1,559

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered by individuals.

Notes: We lump the weak and strong versions of misinformed ads in deodorant study and report the original estimation results in robustness check. Balancing attributes are: “scented” for deodorant, “whitening” for toothpaste, and “vanilla/chocolate” for nutritional shakes. Brands included in the studies are: {Kopari, Dove, Speed Stick} for deodorant, {Colgate, Crest, Tom’s of Maine, Risewell} for toothpastes, and {Soylent, Orgain, Ensure} for nutritional shakes. Table B10 in the Appendix displays the results for only those who pass the verification checks.

6.1 Heterogeneity Analysis

Here, we discuss results from the beliefs survey, designed to explicitly understand whether debunking has the most impact on consumers with the most misinformed beliefs. As highlighted in Section 4.4, respondents’ beliefs on the harmfulness of the ingredient were elicited prior to being exposed to the treatment. After treatment, along with the choice data which provides us with the willingness-to-pay estimates, we again collect respondents’ beliefs as a...
metric of consumers’ posterior beliefs.\textsuperscript{15}

To implement this survey, we choose the deodorant product category because a) consumers are more likely to have misinformed beliefs as seen by the negative WTP for the ingredient in Figure 11a, as opposed to toothpaste where most people are favorable to fluoride, and b) we are able to get more precise and economically meaningful responses to debunking message as can be seen in Figure 11b, as opposed to GMO. Because our goal is to detect significant differences across belief groups, we ran a pilot survey to estimate the required sample size, resulting in N=240 respondents per belief group. With 2 advertisements (control ad vs. misinformation ad) and 2 debunking messages (control vs. regulator), and 5 belief groups, this leads to a total sample size of $2 \times 2 \times 5 \times 240 = 4800$, a fairly large number. We therefore restrict attention to just one product category, and one debunking source for budgetary reasons. We pick regulator as the debunking source, because it has the largest impact on consumers in our previous surveys.

This survey was implemented in March 2021, with a sample size of $N = 4,758$, pre-registered on aspredicted.org #62331. Participants that have taken one of the previous three surveys are excluded from taking this survey to avoid familiarity with the experiment design. Table B12 displays the characteristics of the participants in this survey.

\subsection*{6.1.1 Heterogeneity by Ex-Ante Beliefs}

Figure 13 reports the estimated treatment effects on stated beliefs and willingness-to-pay, under exposure to misleading ad only, to debunking only, and to both misleading ad and debunking (net effect). To obtain the treatment effects on stated beliefs for each belief group (13a), we compare the within-person differences between the ex-post and the ex-ante stated beliefs about the focal ingredient across the three treatment arms and the control arm. First, and consistent with the first aluminum survey, the effect of misinformation (red dashed line) is significantly smaller than the effect of the debunking message (green dotted line), leading to a robust net effect (blue dot-dashed line) where all consumers are now less likely to believe the ingredient is harmful. The green and blue lines overlap, which suggests that an additional dose of misinformation does not make debunking any less effective.

Second, debunking is most effective for consumers with priors “Likely Harmful” as can be seen by the steep decline in stated beliefs for this group. Comparing Figure 13a to Figure 3b in the Theory section provides evidence consistent with Bayesian updating. Confirmation bias would predict that consumers with priors on the left hand side of the x-axis, i.e. “Likely

\textsuperscript{15}Because of repeated measure of the same metric (beliefs), reversion to the mean is of concern. As an example, those who state they believe the ingredient is “Definitely Not Harmful” are more likely to state one of the other choices making it seem they responded to treatment while in fact it is a statistical artifact of repeated measurements. We use the control group to control for reversion to the mean.
Figure 13: Estimated Change in Stated Belief and WTP.

(a) Treatment Effects on Stated Belief.
(b) Treatment Effects on WTP.

Not Harmful” would update the most because they view the debunking message as consistent with their existing beliefs (Prediction 2 in Section 3). In Appendix A, we provide quantitative evidence against confirmation bias. Overall, we find the Bayesian updating framework satisfactorily rationalizes the empirical results in our study. This is good news for policy makers, as the findings are supportive of the ideal outcome that debunking seems to have larger impact on consumers with more misinformed beliefs.

We confirm these patterns using the willingness-to-pay estimates constructed directly from the conjoint choice data (as done in Section 6). The willingness-to-pay patterns (Figure 13b) are consistent with the stated beliefs. Specifically, the impact from debunking across the belief groups (green dotted line) significantly outweighs the impact from misleading ad (red dashed line). Combining the net effect from misleading ad and debunking, we find a significant increase in willingness-to-pay across the board (blue dot-dashed line). Similar as before, we find the largest net effect occurring with people who think the ingredient is “likely harmful”: everything else constant, they are now willing to pay $2.2 more for a 2.7oz deodorant with aluminum. This pattern in willingness-to-pay also provides evidence that the effects in the stated beliefs are not driven by ceiling effects (i.e., those who state they consider the ingredient to be “Definitely Not Harmful” have less room to move than those who state “Likely Harmful”), as willingness-to-pay estimates are unbounded.
7 Conclusion

This paper investigates the extent that debunking via corrective messaging can revert the effects of misinformation, and the heterogeneous impacts of misinformation and debunking based on the debunking source and prior beliefs. Through an incentive compatible survey experiment, we measure these impacts on consumers’ revealed preferences and stated beliefs. We find that misinformation can influence consumers’ willingness to pay, and that debunking provides an effective strategy to revert consumers’ beliefs, and in some cases, can even influence consumers’ existing beliefs. Additionally, debunking from all sources are effective for both aluminum and fluoride, and only the competitor debunking is effective for GMOs.

While debunking is shown to be effective on average, the heterogeneous impacts of debunking is an important consideration in policy evaluation. From a regulator’s perspective, debunking ideally should change actions resulting from misinformed beliefs (consistent with Bayesian updating) rather than reinforcing those with correct beliefs (consistent with confirmation bias). Directly eliciting prior beliefs from survey participants, we find that debunking is most effective for those who had misinformed beliefs, an encouraging finding for policymakers.

The best course of action for competitors is to actively debunk such ads. Although regulators have taken the major role in debunking the spread of misinformation, it might be hard for regulators to debunk every source of misinformation due to resource constraints and the vast number of claims in the marketplace. Existing laws such as the Lanham Act and accreditation sites such as the Better Business Bureau might help bring questionable claims to the attention of regulators.

Methodologically, this paper develops an incentive compatible survey to measure consumers’ responses to misinformation and sources of debunking. This method is straightforward to use and can be applied across a wide variety of categories, especially in settings where field experiments are not feasible. Because consumer beliefs are constantly evolving, future work would benefit from investigating the strength of debunking over time and across categories.

While this paper shows that debunking is effective in controlled setting where consumers are paying attention to the source and content of the tweets, we are not able to comment on whether these results can hold in a setting where consumers may pay less attention, or can seek out information in a biased manner. Another limitation of this paper is that we do not observe the effects of debunking over time. Understanding debunking effectiveness when individuals selectively pay attention or how effectiveness varies over time for individuals with different priors are interesting avenues for future research.
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Figure A1: Estimated Perceived Ad and Debunking Source Trustworthiness

(a) Ad

(b) Debunking Source

Note: The figures plot the estimated ad’s (left panel) and debunking source’s (right panel) trustworthiness. The x-axis is the individual’s stated belief that aluminum is toxic. Note that the survey responses are in ranges for how sure the individual is that aluminum is harmful (0-10% = “Definitely not harmful”, 20-40% = “Likely not harmful”, etc.): individual’s priors are assumed to be the median of the range. The size of each point represents how many individuals had the respective estimated π’s.

Appendix

A Supplemental Evidence against Confirmation Bias

To formally test for evidence of confirmation bias, we follow the frameworks for updating beliefs in Section 3 to derive a user’s perceived trustworthiness, based on their observed prior and posterior beliefs. Specifically, following the equations in Table 1, given an observed prior and posterior for individuals who see either an ad with misinformation and no debunking or a control ad with debunking, we can identify each individual’s trustworthiness of their respective misinformation or debunking source. As stated in Section 3.2, if individuals update their beliefs with confirmation bias, they tend to underweight the information if it conflicts with their priors. Therefore, in this setting, this definition translates to the following null hypothesis: an individual perceives a source to be less trustworthy if her prior conflicts with the source. That is, under confirmation bias, we expect a negative correlation between the individual’s prior that the ingredient is toxic and her perceived trustworthiness of the debunking source, and a positive correlation between an individual’s prior and her perceived trustworthiness of the misinformation source.

We assume that each individual’s prior/posterior that the ingredient is toxic is the median of their stated range (i.e. if the respondent states 0-20%, then her θ = 0.1). Given each individual’s stated prior and posterior, we estimate the perceived trustworthiness of the
ad/debunking source for each individual in the Control Ad - Regulator Debunking, Misinfo Ad - Control Debunking treatment groups, which are plotted as a function of their priors in Figure A1. The averages of the estimated perceived trustworthiness is 0.49 and 0.67 for the ad and debunking source, respectively, which reflects the finding that debunking is more effective at shifting beliefs than misinformation is, on average. While we can visually see a correlation between the prior and the estimated perceived trustworthiness in Figure A1, to test for evidence of confirmation bias, we must account for reversion to the mean. Reversion to the mean occurs in this setting because we are comparing within-individuals over time; those who state that they believe that aluminum is “definitely not harmful” is more likely to shift their beliefs towards “more harmful” when asked the second time, than someone who states they believe that aluminum is “likely not harmful” the first time, even in the absence of treatment. As a result, our estimation method would incorrectly attribute this change in belief to a higher level of trustworthiness, rather than reversion to the mean.

To account for reversion to the mean, we use data from respondents in the Control Ad-Control Debunking group. Individuals in this group receive no information about the ingredient, which is the same as receiving information from a source with \( \tilde{\pi} = 0.5 \).\(^\text{16}\) We measure the extent of reversion to the mean by estimating their perceived trustworthiness, as if they had seen an ad with misinformation or a debunking message. We then can compare the estimated trustworthiness and their relationship with the priors between the control group and the treated group to remove reversion to the mean effects. To do so, we estimate the following linear regressions.

\[
\tilde{\pi}^a = \alpha + \beta_1 \theta^0_i + \beta_2 Treated_i + \beta_3 (\theta^0_i \times Treated_i) + \epsilon_i \quad (14)
\]

\[
\tilde{\pi}^d = \alpha + \beta_1 \theta^0_i + \beta_2 Treated_i + \beta_3 (\theta^0_i \times Treated_i) + \epsilon_i \quad (15)
\]

Equation ?? is estimated for respondents in the Misinfo Ad-Control Debunking and Control Ad-Control Debunking groups, and \( Treated_i \) is an indicator for whether \( i \) is in the Misinfo Ad-Control Debunking group, while Equation ?? is estimated for respondents in the Control Ad-Regulator Debunking and Control Ad-Control Debunking groups, and \( Treated_i \) is an indicator for whether \( i \) is in the Control Ad-Regulator Debunking group. For the remainder of the appendix, the Control Ad-Control Debunking group will be referred to as the control group.

The interpretations of the coefficients are as follows. The intercept \( \alpha \) is the average estimated trustworthiness of the ad/debunking source for the control group. Because those in the control group do not actually receive information, any deviations from \( \tilde{\pi} = 0.5 \) are

\(^\text{16}\)Under both scenarios, without reversion to the mean, the individual’s prior should equal the posterior.
interpreted as inherent tendencies for individuals to select different responses when asked the same question twice (in the absence of treatment). $\beta_1$ is the correlation between the stated prior and the estimated trustworthiness for respondents in the control group. $\beta_1 = 0$ indicates that there is no reversion to the mean. $\beta_2$ is the difference between the average trustworthiness of the source between the treated and control groups, or in other words, the extent that the information is trustworthiness after accounting for reversion to the mean. $\alpha + \beta_2$ is the average estimated trustworthiness for respondents in the respective treatment groups. Lastly, the most important coefficient is $\beta_3$, which represents the extent that the relationship between the prior and the estimated trustworthiness is different for the treated group compared to the control group. In other words, $\beta_3$ is the relationship between the prior and estimated trustworthiness after accounting for mean reversion. If individuals update with confirmation bias, we would expect $\beta_3 > 0$ for Equation ?? (those who have a prior that the ingredient is harmful perceive the misinformation that the ingredient is indeed harmful to be more trustworthy), and $\beta_3 < 0$ for Equation ?? (those who have a prior that the ingredient is harmful perceive the debunking message to be less trustworthy).

Columns 1 and 2 of Table ?? displays the estimates of Equation ??, and columns 3 and 4 display the estimates of Equation ??.

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<tr>
<td>$\theta^0 &lt; 0.9$</td>
<td>0.053</td>
<td>0.033</td>
<td>0.219</td>
<td>0.185</td>
</tr>
<tr>
<td>$\theta^0 &gt; 0.1$</td>
<td>0.2360</td>
<td>0.2081</td>
<td>0.2370</td>
<td>0.2082</td>
</tr>
</tbody>
</table>

**p < 0.001; **p < 0.01; *p < 0.05
toxic after seeing misinformation. First, we find that \( \beta_1 \), the relationship between the prior and the estimated trustworthiness for the control group is statistically different from 0, indicating there is reversion to the mean. Second, \( \beta_2 \) is significantly positive in Columns 2 and 3 but not statistically significant in Columns 1 and 2, which means that on average, there are no differences in changes in stated beliefs between respondents who see misinformation (and no debunking) and respondents in the control group, while debunking leads to a significant average reduction in “aluminum is harmful” beliefs. Third, in all specifications, we find that either \( \beta_3 \) is not significantly different from 0 (columns 1, 2, 4), or is the opposite of what confirmation bias would predict (Column 3, which indicates that those with stronger priors that the ingredient is harmful perceive the source to be more trustworthy). Therefore, we do not find evidence of confirmation bias in how individuals update their beliefs in response to misinformation or debunking.

B Additional Figures and Tables

Figure B1: Posterior Beliefs after Debunking for Varying Trustworthiness

Notes: This figure presents \( \theta_{\text{post}} \), an individual’s posterior belief that the ingredient is toxic, for the ingredient after she sees a debunking message for varying levels of trustworthiness. The values are derived from the equations in Table 1.
Figure B2: Additional Treatment Ad in Aluminum Survey

(a) Treated Ad 1

Figure B3: Product Pricing Examples - Deodorant With and Without Aluminum

(a) Aluminum-free

Dove 0% Aluminum Deodorant for Women
- 1% Moisturizers Cucumber & Green Tea Aluminum Free with 24-hour Odor Protection 2.6 oz 3 Count
- Visit the Dove Store
- 155 ratings | 13 answered questions
- $22.47 (Save $7.52)
- Mark as a Best Seller
- Ships FREE One-Day
- Ships within 12 hours
- Pay with your American Express membership credits.
- Available until Jan 31, 2021
- Scent: Cucumber green tea
- Acne ingredients: Aluminum-Free
- Item type: 2.6 Fl oz (73.94 mL)
- About this item:
  - Dove 0% Aluminum Deodorant with Cucumber & Green Tea 2.6 oz
  - The aluminum-free deodorant provides 24-hour odor protection.
  - Formulated deodorant that contains 1% moisturizers for soft and smooth underarms.

(b) Aluminum

Dove Advanced Care Antiperspirant for Sweat Block Cool Essentials 48-Hour Deodorant Protection 2.6 oz 4 Count
- Visit the Dove Store
- 4 stars rating | 4 answered questions
- $17.06 (Save $3.93)
- Mark as a Best Seller
- Ships FREE One-Day
- Ships within 12 hours
- Pay with your American Express membership credits.
- Available until Jan 31, 2021
- Scent: Green tea cucumber
- Acne ingredients: Aluminum Dihydroxypropylamide (1.7%), Proline
- Size: 2.6 oz (73.94 mL)
- Item type: 2.6 Fl oz (73.94 mL)
- About this item:
  - Dove Advanced Care Antiperspirant for Sweat Block Cool Essentials
  - 48-hour protection
  - Fresh scent
  - Antiperspirant
  - Deodorant
  - Formulated deodorant that contains 1% moisturizers for soft and smooth underarms.

Notes: This figure displays the prices on Amazon for variants of Dove deodorants with and without aluminum. This example was chosen because 1) this brand was included in the aluminum survey, and 2) there exist variants of the same, or similar products with and without aluminum within the same brand. The prices were accessed in November 2020.
Figure B4: Product Pricing Examples - Nutritional Shakes with and without GMOs

(a) Non-GMO

(b) GMO

Notes: This figure displays the prices on Amazon for variants of Ensure nutritional shakes with and without GMOs. This example was chosen because 1) this brand was included in the GMO survey, and 2) there exist variants of the same, or similar products with and without GMOs within the same brand. The prices were accessed in November 2020.
Figure B5: Product Pricing Examples - Toothpastes With and Without Fluoride

(a) Flouride and Fluoride-free: Example 1

Tom's of Maine Activated Charcoal Toothpaste, Charcoal Toothpaste, Fluoride Free Toothpaste, Peppermint, 4.7 Ounce, 3-Pack
Visit the Tom's of Maine Store
5 stars - 1,824 ratings | 18 answered questions
Amazon Choice for "charcoal toothpaste no-fluroide"

Price: $17.97 ($1.72 / Ounce) *Prime FREE One-Day & FREE Returns
Pay $19.99 $0.00 after using available American Express Membership Rewards points.
Returnable until Jan 31, 2021

Flavor: Peppermint, Flouride-Free

<table>
<thead>
<tr>
<th>Price</th>
<th>Size</th>
<th>Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>$14.99 ($1.06 / Ounce)</td>
<td>4.7 Ounce, 3 Pack</td>
<td>Water, hydrated silica, sorbitol, glycerin, xylitol, lauryl glucoside, sodium cocoyl glutamate, natural flavors, benzyl alcohol, charcoal powder...</td>
</tr>
</tbody>
</table>

See more

Tom’s of Maine Natural Activated Charcoal Toothpaste, Charcoal Toothpaste, Fluoride Free Toothpaste, Peppermint, 4.7 Ounce, 3-Pack
Visit the Tom's of Maine Store
5 stars - 1,824 ratings | 18 answered questions
Amazon Choice for "charcoal toothpaste no-fluoride"

Price: $14.99 ($1.06 / Ounce) *Prime FREE One-Day & FREE Returns
Pay $19.99 $0.00 after using available American Express Membership Rewards points.
Returnable until Jan 31, 2021

Flavor: Peppermint, Flouride-Free

<table>
<thead>
<tr>
<th>Price</th>
<th>Size</th>
<th>Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>$14.99 ($1.06 / Ounce)</td>
<td>4.7 Ounce, 3 Pack</td>
<td>Water, hydrated silica, sorbitol, glycerin, xylitol, lauryl glucoside, sodium cocoyl glutamate, natural flavors, benzyl alcohol, charcoal powder...</td>
</tr>
</tbody>
</table>

See more

(b) Flouride (Example 2)

(c) Flouride Free (Example 2)

Notes: This figure displays the prices on Amazon for variants of Tom’s of Maine toothpastes with and without fluoride. These examples were chosen because 1) this brand was included in the fluoride survey, and 2) there exist variants of the same, or similar products with and without fluoride within the same brand. Note that there are two examples of flouride vs flouride-free pricing. For both deodorant and nutritional shakes, the aluminum-free and GMO-free versions are more expensive than the aluminum and GMO variants, respectively. However, for toothpaste, this is not always the case, as highlighted by this example. The prices were accessed in November 2020.
Table B1: Debunking Message Content

<table>
<thead>
<tr>
<th>Survey</th>
<th>Debunking Type</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>Control</td>
<td>Egyptians are often credited with developing the first deodorant, applying sweet-smelling scents to cover up body odor. Their deodorants consisted of spices, such as citrus or cinnamon.</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>Aluminum-containing products are safe for topical use. Aluminum in deodorant products prevents sweat buildup, and scientific studies have found no conclusive evidence that it causes adverse health effects.</td>
</tr>
<tr>
<td>Fluoride</td>
<td>Control</td>
<td>Egyptians are often credited with developing the first toothpaste. The earliest Egyptian recipe contained plenty of abrasives to scrape off all the sticky residue: the ashes of burnt egg shells and oxen hooves mixed with pumice seemed to be popular.</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>Fluoride-containing toothpastes are safe. Fluoride in toothpastes prevents cavities, and scientific studies have found no conclusive evidence that it causes adverse health effects.</td>
</tr>
<tr>
<td>GMO</td>
<td>Control</td>
<td>Whey protein is a nutritional supplement that comes from milk. It’s isolated from the rest of the milk through a variety of purification processes. Only 20 percent of milk’s protein is whey.</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>GMOs are safe. GMOs benefit the environment by creating more sustainable farming methods, and scientific studies have found GMO foods are just as safe as non-GMO foods.</td>
</tr>
</tbody>
</table>

Notes: This table displays the debunking messages for all debunking types. The treatment group encompasses the firm, media, and regulator groups, as the debunking messages are the same across all sources. Each debunking message also includes a website link to an actual article from the source.
Table B2: Post-Conjoint Survey Questions: Aluminum

<table>
<thead>
<tr>
<th>Question Type</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification Checks</td>
<td>Which account is the first Tweet from?</td>
</tr>
<tr>
<td></td>
<td>Which account is the second Tweet from?</td>
</tr>
<tr>
<td></td>
<td>What is the first Tweet’s point?</td>
</tr>
<tr>
<td></td>
<td>What was the second Tweet’s point?</td>
</tr>
<tr>
<td>Product Usage</td>
<td>In the past week, how frequently have you used deodorant?</td>
</tr>
<tr>
<td>Brand Preference</td>
<td>What is your favorite deodorant brand?</td>
</tr>
<tr>
<td>Sensitivity to Ingredients</td>
<td>In instances where you look at ingredients when purchasing deodorant, why? Select all that apply.</td>
</tr>
<tr>
<td>Knowledge about the ingredient</td>
<td>What is the reason for adding aluminum to deodorants and antiperspirants?</td>
</tr>
<tr>
<td>Other controversial products</td>
<td>Would you buy the following? Choose all that apply.</td>
</tr>
<tr>
<td>Ingredient Importance</td>
<td>Do you generally read ingredient labels?</td>
</tr>
</tbody>
</table>

Notes: This table includes the questions asked in the aluminum survey, except the conjoint and demographic questions. The demographic questions are the same across all surveys and are displayed in Table B5. All questions are multiple choice.
Table B3: Post-Conjoint Survey Questions: Fluoride

<table>
<thead>
<tr>
<th>Question Type</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification Checks</td>
<td>Which account is the first Tweet from?</td>
</tr>
<tr>
<td></td>
<td>Which account is the second Tweet from?</td>
</tr>
<tr>
<td></td>
<td>What is the first Tweet’s point?</td>
</tr>
<tr>
<td></td>
<td>Which of the following best describes the second Tweet’s point?</td>
</tr>
<tr>
<td>Product Usage</td>
<td>In the past week, how frequently have you brushed your teeth?</td>
</tr>
<tr>
<td>Brand Preference</td>
<td>What is your favorite toothpaste brand?</td>
</tr>
<tr>
<td>Sensitivity to Ingredients</td>
<td>In instances where you look at ingredients when purchasing toothpaste, why? Select all that apply.</td>
</tr>
<tr>
<td>Beliefs about the focal ingredient</td>
<td>Do you believe that fluoride in toothpaste is harmful to humans?</td>
</tr>
<tr>
<td>Knowledge about the ingredient</td>
<td>What is the reason for adding fluoride to toothpaste?</td>
</tr>
<tr>
<td>Other controversial products</td>
<td>Would you buy the following? Choose all that apply.</td>
</tr>
<tr>
<td>Ingredient Importance</td>
<td>Do you generally read ingredient labels?</td>
</tr>
</tbody>
</table>

Notes: This table includes the questions asked in the fluoride survey, except the conjoint and demographic questions. The demographic questions are the same across all surveys and are displayed in Table B5. All questions are multiple choice.
Table B4: Post-Conjoint Survey Questions: GMO

<table>
<thead>
<tr>
<th>Question Type</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification Checks</td>
<td>Which account is the first Tweet from?</td>
</tr>
<tr>
<td></td>
<td>Which account is the second Tweet from?</td>
</tr>
<tr>
<td></td>
<td>What is the first Tweet’s point?</td>
</tr>
<tr>
<td></td>
<td>What was the second Tweet’s point?</td>
</tr>
<tr>
<td>Product Usage</td>
<td>In the past month, have you purchased any nutritional shakes?</td>
</tr>
<tr>
<td></td>
<td>Generally, how do you consume nutrition shakes?</td>
</tr>
<tr>
<td></td>
<td>Choose all that apply.</td>
</tr>
<tr>
<td>Brand Preference</td>
<td>Among the options below, what is your favorite brand?</td>
</tr>
<tr>
<td>Sensitivity to Ingredients</td>
<td>In instances where you look at ingredients when purchasing a shake, why? Select all that apply.</td>
</tr>
<tr>
<td>Beliefs about the focal ingredient</td>
<td>Do you believe that GMOs are harmful to health?</td>
</tr>
<tr>
<td></td>
<td>Do you believe that GMOs benefit the environment?</td>
</tr>
<tr>
<td>Knowledge about the ingredient</td>
<td>What is the reason for genetically modifying crops?</td>
</tr>
<tr>
<td>Other controversial products</td>
<td>Would you buy the following? Choose all that apply.</td>
</tr>
<tr>
<td>Ingredient Importance</td>
<td>Do you generally read ingredient labels?</td>
</tr>
</tbody>
</table>

Notes: This table includes the questions asked in the GMO survey, except the conjoint and demographic questions. The demographic questions are the same across all surveys and are displayed in Table B5. All questions are multiple choice.
Table B5: Demographics Survey Questions

<table>
<thead>
<tr>
<th>Question Type</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Cognition†</td>
<td>People in our society often disagree about issues of equality and discrimination. How strongly you agree or disagree with each of these statements?</td>
</tr>
<tr>
<td>Education</td>
<td>What is your highest level of education achieved?</td>
</tr>
<tr>
<td>Household Income</td>
<td>What is your annual household income level?</td>
</tr>
<tr>
<td>Race</td>
<td>Choose one or more races that you consider yourself to be:</td>
</tr>
<tr>
<td>Political Affiliation</td>
<td>Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else?</td>
</tr>
<tr>
<td>Primary Shopper</td>
<td>Are you the primary grocery shopper for your household?</td>
</tr>
<tr>
<td>Children</td>
<td>How many children do you have?</td>
</tr>
<tr>
<td>Grocery Spend</td>
<td>How much do you spend on grocery shopping per month?</td>
</tr>
</tbody>
</table>

Notes: This table reports the demographics questions that are asked in all of the surveys. All questions are multiple choice.

†: Survey questions are taken from Kahan (2008).
Table B6: Randomization Check - Ad

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Treated</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aluminum</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>602</td>
<td>1195</td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>33.65</td>
<td>33.23</td>
<td>0.49</td>
</tr>
<tr>
<td>Prop. Female</td>
<td>0.53</td>
<td>0.53</td>
<td>0.97</td>
</tr>
<tr>
<td>Prop. Democrat</td>
<td>0.5</td>
<td>0.46</td>
<td>0.15</td>
</tr>
<tr>
<td>Prop. White</td>
<td>0.75</td>
<td>0.77</td>
<td>0.29</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.08</td>
<td>0.08</td>
<td>0.89</td>
</tr>
<tr>
<td><strong>Fluoride</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1619</td>
<td>1583</td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>33.12</td>
<td>32.5</td>
<td>0.15</td>
</tr>
<tr>
<td>Prop. Female</td>
<td>0.54</td>
<td>0.52</td>
<td>0.2</td>
</tr>
<tr>
<td>Prop. Democrat</td>
<td>0.51</td>
<td>0.5</td>
<td>0.92</td>
</tr>
<tr>
<td>Prop. White</td>
<td>0.74</td>
<td>0.74</td>
<td>0.99</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.11</td>
<td>0.11</td>
<td>0.78</td>
</tr>
<tr>
<td><strong>GMO</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>787</td>
<td>772</td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>32.45</td>
<td>32.67</td>
<td>0.72</td>
</tr>
<tr>
<td>Prop. Female</td>
<td>0.51</td>
<td>0.51</td>
<td>0.99</td>
</tr>
<tr>
<td>Prop. Democrat</td>
<td>0.49</td>
<td>0.47</td>
<td>0.48</td>
</tr>
<tr>
<td>Prop. White</td>
<td>0.76</td>
<td>0.72</td>
<td>0.06</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.08</td>
<td>0.09</td>
<td>0.41</td>
</tr>
</tbody>
</table>

Notes: This table reports the demographics for participants in each ad type. The p-value is associated with the null hypothesis that the mean values of the corresponding row is the same across all debunking groups.
Table B7: Randomization Check - Debunking

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Firm</th>
<th>Media</th>
<th>Regulator</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aluminum</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>451</td>
<td>438</td>
<td>440</td>
<td>468</td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>33.39</td>
<td>33.81</td>
<td>33.15</td>
<td>33.13</td>
<td>0.83</td>
</tr>
<tr>
<td>Prop. Female</td>
<td>0.54</td>
<td>0.52</td>
<td>0.54</td>
<td>0.54</td>
<td>0.85</td>
</tr>
<tr>
<td>Prop. Democrat</td>
<td>0.43</td>
<td>0.48</td>
<td>0.5</td>
<td>0.49</td>
<td>0.14</td>
</tr>
<tr>
<td>Prop. White</td>
<td>0.77</td>
<td>0.76</td>
<td>0.78</td>
<td>0.76</td>
<td>0.88</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.09</td>
<td>0.07</td>
<td>0.05</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Fluoride</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>812</td>
<td>793</td>
<td>784</td>
<td>813</td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>32.78</td>
<td>33.47</td>
<td>32.71</td>
<td>32.31</td>
<td>0.3</td>
</tr>
<tr>
<td>Prop. Female</td>
<td>0.54</td>
<td>0.52</td>
<td>0.53</td>
<td>0.52</td>
<td>0.64</td>
</tr>
<tr>
<td>Prop. Democrat</td>
<td>0.52</td>
<td>0.47</td>
<td>0.56</td>
<td>0.47</td>
<td>0</td>
</tr>
<tr>
<td>Prop. White</td>
<td>0.76</td>
<td>0.72</td>
<td>0.74</td>
<td>0.73</td>
<td>0.39</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.1</td>
<td>0.1</td>
<td>0.12</td>
<td>0.11</td>
<td>0.47</td>
</tr>
<tr>
<td><strong>GMO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>386</td>
<td>407</td>
<td>382</td>
<td>384</td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>32.87</td>
<td>32.14</td>
<td>32.92</td>
<td>32.33</td>
<td>0.75</td>
</tr>
<tr>
<td>Prop. Female</td>
<td>0.51</td>
<td>0.52</td>
<td>0.47</td>
<td>0.55</td>
<td>0.14</td>
</tr>
<tr>
<td>Prop. Democrat</td>
<td>0.42</td>
<td>0.47</td>
<td>0.51</td>
<td>0.52</td>
<td>0.03</td>
</tr>
<tr>
<td>Prop. White</td>
<td>0.76</td>
<td>0.73</td>
<td>0.72</td>
<td>0.75</td>
<td>0.49</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.09</td>
<td>0.09</td>
<td>0.1</td>
<td>0.08</td>
<td>0.86</td>
</tr>
</tbody>
</table>

Notes: This table reports the demographics for participants in each debunking group. The p-value is associated with the null hypothesis that the mean values of the corresponding row is the same across all debunking groups.

Table B8: Ingredient Surveys Verification Check - Ads

<table>
<thead>
<tr>
<th>Survey</th>
<th>Ad</th>
<th>Source Correct</th>
<th>Content Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>Control</td>
<td>0.94</td>
<td>0.93</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Treatment</td>
<td>0.92</td>
<td>0.73</td>
</tr>
<tr>
<td>Fluoride</td>
<td>Control</td>
<td>0.93</td>
<td>0.96</td>
</tr>
<tr>
<td>Fluoride</td>
<td>Treatment</td>
<td>0.97</td>
<td>0.93</td>
</tr>
<tr>
<td>GMO</td>
<td>Control</td>
<td>0.97</td>
<td>0.81</td>
</tr>
<tr>
<td>GMO</td>
<td>Treatment</td>
<td>0.98</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Notes: This table reports the proportion of the participants that passed the verification check for the ad source and content for each survey. the demographics for participants in each debunking group. The p-value is associated with the null hypothesis that the mean values of the corresponding row is the same across all debunking groups.
Table B9: Ingredient Surveys Verification Check - Debunking Messages

<table>
<thead>
<tr>
<th>Survey</th>
<th>Debunk Source</th>
<th>Source Correct</th>
<th>Content Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>Control</td>
<td>0.89</td>
<td>0.93</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Firm</td>
<td>0.89</td>
<td>0.93</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Media</td>
<td>0.82</td>
<td>0.90</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Regulator</td>
<td>0.90</td>
<td>0.93</td>
</tr>
<tr>
<td>Fluoride</td>
<td>Control</td>
<td>0.89</td>
<td>0.94</td>
</tr>
<tr>
<td>Fluoride</td>
<td>Firm</td>
<td>0.92</td>
<td>0.96</td>
</tr>
<tr>
<td>Fluoride</td>
<td>Media</td>
<td>0.89</td>
<td>0.96</td>
</tr>
<tr>
<td>Fluoride</td>
<td>Regulator</td>
<td>0.92</td>
<td>0.97</td>
</tr>
<tr>
<td>GMO</td>
<td>Control</td>
<td>0.80</td>
<td>0.92</td>
</tr>
<tr>
<td>GMO</td>
<td>Firm</td>
<td>0.88</td>
<td>0.94</td>
</tr>
<tr>
<td>GMO</td>
<td>Media</td>
<td>0.87</td>
<td>0.93</td>
</tr>
<tr>
<td>GMO</td>
<td>Regulator</td>
<td>0.85</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Notes: This table reports the proportion of the participants that passed the verification check for each debunking message source and content for each survey. The demographics for participants in each debunking group. The p-value is associated with the null hypothesis that the mean values of the corresponding row is the same across all debunking groups.
Table B10: Main Results for Demand Estimates using People Passing Verification Checks

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ingredient x controlad</td>
<td>-0.916***</td>
<td>1.584***</td>
<td>-0.668***</td>
</tr>
<tr>
<td></td>
<td>(0.150)</td>
<td>(0.0930)</td>
<td>(0.114)</td>
</tr>
<tr>
<td>ingredient x controlad x debunk_firm</td>
<td>0.493**</td>
<td>3.16e-05</td>
<td>0.0422</td>
</tr>
<tr>
<td></td>
<td>(0.211)</td>
<td>(0.126)</td>
<td>(0.145)</td>
</tr>
<tr>
<td>ingredient x controlad x debunk_media</td>
<td>0.434**</td>
<td>0.0468</td>
<td>0.103</td>
</tr>
<tr>
<td></td>
<td>(0.214)</td>
<td>(0.127)</td>
<td>(0.156)</td>
</tr>
<tr>
<td>ingredient x controlad x debunk_regulator</td>
<td>0.736***</td>
<td>0.0165</td>
<td>0.162</td>
</tr>
<tr>
<td></td>
<td>(0.191)</td>
<td>(0.123)</td>
<td>(0.153)</td>
</tr>
<tr>
<td>ingredient x misinfoad</td>
<td>-1.039***</td>
<td>0.878***</td>
<td>-0.803***</td>
</tr>
<tr>
<td></td>
<td>(0.100)</td>
<td>(0.0935)</td>
<td>(0.0998)</td>
</tr>
<tr>
<td>ingredient x misinfoad x debunk_firm</td>
<td>0.509***</td>
<td>0.328***</td>
<td>0.215</td>
</tr>
<tr>
<td></td>
<td>(0.153)</td>
<td>(0.121)</td>
<td>(0.137)</td>
</tr>
<tr>
<td>ingredient x misinfoad x debunk_media</td>
<td>0.780***</td>
<td>0.547***</td>
<td>0.0211</td>
</tr>
<tr>
<td></td>
<td>(0.146)</td>
<td>(0.129)</td>
<td>(0.144)</td>
</tr>
<tr>
<td>ingredient x misinfoad x debunk_regulator</td>
<td>0.995***</td>
<td>0.515***</td>
<td>0.0608</td>
</tr>
<tr>
<td></td>
<td>(0.143)</td>
<td>(0.126)</td>
<td>(0.136)</td>
</tr>
<tr>
<td>price</td>
<td>-0.446***</td>
<td>-0.475***</td>
<td>-0.187***</td>
</tr>
<tr>
<td></td>
<td>(0.0188)</td>
<td>(0.0135)</td>
<td>(0.00736)</td>
</tr>
</tbody>
</table>

Control dummies balancing attributes, brands

N individual 1,192 2,633 1,125

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered by individuals.

Notes: This table presents robustness results using people in the ingredient surveys who passed the verification check. Conclusions stay the same except that firm debunking is no longer significant among GMO. We group together the weak and strong versions of misinformed ads in deodorant study and report the original estimation results in robustness check. Balancing attributes are: "scented" for deodorant, "whitening" for toothpaste, and "vanilla/chocolate" for nutrition shakes. Brands included in the studies are: {Kopari, Dove, Speedstick} for deodorant, {Colgate, Crest, Tom’s of Maine, Risewell} for toothpastes, and {Soylent, Orgain, Ensure} for nutrition shakes.
Table B11: Main Results of Demand Estimates for Deodorants

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ingredient x controlad</td>
<td>-0.819***</td>
<td>-0.916***</td>
</tr>
<tr>
<td></td>
<td>(0.126)</td>
<td>(0.150)</td>
</tr>
<tr>
<td>ingredient x controlad x debunk_firm</td>
<td>0.409**</td>
<td>0.493**</td>
</tr>
<tr>
<td></td>
<td>(0.176)</td>
<td>(0.211)</td>
</tr>
<tr>
<td>ingredient x controlad x debunk_media</td>
<td>0.312*</td>
<td>0.435**</td>
</tr>
<tr>
<td></td>
<td>(0.178)</td>
<td>(0.214)</td>
</tr>
<tr>
<td>ingredient x controlad x debunk_regulator</td>
<td>0.582***</td>
<td>0.736***</td>
</tr>
<tr>
<td></td>
<td>(0.166)</td>
<td>(0.191)</td>
</tr>
<tr>
<td>ingredient x exploitad</td>
<td>-0.954***</td>
<td>-1.119***</td>
</tr>
<tr>
<td></td>
<td>(0.116)</td>
<td>(0.145)</td>
</tr>
<tr>
<td>ingredient x exploitad x debunk_firm</td>
<td>0.544***</td>
<td>0.645***</td>
</tr>
<tr>
<td></td>
<td>(0.159)</td>
<td>(0.216)</td>
</tr>
<tr>
<td>ingredient x exploitad x debunk_media</td>
<td>0.650***</td>
<td>0.957***</td>
</tr>
<tr>
<td></td>
<td>(0.168)</td>
<td>(0.214)</td>
</tr>
<tr>
<td>ingredient x exploitad x debunk_regulator</td>
<td>0.709***</td>
<td>0.963***</td>
</tr>
<tr>
<td></td>
<td>(0.171)</td>
<td>(0.210)</td>
</tr>
<tr>
<td>ingredient x spreadad</td>
<td>-0.752***</td>
<td>-0.949***</td>
</tr>
<tr>
<td></td>
<td>(0.112)</td>
<td>(0.138)</td>
</tr>
<tr>
<td>ingredient x spreadad x debunk_firm</td>
<td>0.151</td>
<td>0.353</td>
</tr>
<tr>
<td></td>
<td>(0.172)</td>
<td>(0.217)</td>
</tr>
<tr>
<td>ingredient x spreadad x debunk_media</td>
<td>0.432***</td>
<td>0.591***</td>
</tr>
<tr>
<td></td>
<td>(0.155)</td>
<td>(0.197)</td>
</tr>
<tr>
<td>ingredient x spreadad x debunk_regulator</td>
<td>0.744***</td>
<td>1.010***</td>
</tr>
<tr>
<td></td>
<td>(0.152)</td>
<td>(0.195)</td>
</tr>
<tr>
<td>price</td>
<td>-0.426***</td>
<td>-0.446***</td>
</tr>
<tr>
<td></td>
<td>(0.0153)</td>
<td>(0.0188)</td>
</tr>
</tbody>
</table>

Control dummies balancing attributes, brands

<table>
<thead>
<tr>
<th>Passed all verification checks?</th>
<th>N</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>N individuals</td>
<td>1,797</td>
<td>1,192</td>
</tr>
</tbody>
</table>

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered by individuals.

Notes: This table presents the robust result for deodorant when we keep two versions of treated ads separate, in the ingredient surveys. The first column is for all respondents, second column is for only respondents who passed the verification checks. The “exploit” (weak) version of ad states that the deodorant is aluminum-free, whereas the “spread” (strong) version explicitly states that “non-natural” deodorants have toxic ingredients. Balancing attribute for deodorants is: "Scented". Brands included in the deodorant study are: Kopari, Dove, Speed Stick.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated Ad - Regulator Debunk</td>
<td>1210</td>
<td>35</td>
<td>0.57</td>
<td>0.50</td>
<td>0.74</td>
<td>0.10</td>
</tr>
<tr>
<td>Control Ad - Regulator Debunk</td>
<td>1188</td>
<td>34.9</td>
<td>0.58</td>
<td>0.54</td>
<td>0.73</td>
<td>0.09</td>
</tr>
<tr>
<td>Treated Ad - Control Debunk</td>
<td>1178</td>
<td>34.3</td>
<td>0.56</td>
<td>0.51</td>
<td>0.75</td>
<td>0.10</td>
</tr>
<tr>
<td>Control Ad - Control Debunk</td>
<td>1182</td>
<td>34.8</td>
<td>0.56</td>
<td>0.51</td>
<td>0.73</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Notes: This table reports the demographics for participants in each treatment group in the beliefs survey. The demographics are not statistically different across treatment groups. The p-values from the ANOVA in which the null hypothesis is the mean values of age, proportion female, Democrat, white, black are the same across treatment groups are 0.49, 0.64, 0.3, 0.82, and 0.70, respectively.
DESTIGMATIZING PATERNALISM IN SUSTAINABLE WASTE MANAGEMENT POLICY

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University of Guelph

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villerss@uoguelph.ca

Keywords: Waste Management, Paternalism, Neoliberalism, Environmentalism, Cultural Relativity.

Description: This paper aims to understand why Canadian sustainable waste management policy is so ineffective and it advances the controversial proposition that paternalist policies are needed to attain environmentally sustainable teleological ends.
Research Question: Decades of overconsumption in developed countries has necessitated the exporting of waste to developing countries. Consequently, the former lacks the local capacity for proper waste management while the latter is drowning in trash. Climactically, 2018 saw a turn of events when several developing countries enacted laws to deter this practice. Developed countries scrambled to implement policies aimed at waste diversion and reduction. Canada emerged as the country worst at attaining these ends. This paper aims to understand why Canadian sustainable Municipal Solid Waste (MSW) management policy is so ineffective.

Method and Data: This paper employs a qualitative narrative analysis to tell the story of a particular experience through careful observation and interpretation of secondary data. This story is structured through the used of case studies and process models. Using an inductive retrospective narrative approach, heterogeneous cultural factors that influence how waste management policies evolve temporally and geographically are investigated. Specifically, Canadian policies are examined to understand why it struggles more than any other country to reduce MSW. The analysis employs temporal bracketing of events to compare the Canadian values of materialism and the neoliberal policies that ensue therefrom with the alternative cultural value systems of environmentalism and paternalist policy measures.

Summary of Findings: First, this paper proposes that Canadian municipalities’ neoliberal policy instruments have not yet resulted in a net reduction of waste. It examines the differences between Canadian municipal sustainable waste management expenditures on marketing and infrastructure and finds that (1) marketing nudges are ineffective because public participation is thwarted by corporatocracy, and (2) public infrastructure expenditures show a lack of commitment to sustainable SMW management. Next, in examining Canadian conflicting values
of materialism and environmentalism it contends that public support for sustainable waste management policies is culturally relative. A comparative case study between Germany and Canada using Hofstede’s Culture Compass™ supports this contention. Third, in analyzing the cultural attribution of negative or positive sentiment towards paternalism, this paper posits that paternalist (rather than neoliberal) policies are needed to attain meaningful results in sustainable MSW management. An analysis of the Canadian policy response to the plastics crisis following Operation National Sword and the Malaysian reaction to illegal imports of Canadian plastics is considered in support of this proposition.

**Key Contributions**: Rather than echoing the predication in environmental governance literature for neoliberal policy mechanisms that endorse public participation and stakeholder engagement, this manuscript challenges the dominant thought paradigm by urging Canadian policymakers to take paternalist policy measures to address the country’s broader waste management problems. While neoliberal ideals have strong normative appeal, in a waste management context they lack positivist logic in terms of goal attainment. When stakeholders can influence policy, it becomes a competition of whose influence becomes paramount. In capitalist countries, with highly materialistic cultures, the primacy of corporate interests often motivates neoliberal policies. Theoretically, this research contributes to the controversial and limited body of literature that advocates for paternalistic sustainable MSW policies. Managerially, it offers local governments real-world guidance on the benefits of using paternalism to implement sustainable waste management policies. It is hoped that the insights gain from the Canadian narrative, case study and process model analysis will incite future research into the use of paternalist policy instruments and motivate lawmakers to take a firmer stance on sustainable waste management.
DO YOU BELIEVE IT OR NOT? - THE ROLE OF SOURCE CREDIBILITY IN REDUCING STIGMA AND MISINFORMATION ABOUT AIDS

Jose Manu M A (Indian Institute of Management, Bangalore), Soumya Pal (Indian Institute of Management, Bangalore)

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Keywords: Health and Well-being, Misinformation, Stigma, Source credibility, Awareness

Description: Using source credibility theory as a theoretical foundation, the authors focus on the source of information related to HIV and how it may translate into awareness and stigma attached to the disease.

EXTENDED ABSTRACT

Research Question

"Until there is a chemical cure or a vaccine for this disease, the only weapons available for prevention are public information and education. While other forms of information dissemination (e.g., classroom instruction, doctors, private organizations, etc.) are critical in helping to control AIDS, advertising should have a role in assisting society with that dissemination of information and education" - (Bush & Davies, 1989, p. 56)

Existing research studies the impact of source credibility on information usefulness, purchase intentions, information adoption, and information credibility. Studies have shown that source credibility can positively affect brand trust, which affects the attitude towards the brand. In the current study, we evaluate the source of information for AIDS awareness and its effect on
misinformation among people. The research shows that even though general understanding is created through all the routes, a decrease in misinformation is significant only when the information is disseminated through credible sources.

We conducted a preliminary exploratory analysis with the following objectives:

- To study the impact of different sources of information on HIV related awareness
- To study the impact of different sources of information on HIV related stigma

**Method and Data**

*Data*

The information on HIV-related awareness, stigma, and sources of information is extracted from the Demographic Health Survey (DHS) of India. The data represents the whole of India for the year 2015-16. We conducted our analysis with 86,816 women selected for HIV-related information in the age group 15-49. We selected women as the study group because they influence health-related practices and stigma in the household. Second, women in India are less exposed to the source of mass media; hence they are more vulnerable.

*Econometric Model*

We utilized Linear Probability Model (LPM) to establish the relationship between HIV-related awareness, stigma, and sources of information. We used the following stigmas, related to HIV, as the outcome variable:

1. Spread through mosquito
2. Spread through sharing food
3. HIV-positive people should not be allowed in the same workplace

4. Should not be treated in the same hospital

To model the relationship with the sources of information, we categorized them based on the credibility. Our key independent variables are: Credible sources (Television and Radio) and Non-Credible sources (Political leaders, religious leaders, husband, relatives, and co-workers).

Further, we corrected for heteroskedasticity and autocorrelation in the model by estimating the clustered standard error at the state level. We also included individual, household and neighbourhood related variables as Independent variables, to minimize the endogeneity effect. All corrections in the econometric model validates our results.

Summary of Findings

We find that formal sources such as Television and Radio increase the likelihood of HIV-related awareness. For example, awareness about using a condom to reduce the spread of the virus increases with exposure to television and radio. Similarly, informal sources such as husband and friends also increase the likelihood of HIV-related awareness. However, the source of information becomes vital in the case of removing the stigma related to HIV. For example, women's belief that they cannot share food with HIV patients decreases with exposure to formal or credible sources. In contrast, informal sources or non-credible sources do not impact HIV-related stigma. Additionally, the size effect of informal sources is positive, however statistically insignificant, amplifies the HIV-related stigma.
**Statement of Key Contributions**

Based on this exploratory study, people exposed to AIDS through credible mass media communication are less prone to misinformation and stigma associated with it. The results point out that even though people are aware of a disease and its modes of transmission, there might be misinformation or misconception about it when they receive such information through informal sources. This study contributes to the literature of source credibility and extends it by understanding its effect on social stigma and the spread of misinformation.

Understanding and identifying misinformation can affect the quality of life of the individual and, in some cases, increase the risk of mortality. So, the government or public health agencies should keep paying attention to formal communication sources to reduce misconceptions or stigma about health issues. The information from non-credible sources can increase misinformation. They must ensure that the reach of credible information does not die out in the long run so that misinformation through non-credible channels does not take its place.
DOES CASH REALLY MEAN TRASH? AN EMPIRICAL INVESTIGATION INTO THE 
EFFECT OF RETAILER PRICE PROMOTIONS ON HOUSEHOLD FOOD WASTE

Abstract

Retailer price promotions, and in particular multibuys such as the popular “buy-one-get-one-free,” are often criticized as a leading cause of household food waste, presumably because they lure shoppers into buying more than they can realistically consume. In this research, the authors combine household scanner panel data and survey data from a natural experiment to conduct the first systematic, large-scale test of this claim. Households reported consumption, storage, and disposal of perishable foods purchased at regular prices, at a straight discount, or on a multibuy. Contrary to public opinion, households in either price promotion condition clearly did not report wasting more food than did households that purchased at regular prices. In fact, our analysis shows that food purchased on a multibuy was wasted less, and that households in this condition reported consuming more and taking more preventive action than did households in the regular price condition. These findings are relevant to marketing scholars interested in food waste or price promotions, and to marketing professionals and regulators interested in the broader societal impact of promotional tactics.
Statement of Intended Contribution

Approximately one-third of eatable food goes to waste worldwide and the majority of wasted food in developed nations occurs at the household level. Retailer price promotions and, in particular, multibuy deals have been heavily criticized by action groups and policy makers for seducing consumers into buying more than they can consume, thereby contributing to food waste. Yet, this loud condemnation of price promotions rests largely on intuition and generalizations rather than systematic research. This research is the first to systematically test this notion in a large-scale natural experiment, combining household purchase data with survey data from a specially-made questionnaire, collected over a period of nine weeks. Contrary to popular belief, our results show that food purchased on a straight discount or multibuy is not wasted more than food purchased at regular price. In fact, our results suggest that food purchased on a multibuy is actually wasted less and the additional quantity often consumed or frozen.

This research adds to the marketing literature in three respects. First, it responds to calls for research on the marketing aspects related to food waste, a topic far from being completely understood (Block et al. 2016; Porpino 2016; van Doorn 2016). Second, it advances the price promotion literature by examining a fundamental overlooked outcome variable—nonconsumption and in particular food waste. Third, it contributes to the current debate about the role of marketing in improving the world we live in (MacInnis et al. 2020; Moorman and Kirby 2019).

Our findings are also valuable for non-academic stakeholders. Supermarket retailers—which are under increasing pressure to restrict or ban multibuys—could use our results to guide their price promotion decisions. Policy makers profit from this research as it
provides a deeper understanding of the causes of food waste, and allows them to concentrate their efforts accordingly.
Each year, at least 1.3 billion tons of edible food, or roughly one-third of the global production intended for human consumption, is discarded, left to spoil, or simply lost (FAO 2014). The economic, environmental, and social consequences of this negligence for society are extraordinary. Although food waste occurs at every step in the supply chain, in developed nations more than half is the “collateral damage” produced by households as they plan, purchase for, prepare, and consume their meals (Block et al. 2016). In particular, supermarket retailers have been criticized by consumer action groups and regulators for using straight money-off discounts (e.g., “get X% off your purchase”) and, above all, multibuys such as the popular “buy-one-get-one-free” (BOGOF) to lure shoppers into buying more than they can realistically consume. Bowing to the rising pressure, Walmart-owned Asda Stores acknowledged that “there is undoubtedly a lot of waste with BOGOFs” (The Grocer 2008), and other chains vowed to cut the “morally repugnant amount of food being thrown away by shoppers” (BBC News 2014) by phasing out multibuys and, in some instances, replacing them with clever alternatives such as “buy-one-get-one-later.”

A striking aspect of this loud and clear condemnation of supermarkets is that the link between price promotions and food waste stems largely from intuition and generalizations rather than systematic research. For example, in the United Kingdom the government-backed Waste and Resources Action Programme (WRAP) lobbied against multibuys claiming that they contribute disproportionately to the scrapping of food, but this was inferred from the share of respondents to a survey who agreed with the statement “the temptation of price offers leads me to waste,” not from actual behavior (Cox and Downing 2007). Similarly, in academic circles some food scholars showed that consumers anticipate the potential waste associated with multibuys and bonus pack deals (Le Borgne, Sirieix, and Costa 2018; Petit, Lunardo, and Rickard 2020), while others correlated the general tendency to purchase on discount with total household waste (Giordano et al. 2019; Jörissen, Priefer, and Bräutigam 2021 AMA Marketing and Public Policy Conference).
2015; Koivupuro et al. 2012). However, none of these studies can speak to the merit (or otherwise) of criticizing retailers and their promotional tactics because none pinpoints the extent to which food purchased under one price offer or another is actually wasted.

The goal of our research is to address this discrepancy between public opinion and empirical evidence. In a recent commentary van Doorn (2016, p. 54) observed “large-scale studies investigating the extent to which in-store stimuli and (different types of) price promotions contribute to food waste are lacking.” Against this backdrop, we collaborated with AiMark and GfK to build a unique data set combining their 10,000-household scanner panel data with survey data from a specially-made questionnaire. In a natural experiment spanning nine weeks, panel households shopping at Albert Heijn, the largest supermarket retailer in the Netherlands, encountered eight perishable foods sold at their regular price, at a straight discount, or on a multibuy. For more than 2,500 purchase occasions, households then reported how these products were ultimately used, including whether any portion was discarded.

The first and most important conclusion that we draw from these data is that households in the straight discount and multibuy conditions clearly did not report wasting more food than did households in the regular price condition. In fact, our analysis suggests that food purchased on a multibuy was actually wasted less than food purchased at its regular price; despite the fact that, due to the nature of this deal, households purchased more than they did in the absence of a discount, and more than households that purchased at regular prices. This surprising result holds when we then controlled for household characteristics including demographics, attitudes towards waste, and frugality—the latter capturing the intuition that people who care not to squander food may also care not to squander money and, therefore, are inherently attracted to price promotions.
What happened to the extra quantities purchased on a multibuy if, in fact, less waste was reported? A closer look at the data shows two interesting effects. First, households in the multibuy condition reported consuming significantly more than did their counterparts in the regular price condition. Second, these households also stated taking more preventive action in the form of freezing. Although we did not observe what happened to these products once they left the freezer, the data provide multiple clues that they were ultimately consumed—which is consistent with previous studies showing that freezer food typically is eaten rather than discarded (Janssen et al. 2017; Maxey and Oliver 2010).

Data Collection

We conducted our study in the Dutch market in collaboration with AiMark and GfK, the market leader for household panel data in the Netherlands. This collaboration gave us the opportunity to build a unique data set combining GfK’s 10,000-household scanner panel data with survey data from a specially-made questionnaire sent to households the week after their purchase of pre-selected food products. We collected the survey data over a period of nine weeks among households shopping at Albert Heijn, the largest supermarket retailer in the Netherlands.

Household Survey Data

Product selection. We selected food products based on two criteria. First, to ensure sufficient statistical power, we considered products of categories that have relatively high waste levels in the Netherlands: fresh bread and fresh fruits and vegetables. Second, from these categories of perishables we picked specific products on the basis that they are (a) likely to be consumed or discarded by a household within the period between purchase and receipt of the survey (that is, on average the food “goes bad” within approximately one week.
after purchase), (b) pre-packed, such that purchase quantity is determined by the retailer rather than the household, (c) sufficiently high in expected sales, and (d) regularly sold at the regular price, at a straight discount, and on multibuy. To satisfy the last criterion, we contacted Albert Heijn and received confidential access to their promotional calendar for each of the nine weeks of data collection. The final mix of perishable foods comprised eight products: white grapes, cut vegetable mix, flat beans, kale, lettuce mix, vine tomatoes, bread loafs, and soft bread rolls.

**Method.** We collected the data from week 2 to week 10 of 2019 following a strict weekly procedure. On the Monday of each week, when a new set of products went on promotion at all Albert Heijn stores, we visited one store and verified whether the information in the promotional calendar matched the deals offered in-store. We then tracked whether households in the GfK panel purchased one or more of that week’s considered products by matching the barcodes they scanned at home. Upon a match, we sent households an electronic questionnaire on the Friday of the week following their purchase—that is, with a delay of 5 to 11 days—and asked them to complete it within one week. Consequently, the time elapsed between purchase and completion of the questionnaire ranged from 5 and 18 days. To reduce the burden on respondents, the questionnaire focused on one specific product from our product mix.

**Questionnaire design.** In the introduction, we reminded households about their purchase of the product at Albert Heijn in the previous week, asked them whether they remembered the purchase and, if so, how many packages they took home from Albert Heijn during that week. Next, households indicated whether they consumed the product, stored it, or whether any or all of it was wasted. Our approach here builds on van Herpen et al. (2019a), who showed that asking about food wasted in the past week correlates strongly with
more direct measures such as collecting and weighing actual waste. Nonetheless, it is important to emphasize that self-reported measures of waste present two challenges.

First, there is often confusion in the public domain as to what “waste” actually means. To address this problem, we followed Block et al. (2016) by adopting the definition set by the United Nations, which comprises any food that was intended for human consumption but is ultimately not consumed, whether disposed of (in the general trash, a dedicated food waste container, or the compost heap) or fed to a pet or animal. In addition, we reminded households of the high occurrence of food waste in society, and explained that “not all food that is purchased, is actually eaten” and that by “not eaten” we mean “everything that may have happened to the product” including waste generated before, during, and after the preparation and consumption of a meal.

The second challenge with self-reported measures of food waste is the possibility that social desirability concerns cause underreporting. While this issue may not play a large role in our study given that we focus on comparing households across different price conditions, we took several precautions. We first reminded households of the high occurrence of food waste in society in the introduction to this part of the survey. Next, we took care to describe food waste in neutral terms as much as possible, such as “thrown away” or “given to a pet or animal” rather than the more negative term “waste.” More important, rather than ask about waste immediately, we adopted the following three-step approach: (1) we asked households whether they ate all of the product purchased the previous week at Albert Heijn (where 1 = “nothing has been eaten,” 2 = “almost nothing has been eaten,” 3 = “a part has been eaten,” 4 = “almost everything has been eaten,” and 5 = “everything has been eaten”), (2) we asked households that indicated not eating part or all of the product whether this is still on stock (in one or more places such as the fridge, a bread bin, a fruit bowl, or the freezer) or discarded, and (3) we asked households that indicated discarding part or all of the product to estimate
the quantity. For this third step we provided estimates tailored to the specific product in question that the respondent could easily relate to. For example, in the case of grapes the options were “less than a handful of grapes,” “a handful of grapes,” “about a quarter of a box of grapes,” “about half a box of grapes,” “about three-quarters of a box of grapes,” “about one box of grapes,” and “more than one box of grapes.” In the analysis, we converted these categories into numerical values based on information from Albert Heijn and the Netherlands Nutrition Centre—with “less than a handful” equivalent to 0.0625 of a package, “a handful” equivalent to 0.125 of a package, and “more than one box” equivalent to 1.5 of a package (cf. van Herpen et al. 2019b).

Finally, we asked households that indicated wasting part or all of the product to provide the main reasons for this (because the amount purchased was more than needed, it went off, it was past the date on the label, plans changed, etc.), and households that indicated stocking part or all of the product when they thought this would be used.

**Sample.** The response rate to the questionnaire is 65.71% in the regular price condition, 65.74% in the straight discount condition, and 67.6% in the multibuy condition ($\chi^2(2) = 1.594, p = .45$), for a total of 2,563 responses. The average time between receipt of the questionnaire and response is 1.3 days (median: 0 days). Indeed, households completed it on the same day in about 60% of cases, and within three days in about 80% of cases. The average time between purchase and response to the questionnaire is 10.5 days (median: 10 days).

We removed five responses from the data set because the household reported purchasing zero (one response) or more than 10 (four responses) packages, and 11 responses because the household reported wasting more than they actually purchased at Albert Heijn on the week indicated in the questionnaire, leaving 2,547 responses by 1,646 unique households (including these responses did not substantially change the results of our analyses).
For all the households that participated in the questionnaire GfK provided demographic information including size, income, and age of the head of the household. Some differences appear between the regular price, straight discount, and multibuy conditions, primarily in terms of household size, with more purchases of larger households in the multibuy condition than in the straight discount or regular price conditions. To control for these differences, we include the demographics in our analyses as covariates.

**Household Scanner Panel Data**

We received from GfK household scanner panel data comprising the complete purchase records of a stratified national sample of approximately 10,000 households at the daily level for the period January 2019 to June 2019 at Albert Heijn and all other supermarkets and food stores in the Netherlands—including bakeries, fruit and vegetable shops, and farmers’ markets. Specifically, we have information on each shopping trip by a household, including the supermarket or store they visited, the items purchased and their respective quantities, and prices paid.

**Main Analysis of Household Food Waste**

Because not all households reported to have wasted, we use a tobit model that includes dummies for the straight discount and multibuy conditions (with the regular price condition as the reference level), and household size, income, and age as covariates. We account for differences in waste behavior across the eight food products in our set by including product fixed effects, and for any remaining (unobserved) heterogeneity across households via a random-effects specification.

The estimates clearly do not corroborate the common intuition that straight discounts and multibuys prompt greater household waste. In fact, the evidence suggests that products sold on multibuys are actually associated with less food waste than products sold at regular
prices (β = -0.156, \( p < .01 \)). The difference in reported waste between the straight discount and regular price conditions is not statistically significant (β = -0.031, \( p = .62 \)). Further to the model estimates, the effects of household size and income are not significant (all \( p \)'s > .25), but food waste is lower when the head of the household is older (β = -0.045, \( p < .01 \)).

Of course, it is possible that households that take advantage of price promotions differ from households that purchase at regular prices on dimensions other than demographics. In particular, one could argue that households attracted to price promotions are more frugal with all types of resources. That is, they are careful not only about wasting money, but also about wasting food, and this in turn explains the difference in reported waste across conditions.

To account for this possibility, we approached the households that completed the first questionnaire and asked them to complete a second one on frugality (Lastovicka et al. 1999; e.g., “Making better use of my resources makes me feel good”) and general attitude to food waste (e.g., “I pay attention to prevent throwing away food,” all 1 = “completely disagree” to 7 = “completely agree;”).

The estimates of our model augmented with these measures show that the effect of frugality on reported waste is not significant (β = 0.052, \( p = .17 \)), but general attitude to food waste has a strong negative effect (β = -0.162, \( p < .01 \)). This indicates that households with a stronger attitude to (preventing) food waste also wasted less, which provides convergent validity for our survey measure of food waste. The parameter estimate of the multibuy dummy remains negative and significant (β = -0.131, \( p < .01 \)) and the estimate of the straight discount dummy remains not significant (β = -0.011, \( p = .87 \)). That is, holding frugality and general attitude to food waste constant, we continue to find that products purchased on price promotion are not wasted more than products purchased at regular prices, and that products purchased on multibuy are in fact wasted less.
If Not Wasted, then What?

All of the multibuys offered during the data collection period required shoppers to purchase two packages of a product. This implies that households purchased in larger quantities than they otherwise would. Yet these households also reported wasting fewer packages, which further implies that they must have consumed more, stored more for future use, or both (Ailawadi and Neslin 1998; Ailawadi et al. 2007).

We first regress the number of packages eaten on dummies for the straight discount and multibuy conditions and the other variables that we included in the household waste model, again using a random-effects specification. We find that consumption is higher in the multibuy condition (β = 0.558, p < .01). The effect of straight discount is not significant after controlling for other factors (β = 0.019, p = .70).

Next, we turn to storing. In the case of perishable food, the most likely action to avoid waste is to freeze whatever product is not consumed. Accordingly, we re-estimate the household waste model, now with number of packages frozen as the dependent variable. We find that more packages purchased on multibuy were frozen than packages purchased at the regular price (β = 0.946, p < .01). After controlling for other factors, the effect of straight discount is not significant (β = 0.006, p = .98).

Overall, these additional analyses support the intuition that households not only increased their consumption after a multibuy purchase, but also froze more for future use. Of course, there is a chance that the packages frozen ultimately will not be consumed and, therefore, are still thrown away. While we cannot formally rule out this scenario, households reported that they plan to consume the remaining packages within the next week (64%) or month (27%). In addition, we can get an idea about whether households actually froze the product for future consumption by looking at their purchase behavior in the period after completing the questionnaire. The household purchase data include the items purchased on
each shopping trip at the daily level across all supermarkets and food stores in the Netherlands. To account for variety seeking (i.e., households switching to another type of bread, fruit, or vegetable), we look at the amounts households purchased at the category level. Specifically, we compare the volumes purchased during the seven (30) days after completing the questionnaire by households that indicated they will consume the frozen remaining packages within the next week (month) with the number of packages purchased by households that indicated they did not have a remainder. If households that put more of the remaining product in the freezer purchased less during this period than other households, then it suggests that they dug into their freezer supply.

The results of a random-effects regression model of the volumes purchased during the subsequent period on volume frozen, the demographic and attitudinal variables, and category fixed effects show that the volumes purchased during the week after the questionnaire are significantly lower for households that put more in the freezer and indicated that they will consume in that week ($\beta = -0.046, p < .05$). The same applies for the volumes purchased during the month after the questionnaire for households that indicated that they will consume the frozen amount in that month ($\beta = -0.024, p < .05$).

In summary, the data indicate that perishable food purchased on multibuy is not wasted more than perishable food purchased at regular prices. In fact, the data suggest that this food is consumed more, stored for future consumption more and, ultimately, wasted less.

**Discussion**

We hope that our work triggers greater debate among marketing scholars on the impact of the profession on food waste and, more broadly, on the way organizations deal with
issues of sustainability that are increasingly important to society. While marketing research has studied behavior at the point-of-purchase extensively, the current understanding of how people consume, store, and possibly waste food is far more limited. This gap in knowledge has not gone unnoticed, and our work in fact was motivated by recent calls for research specifically on the marketing aspects related to food waste behaviors (Block et al. 2016; Porpino 2016; van Doorn 2016).

Similarly, we believe that our research adds to the literature on price promotion. First, most of the work in this area focuses on the purchase of promoted goods. The studies that do consider consumption typically draw inferences from scanner panel data rather than measure consumption itself (Ailawadi and Neslin 1998; Ailawadi et al. 2007; Pauwels et al. 2002). Importantly, we know of no article in this literature that contemplates the act of nonconsumption. Second, while long-term food storage as a result of price promotions has traditionally been associated with non-perishables that physically can be stockpiled (Macé and Neslin 2004; Narasimhan et al. 1996), our results show that even perishables can be stored in order to cope with extra purchase quantities if the household has the option of freezing.

Finally, supermarket retailers should find our research useful in guiding their price promotion decisions. The main result of our analysis implies that retailers can enjoy the sales bump from multibuys without necessarily worrying about the downstream impact on waste. At the same time, it may be that retailers can use multibuys to limit their own waste. To the extent that consumers eat and freeze more of the food bought on a multibuy, retailers are not transferring waste from their warehouses and shelves to the household kitchen. Instead, it appears that overall food waste may decrease due to the preventive measures taken by consumers. With this in mind, supermarket retailers could test novel promotional messages
such as “buy-one-freeze-one” as a means to promote responsible freezing behaviors by households.

References


DOES FOOD INSECURITY LEAD TO LESS HEALTHY FOOD CHOICES?

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Keywords: food insecurity, food wellbeing, consumer health

Description: This research seeks to understand how food insecure consumers manage their hunger and nutritional food choices.

EXTENDED ABSTRACT

Research Question

Food insecurity is one of the most important public health concerns in the United States (Gundersen, Kreider, and Pepper 2011; USDA 2018). Accordingly, transformative consumer researchers have conducted multiple studies from various perspectives (see for example: Baker, Gentry, and Rittenberg 2005; Block et al. 2011; Bublitz et al. 2019; Hill and Stephens 1997). Although prior studies have laid the groundwork for understanding how vulnerable consumers cope with hunger and nutritional needs, many questions remain unanswered in this important domain. Much of extant literature relies on findings resulting from cross-sectional surveys and primarily focuses on the extent to which consumers engage in various coping behaviors. Little is known about why consumers are engaging in different coping behaviors, how they make their coping decisions and subsequently, how those coping decisions lead to actual food choices that impact their nutritional well-being.

Method and Data

We use a mixed methods design to begin answering our research questions. Study 1 is inductively qualitative research, which seeks to explicate the problem by offering a theoretical framework and study 2 employs experimental design to test the findings of the previous study.
and offer normative findings for ways to increase healthy food choices in food insecure consumers.

**Summary of Findings**

Study 1 results suggest that consumers’ coping decisions started from a cognitive appraisal process (e.g., Lazarus 1993) in which customers evaluate whether the hunger problem is harmful or threatening to their personal well-being and the extent that they believe in their ability to deal with their hunger problems. Further, the data suggests that participants thought about their hunger problem on different timelines: chronic, seasonal, or temporary. Those with chronic hunger indicated more calorie dense foods with less nutritious benefits and those with seasonal or temporary hunger situations were more likely to select fruits and vegetable options. Thus, there is evidence that the degree of food insecurity can impact food choices, likely based off of goals and coping behaviors.

**Key Contributions**

This research specifically focuses on food choice in vulnerable consumers groups and the variances of those choices by difference levels of food insecurity. We view this issue from two different theoretical viewpoints, life course theory and prevention/promotion focused coping behaviors, and experimentally test the qualitative findings from a prospect theory standpoint. Our findings will contribute to the theoretical discussion around consumer choices when those individuals are met with extreme life conditions such as food insecurity. This research also aims to further support prospect theory and ultimately (with additional studies) give normative guidance on how policy makers at both food banks and other supplemental food benefit programs can structure and present healthy food options in order to encourage adaptive food behaviors and increase overall food wellbeing (Block et al. 2011).
References are available upon request.
DOES TECHNOLOGY MAKE US MORE OR LESS SOCIABLE? THE EFFECTS OF SMART CITY TECHNOLOGIES ON CITIZENS’ SOCIABILITY

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Keywords: Artificial intelligence, sociability, smart cities, surveillance

Description: The paper investigates the effects of smart cities surveillance technologies on citizens’ sociability and willingness to help.
EXTENDED ABSTRACT

Research Question

Many cities are heavily investing in smart city technologies (SCTs), using sensors, Internet–enabled networks, and applications to gather data from public spaces. The main goal of these investments is to leverage technological solutions to improve city services and citizens’ living experiences. Despite the growing body of studies investigating SCT’s technological developments, research overlooks SCTs’ impact on citizens’ well-being and social norms. Initial studies on SCTs’ effects on sociability lack causal evidence and often focus on general use of mobile phones or the Internet. Pertinent questions remain: How will living in a monitored and smart society ultimately affect citizens’ behavior toward others? Will SCTs change the way we socially interact? In the current research, we address these questions by focusing on how the smart city of the future may affect our sociability. Specifically, we propose that SCT might have both positive and negative effects on sociability. Citizens might perceive intelligent technology as a bystander that is able to intervene and help if something is wrong. Therefore, when SCT is present, citizens might transfer the responsibility to intervene to the technology and help less each other.

Method and Data

To test for the effect of SCT on sociability, we conducted two studies: a multifaceted conjoint study (N = 750, Prolific sample) and an online experiment (N = 1001, Prolific sample) to test the process. In the conjoint study, we limit concerns about social desirability by asking participants to trade-off among different conditions. In both studies, we operationalized sociability as helping behavior. With the help of a professional designer, we created different scenarios picturing a person laying on the sidewalk. The design was inspired by classical studies on the bystander effect. The aim of the study was to explore whether and how the
smart city context affects people’s behavior toward other people. We hypothesize that technology might generate the feeling of social presence and that the “smart system” will take care of laying person (in a similar way that a police officer would). We also explore when citizens feel that the technology can act as an additional bystander and how they transfer their responsibility to intervene to the technology. Since most SCT applications require the use of some sensor or smart devices collecting the information, we use cameras surveillance and a robot as proxies of SCT.

**Summary of Findings**

In the conjoint study, we found that respondents were less likely to approach the fallen person in a smart city than in a city without smart technologies. Interestingly, participants were the least likely to help in conditions with the “smartest level of technology” such as a police robot (.09, SE=.01, p=.00). This negative effect on likelihood to help the fallen person is similar to the effect when the police officer was in the picture (.16, SE=.02, p=.00). On the other hand, the respondents were significantly more likely to choose to approach the fallen person when smart surveillance cameras were present than when no surveillance was present (.04, SE=.01, p=.01). Similar to the conjoint study, in the experiment, we find that people are more likely to approach the fallen person when the camera is present than when the robot or the police officer are present. A possible explanation for these findings might be that people feel more responsible to intervene when the camera is present and they are more willing to delegate the help to the technology when the robot is present. We, therefore, show the adverse effects that implementation of SCT can have a social norms and behaviors.

**Key Contributions**

In the paper, we make several contributions to theory and practice. First, by exploring SCTs’ potential effects on helping behavior, we answer the recent calls to understand how smart
technologies affect future sociability. Second, we contribute to the literature on the effect of smart cities on citizens’ well-being by showing how safety technologies can have both positive and negative effects on citizens. Finally, we answer the call for more “boundary-breaking” consumer research in two ways. Theoretically, we show the importance of studying how technologies affect not only private consumers in commercial settings, but also citizens in public settings. Methodologically, we build on previous studies which use a choice-based conjoint approach to reduce social desirability bias and to understand a phenomenon that has many relevant dimensions as potential drivers of the effect. The design allows to show what citizens might actually do when they make similar choices in future real-world situations. For policy makers, our paper sheds light on consequences of smart city investments on citizen well-being. We show the importance of not only maximizing efficiency from the government side but also of considering citizens’ perspective in new technologies’ development and implementation.
DRINK, BUT PLEASE DON’T DRIVE: SPILLOVER EFFECTS OF RIDE-SHARING ON ALCOHOL SALES AND DRUNK DRIVING ARRESTS

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Keywords: sharing economy, ridesharing, drunk driving, alcohol sales

Description: This research paper finds that the entry of ridesharing services in a metropolitan area is associated with an increase in sales of alcohol and a decrease in the number of daily drunk driving arrests.

EXTENDED ABSTRACT

Research Question

Few academic papers examine the spillover effects that the sharing economy has on complementary industries, most prior work focuses on the effects on incumbent industries. We contribute to the growing literature on positive spillovers of the sharing economy by analyzing the impact that ridesharing has on alcohol sales. We then analyze the effect of ridesharing on drunk driving arrests in a major US city, to estimate any public safety consequences due to changes in alcohol sales.

When ridesharing is available, consumers have another transportation option that allows them to plan for a safe ride home and if a consumer plans on using a ridesharing service, they are free to consume more alcohol. We expect that the availability of ridesharing services is associated with an increase in the sales of alcohol.

However, this could be associated with negative societal consequences if consumers do not stick to the planned virtuous behavior of using a rideshare to get home. As such, we also
consider the impact of ridesharing services on the number of drunk driving arrests. We expect that consumers will take advantage of the availability of ridesharing to help them avoid drunk driving behavior.

**Method and Data**

In the first study, we first examine the impact that ridesharing has on the monthly sales of alcoholic beverages in twenty-four of the largest Texas metropolitan areas. The dataset begins in January 2007 and extends to August 2019, totaling 152 reporting periods. Each establishment in the dataset is identified by a unique license number for a total of 29,143 licensed establishments, giving us a total of 1,838,509 observations. Indicators were added to show the timeline of Uber’s availability in each city included in the analysis. By using a fixed-effects difference in differences model, we estimate the log of monthly alcohol sales at establishment $j$ in city $k$ at time $t$ ($\text{Log Alcohol Sales}_{jkt}$) as a function of the presence of Uber in city $k$ at time $t$ ($\text{Uber}_{kt}$).

In the second study, we used forty years of daily arrest data from Bexar County, Texas to analyze the impact of ridesharing on drunk driving arrests. We use negative binomial regressions to measure the impact of Uber ($\text{Uber}_t$) on the various types of drunk driving arrests while controlling for holidays, the day of the week, and the month/year trend across the dataset.

**Summary of Findings**

Results of our first study show that when Uber enters a market, the sales of liquor beverages increase by 5.25%. We find directional evidence that sales of wine and beer increase as well, but not at statistically significant levels.

The results of our second study show that this increase in alcohol sales is met with a concurrent decrease in daily drunk driving arrests of five percent. This counterintuitive suggests
that while people are engaging in more indulgent behavior, they are being safer about it by using ridesharing services, which is what we expected.

**Key Contributions**

The results of our research contribute to the growing literature on the sharing economy by highlighting a complementary effect on adjacent industries and demonstrating a positive effect on public safety. The results suggest more responsible consumer behavior, as the sales of alcohol sales are met with a drop in drunk driving arrests. These results are encouraging for both practitioners and public policy decision-makers that need to evaluate the costs and benefits of ridesharing for consumers. This paper also highlights the need for more research to gain a holistic understanding of the impact of ridesharing.

References are available upon request.
EXAMINING MATERIALISM FOR POLICY USING THE IAD FRAMEWORK.

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Keywords: Materialism, IAD Framework, Institutions, Policy, Values.

Description: This research implements the IAD framework to empirically examine the policy implications of materialism.

EXTENDED ABSTRACT

Research Question

Much of contemporary research on materialism is concerned with individual behavioral and local environmental variables, ignoring the top-level societal and institutional influences. It has been suggested that materialism be studied at the macro, institutional level. One framework that has successfully applied an institutional level of analysis is the Institutional Analysis and Development (IAD) framework. This research examines if the IAD can be used to investigate materialism by using measures of the dominant social paradigm (DSP) and individual values.

Method And Data

IAD identifies relevant institutions that influence societal behavior regarding a social issue, and it then examines how institutions operate and change over time. The IAD goes beyond conceptualizing these relationships, as it is also a systematic method that can be used to predict outcomes for social issues based on how institutions operate and how society responds. The IAD can be viewed as a conceptual map consisting of four main parts: 1) action arena, 2) context, 3) evaluative criteria, and 4) outcomes, one of which is materialism.
To apply the IAD to study materialism, measures from prior research were selected based on theoretical contribution. Context is measured with three sub-scales originating from the DSP literature: political, economic, and technology (Kilbourne et al. 2001). The action arena is measured with two sub-scales: competition and self-enhancement. Self-transcendence is used to measure evaluative criteria (Schwartz 1994). Lastly, Richins and Dawson’s (1992) scale was used to measure materialism.

Data were collected from an online panel of United States citizens, which after data cleaning, resulted in 500 respondents (mode 25-44 years old, 55% female). A structural model was constructed based on the IAD conceptual model using AMOS 26.

Summary of Findings

The structural model showed good model fit \[X^2 (514) = 1335.47, \text{CFI}=.92, \text{IFI}=.92, \text{TLI} =.91, \text{RMSEA}=.06, \text{SRMR}=.07\]. And all but one path developed using the IAD conceptual mapping were significant. Through conceptualizing the IAD for materialism and then testing it using a structural equations model, we conclude that the IAD helps examine and explain materialism as a phenomenon.
FACTORS AFFECTING MOTIVATION AND PERFORMANCE OF TOURISM ENTREPRENEURS IN ETHIOPIA

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Key Words: Motivation, Tourism, Entrepreneur, Performance

Description: This study focuses on identifying the factors of the motivation and performances of souvenir entrepreneurs in Addis Ababa city of Ethiopia.

EXTENDED ABSTRACT

Research Question

Entrepreneurial motivation and challenges are extensively researched in the context of developed countries and mainly focused on the driving factors in the entrepreneurial process (Shane et al, 2003). But business environment and the driving factors in the entrepreneurial process is not same for the developing countries like Ethiopia. Because in these countries tourism is also a strategy for unemployment eradication and source of bread.
Even though there are different studies conducted by different scholars on different aspects focusing on the Ethiopian Tourism industry, but souvenir industry is untouched.

Based on the above background research focused on answering the following two research questions.

Q1. What are the different factors that motivate the souvenir tourism entrepreneurs in Ethiopia?

Q2. How do the different motivational factors affect the firm performance on four different measures including sales, profit, asset, and employee-related performance?

**Method And Data**

This study is an empirical research type, and its design is cross-sectional which was a one-time survey conducted among souvenir owner-managers in Addis Ababa. There are 353 souvenir business owners which were registered under the office for the last three years (AATIDB, 2018). These souvenir entrepreneurs constituted the sampling frame of this study. The questionnaire was sent to these business owners from which 144 complete responses were received. This survey was conducted during March-May 2019.

A survey questionnaire was used for data gathering in this study. A total of 23 items were used to measure the different dimension of entrepreneurial business startup motives under pull and push factors. These items were on a five-point Likert scale. Finally, 4 items used to measure the firm performance (sale, profit, asset and employment) were designed and rated as (1. Decreased
dramatically, 2. Decreased somewhat, 3. Remained/stayed the same 4. Increased somewhat and 5. Increased dramatically).

**Summary of Findings**

The main aim of this study was to assess the factor that motivates entrepreneurs to start up their business and to determine the impact of business start-up motives on the firm performance of entrepreneurs. The principal component analysis result reveals that motivational factors of business startups such as independence, confidence, alertness and initiation are pull factors whereas risk-taking, unemployment, effectiveness and job dissatisfaction push motivations to start a business. Further, initiation, confidence and risk-taking have a positive association for sales, profit and asset performance while none of the factors was associated with employee performance.

**Statement of Key Contributions**

Ethiopia is one of the oldest countries in the world and the evidence suggested that one of the oldest human civilization lived there. It is also the fact that Ethiopia has nine UNESCO World Heritage Sites. Due to this reason, Ethiopia has a lot of potential for the tourism industry but so far it has not developed as expected. Ethiopia is a developing country and tourism is not only a profit-earning source but also can be useful for the Poverty Reduction Strategy. This study has tried to explore one of the very important and untouched aspects of tourism i.e., the souvenir industry. The souvenir industry is run by small entrepreneurs but has huge potential and the study has highlighted key issues in managing the business by identifying factors affecting motivation and perceived business performance. Moreover, Souvenir tourism gives the benefits of the business directly to the local people.
This study has generated new knowledge in the field of the souvenir industry by investigating how the souvenir industry entrepreneur facing challenges in managing the business. The study has thrown some lights on key motivational factors for souvenir entrepreneurship.

References are available upon request.
GENDER AND SAVINGS: EXPERIMENTAL EVIDENCE FROM INDIA

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**Keywords:** financial education program, savings, social, gender, India

**Description**

In this paper, we conducted a randomized control trial (RCT) in 72 schools with 1403 adolescent kids in the Indian state of Himachal Pradesh, where we integrated a financial education program with modules on social life and found that the impact on the saving and spending behavior of adolescent children was driven significantly by the girls than the boys.

**EXTENDED ABSTRACT**

**Research Question**

The impact of financial education program on savings behavior has received considerable attention in academic research. In particular, such programs provided in the earlier stages of life, when habits are still malleable, are considered more effective as children in middle schools are capable of understanding basic economic concepts and managing their money (Otto et al., 2006). However, a few programs that have focused on school children have found mixed results (Bruhn et al., 2016). One factor that impacts these programs’ efficacy is their content (Bertrand and Morse 2011). Therefore, it is plausible that broadening the program’s curriculum beyond
financial education to incorporate modules that focus on social life generates a significant impact.

This paper examined whether a curriculum that integrated financial and social education impacted savings for adolescents’ kids. Furthermore, we tested whether the effect was driven more by girls than boys. Past research has shown that women exhibit more communal characteristics than men (Xin et al., 2008). Moreover, Indian society is primarily patriarchal, where women are conditioned to consider the needs of the family and the community (Eswaran et al., 2013). Based on this communal-agentic theoretic approach, this program could potentially be more beneficial for girls than boys.

**Method and Data**

We used a RCT to measure the causal effects of the financial education program that integrated both financial and social education. The goal of the financial module was to enhance the adolescents’ understanding of the concepts of savings, budgeting, and risk. The purpose of the social module was to transform the adolescents’ from being “egocentric to socio-centric”. We randomly assigned 72 schools with 1403 students in two districts of Shimla and Solan in the Indian state of Himachal Pradesh to 30 treatment and 42 control schools. There were 572 students in the treatment and 831 in the control schools. The intervention consisted of weekly 60-minute sessions for a period of 6 months, spanning 24 sessions. The sessions were conducted as a part of extra-curricular activities during a school day. No intervention was provided to students in control schools. The primary outcome variables were reported savings and weekly expenditure for both the treatment and control groups during the end-line. To explore the mechanisms through which the training program could impact the outcomes, we also collected secondary outcomes such as patience and the extent to which participants focused on others.
Findings

Overall, the financial education program increased the total savings in the treatment schools by INR 185 and the weekly savings by INR 13 more than the control group. We found that the total and weekly savings increased by INR 315 and INR 20 respectively for girls in the treatment schools than those in control schools. In contrast, the program had no significant effect on savings for the boys. Similar to savings, there was a significant impact of the program on reducing expenses for girls where they reduced their weekly spending by INR 5. This decrease is driven by the reduction in expenditures and not receiving additional income sources (i.e., increased pocket money). On the other hand, the program had no significant effect on the boys' expenditure outcomes.

Additionally, our results showed that patience increased for both girls and boys after the intervention. However, the increased levels of patience did not translate to increased savings for the boys. That further indicates that the communal orientation of girls is a plausible explanation. To explore this as a plausible mechanism, we used a difference-in-differences analysis to find that females enrolled in this program were more likely to think about others.

Statement of Key Contributions

In an RCT across 72 schools, we found that the financial education program where we combined financial and social modules impacted reported savings for adolescents’ kids. However, the effect was driven by girls than boys. We suggest that the program’s social modules could have had a significant impact on girls who adopted a broader perspective of thinking of others in the household rather than just themselves. Their increased savings were likely driven by their reduction in expenditure due to their potential consideration of others. Overall, our findings
suggested that for financial education programs to be successful, policymakers should supplement such programs with psychological motivations, such as integrating social modules focusing on communal orientation. We do not rule out other psychological factors but point towards their complementarities in any financial education program. In the context of India, where the girl-child is often conditioned to think about the household, we found potential evidence that framing savings with a focus on others was beneficial and boosted their saving behavior. These outcomes could also have an impact on the girls’ sense of empowerment.
I wish to opt out of publication in the proceedings.

Extended Abstract (Max 175 words)

We propose that although consumers view the scientific process as competent (a positive stereotype), they also perceive it as lacking warmth (a negative stereotype). Across five studies, we demonstrate that these lay beliefs impact consumers’ reactions to promotional appeals touting the use of science in product development. The coldness associated with the scientific process is conceptually disfluent with the anticipated warmth of hedonic products and attributes, reducing purchase interest. In contrast, when products are positioned as utilitarian, scientific appeals are effective, as the perceived competence of the scientific process is compatible with the competence expected from utilitarian products. These effects are mediated by increased conceptual fluency for matching appeals. We further demonstrate that scientific appeals negatively impact purchase intentions only when an appeal describes the use of science to develop a hedonic product (and not to test it), because products developed using science are imbued with the qualities associated with the scientific process. Finally, when consumers are made aware of the necessity of science to create a hedonic product, this backfire effect is mitigated.
GREENWASHING ONLINE: A LONGITUDINAL ANALYSIS OF GREEN COLOR PREVALENCE ON CORPORATE WEBSITES

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Keywords: Green Color, Greenwashing, Oil & Gas, Wayback Machine, Websites

Description: We collected monthly visual snapshots of website homepages for 353 publicly traded firms in the oil and gas sector over a nine-year period (2007–2016) and analyzed the pixel content of over 14,000 images using an RGB color model, which revealed that the prevalence of the color green on homepages increased by 89% during this timeframe.
EXTENDED ABSTRACT

Research Question

In light of the detrimental environmental effects of pollution, oil spills, and the depletion of natural resources, numerous public officials have appealed for greater urgency in pressuring firms to become more sustainable and to “go green.” While this has catalyzed an environmental renaissance of genuine sustainability initiatives, the phenomenon of greenwashing is concurrently becoming more prevalent. One of the challenges facing regulators, environmental advocacy groups, and consumers concerned with the environment is that it is hard to identify and measure greenwashing objectively. Scholars have issued calls that the field desperately needs empirical analysis that can identify greenwash clearly and measure whether it is increasing or decreasing over time. Indeed, without standardized measures and data harvesting over a long time horizon, empirical evidence on past greenwashing behaviors can be erased or reframed.

Method And Data

We investigate whether digital greenwashing has been increasing over time by analyzing the visual appearance of corporate homepages over several years. We create a novel measure to assess greenwashing, Green %, which calculates the prevalence of the color green on corporate websites. This variable allows us to capture measurable changes in firm greenwashing over time. We selected the oil and gas industry as our primary data context based on its history of environmental malfeasance and supporting case studies alluding to the existence of greenwashing behaviors. We collected monthly visual snapshots of website homepages for 353 publicly traded firms in the oil and gas sector over a nine-year period (2007–2016) and analyzed the pixel content of over 14,000 images using a red-green-blue color model. Our dataset &
robustness checks allow us to respond to the following questions: Does greenwashing increase over time? Are firms just becoming more eco-friendly? Is green color prevalence an appropriate measure of greenwashing?

**Summary of Findings**

Using a unique dataset obtained from an Internet website archive (Wayback Machine), we create a measure of greenwashing that captures the prevalence of green on corporate homepages. We find that the prevalence of the color green on oil & gas homepages increased by 89% over almost a decade. By augmenting the dataset with reports of EPA violations over the same timeframe, we mitigate the rival explanation that firms are genuinely getting more eco-friendly and signaling as much to their stakeholders. We also introduce an exogenous shock to the incentives for oil and gas companies to greenwash (the BP oil spill) in a difference in differences (DiD) analysis to mitigate concerns that the color green is a poor proxy for greenwashing. We find that, in response to the elevated public pressure to improve environmental practices, caused by the BP Oil Spill, oil and gas companies increased digital greenwashing practices compared to a control group of manufacturing companies.

**Statement of Key Contributions**

To understand the pervasiveness and extent of corporate greenwashing behavior, scholars first must be able to identify and measure greenwashing objectively. We construct a standardized measure of digital greenwashing based on visual imagery and take some initial steps to move the literature in this direction. To our knowledge, we are the first to empirically examine the evolution of environmental signals online over a period of years, specifically the prevalence of
the color green on corporate homepages. We apply this measure to firms in an industry with a history of environmental disasters and find that digital greenwashing has increased over time. The digital imagery selected for a firm’s website can be fundamentally separate from the firm offerings, which ultimately reflects its volitional choice to appear green. This is particularly important in the toolkit for regulators and advocacy groups looking for innovative ways to assess how firms may mislead others in adopting overly positive beliefs about their eco-friendliness. By assessing an archived historical record of digital materials, it is possible to track the environmental signaling intentions of individual firms or industries and pinpoint catalysts of change. The archiving of corporate communications helps ensure that corporate greenwashing will not be expunged by firms hoping stakeholders will forget past efforts to misrepresent their environmental performance.
HAVING LESS BUT WASTING MORE?
THE COUNTERINTUITIVE EFFECT OF SCARCITY ON FOOD WASTE

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Keywords: scarcity, food waste, forecasting preference, mutability

Description: This research demonstrates that the psychological experience of scarcity can increase food waste through negatively impacting an individual’s ability to accurately forecast future food preferences.

EXTENDED ABSTRACT

Research Question

While behavioral drivers of food waste have been highlighted by the existing literature, there remains limited understanding of underlying psychological drivers of waste behaviours (Block et al., 2016),¹ including responses to psychological scarcity. While prior research finds that low socioeconomic status leads to the development of practices which attenuate food waste

¹ References available upon request.
(Porpino et al., 2015; Gustavsson et al., 2011; Poskute et al., 2021), we make the hypothesis that the onset of psychological scarcity will increase the incidence of food waste.

We draw on research, which finds that psychological scarcity leads to focused attention and a hyper-focus on the present (Shah, Mullianathan, & Shafir, 2012; Karau & Kelly, 1992) and creates a reduced capacity for cognitive tasks (Sanbonmatsu & Kardes, 1988), to posit that consumers experiencing a scarcity mindset will be less able to forecast their future food preferences, resulting in greater food waste. Additionally, we propose that this relationship will be moderated by mutability (i.e., the perceived ability for the situation to be controlled/changed through the individual’s investment of effort; Cannon et al., 2019; Roese & Olson, 2007) on both the a’ (H₃a) and b’ pathways.

**Method and Data**

A pilot study was conducted using real waste data from across a large North American metropolitan city to examined total volume of waste in 2020 compared to each of 2017-2019 for the months of March and April when COVID-19-related shortages, job losses, and lockdown were taking hold and activating an acute sense of scarcity. The data highlight greater overall waste during a period of scarcity. Study 1 uses behavioral data in a field experiment to examine actual food waste behaviours. The study took place at an academic conference over two days. On Day 1, no scarcity prime was present, while on day 2, a scarcity prime was presented beside the breakfast foods. A confederate cleared plates tracked food waste. Data indicate a positive effect of scarcity on food waste in a field setting ($t_{40}=4.59$, $p<.001$). Study 2 recruited participants from the U.S. (N = 777) for an online grocery shopping task in which they chose all items they would need for a dinner meal and a series of individual difference (including scarcity) and demographic measures. At Time 2 online participants were re-presented with their chosen meal on the screen
and asked to evaluate how appetizing the meal was and to provide behavioral intentions about consuming it. Data demonstrate that scarcity significantly indirectly influences food waste intentions and that this happens because scarcity negatively impacts the ability for individuals to forecast future food preferences \( (b = -0.022; 95\% \text{ CI: } -0.045 \text{ to } -0.004) \). Finally, study 3 recruited American participants \( (N=2457) \) to assess self-reported food waste behaviours, as well as current resource scarcity perceptions, resource mutability, forecasting effectiveness, and demographic information. Data indicate that scarcity influences self-reported food waste behaviors through forecasting effectiveness, and that both the scarcity to forecasting effectiveness and forecasting effectiveness to food waste pathways are moderated by mutability.

**Summary of Findings**

Across a pilot study and three experiments we find that psychological scarcity leads to increased food waste as a result of decreased ability to forecast future preferences. The pilot study highlights greater overall waste during a period of scarcity. Study 1 demonstrates that scarcity has a positive impact on food waste behavior in control versus scarcity-induced conditions. Study 2 finds that scarcity significantly impairs preference forecasting as a precursor to food waste intentions. Study 3 provides additional support for the forecasting mechanism by examining self-reported food waste behaviours and highlights the moderating role of resource mutability.

**Key Contributions**

We note the counterintuitive finding that those who experience scarcity waste more food due to a hyper-focus on the present. Secondly, we show that this hyper-focus negatively impacts consumer ability to accurately forecast their food consumption preferences, thus heightening food waste. Lastly, we demonstrate that the mutability (i.e., controllability) of resource scarcity
moderates the relationship between psychological scarcity and forecasting, and between forecasting and food waste. Specifically, when scarcity is perceived as uncontrollable, consumers were better able to forecast their food preferences.

These findings provide a starting point for targeting consumers who may be affected by scarcity, and in turn generate higher food waste. For example, those who are experiencing scarcity that they perceive as mutable; that is, those who believe that their scarcity can be ameliorated through their own actions, who may engage in over-acquiring a scarce resource or engaging in actions that make them feel more in control. Second, the findings provide a starting point for developing interventions. For example, this may be through finding ways to attenuate scarcity perceptions using abundance or gratitude. Alternatively, it could involve identifying ways to improve forecasting of food preferences.
How (Erroneous) Consumer Policy Forecasts Influence Consumer Policy Opinion: The Case of Cannabis Legalization

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Keywords: Cannabis Legalization, Drug Policy, Focalism, Forecasts

Description: This paper demonstrates that individuals overestimate the impact of cannabis legalization on the prevalence of cannabis consumption and investigates the impact of this overestimation on policy opinion.

EXTENDED ABSTRACT

Research Question

Consumers often voice their views on policies designed to influence what can be purchased and consumed, where, at what price, and by whom. Interestingly, little attention has been given to the role of forecasts on consumer policy opinions. This paper fills this gap by examining how erroneous forecasts affect consumer policy opinion in the context of cannabis legalization. Specifically, we investigate (a) whether people make accurate forecasts about the effect of cannabis legalization on the prevalence of cannabis consumption, (b) the reason for systematically inaccurate
forecasts, and (c) people’s reaction to information intended to correct erroneous forecasts.

**Method And Data**

We conducted 3 studies. In study 1, we informed people about the prevalence of cannabis consumption in Colorado and Washington prior to legalization (2011–2012) and asked them to forecast consumption prevalence after legalization was fully implemented in these two states (2015–2016). Because the federal government has monitored the annual prevalence of cannabis consumption per state for decades, we could then directly contrast participants’ forecasts against government estimates, thereby allowing us to objectively assess consumers’ forecasting accuracy.

Study 2 examined whether forecast errors could be explained by the salience of the focal policy at the time of judgment (as opposed to other non-focal factors that also affect consumption prevalence). Specifically, we tested whether forecast errors were reduced when participants were prompted to think about the impact of the new policy on their own behavior prior to assessing its impact on the target population.

Finally, study 3 examined whether the correction of erroneous forecasts leads people to modify or to reinforce their initial opinion about the focal policy. To do so, we recruited non-supporters of legalization and assigned some of them to receive feedback about their forecasts, and then measured the effect of the feedback on policy opinion.

**Summary of Findings**

Our results suggest three main findings. First, people consistently overestimated the effect of cannabis legalization on consumption. While government...
data suggest that cannabis consumption prevalence increased slightly after legalization (around 3.5% on average), participants predicted a much larger increase (around 14% on average). This effect was observed in samples from different countries (the US, the UK, and Brazil) recruited online and in the lab, emerged across different estimates (consumption prevalence in past month vs. past year) and was robust to different ways of eliciting the estimates (percentages vs. absolute numbers).

Second, the overestimations occurred because people overweighted the role of legalization and did not consider other factors that affect consumption choice (e.g., preferences, religious beliefs). Precisely, when participants were prompted to think about the effect of legalization on their own behavior—thereby making salient other factors that affect consumption—they made less erroneous forecasts of the effect of legalization.

Finally, our data suggest that while forecasts are relatively easy to correct by providing people with information, such forecast correction may not translate into desirable opinion change. Specifically, providing with information that corrected their erroneous forecasts led opponents of legalization to reinforce, instead of change, their negative opinions about this policy.

Statement of Key Contributions – 200 words

The current work makes two main contributions to the literature. First, prior research on policy opinion formation has focused on multiple individual (e.g., risk orientation) and contextual factors (e.g., political party endorsement, status quo) that affect policy opinion. Given that policy change is meant to promote specific outcomes, it is reasonable to expect that policy opinions will also depend on people’s predictions about the consequences of the policy under consideration. Yet, somewhat
surprisingly, little effort has gone into investigating the accuracy of people’s forecasts and on how it may influence their opinions about consumer-relevant policies. The current work fills this gap.

Second, this manuscript sheds light on opinions about a market-relevant, hot-button issue that has largely been overlooked by marketing scholars: the legalization of cannabis for recreational purposes. In doing so, the current work makes a “phenomenon-to-construct” contribution and answers recent calls for consumer researchers to focus on real-world marketing problems (Moorman et al. 2019) and move beyond “construct-to-construct” contributions (MacInnis et al. 2020).
How Consumers Budget

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Keywords: financial decision making, budgeting, spending, mental accounting

Description: This paper examines budgeting behaviors and beliefs, including who budgets and why, how individuals categorize consumption, and how they adjust their behavior after over- or under-spending.

Research Question

Many people engage in some form of budgeting to manage their everyday finances. They set spending limits for different categories of consumption, use budgeting tools to monitor their spending, and adjust these limits in response to exceeding or underspending their budgets. Understanding systematic patterns in how individuals and households budget may serve a critical role in informing models of budgeting and consumption-savings.
behavior. Yet, empirical evidence identifying these patterns is surprisingly limited. Furthermore, recent empirical evidence suggests that a substantial number of households are unable to cope with even moderate transitory financial shocks (Lusardi, Schneider, & Tufano, 2011; Pew Charitable Trusts, 2015). For these financially fragile households, it may be especially important to understand how individuals manage and rebalance their budgets on a day-to-day basis in response to various shocks. More broadly, better understanding everyday budgeting strategies will help policymakers and industry leaders develop effective programs to improve long-term financial well-being. In this paper, we present new descriptive evidence on budgeting behaviors and beliefs using data from a survey we administer to a nationally-representative panel of U.S. residents.

**Method and Data**

To explore households’ budgeting behaviors and beliefs, we recruited a nationally representative sample (N=3,826) of respondents from Lucid, an online platform. We informed respondents that we were interested in learning about how people budget and that they would be asked a series of questions about their budgeting process. Respondents who reported having experience with budgeting were asked to provide survey responses with their current (or most recent) budgeting process in mind while respondents who reported having never budgeted were asked to respond based on the budget they think they would keep if they were to start budgeting. We intentionally did not provide a specific definition of budgeting so that we could elicit responses based on what respondents believe budgeting to be. Instead, we asked people to provide additional details on their budgeting process in the survey itself. Our survey questions fall into three broad areas of inquiry who budgets and why, how individuals categorize consumption, and how they adjust
their behavior after over- or under-spending. In addition, we supplement findings with administrative data (N=194,678) from a large financial institution in Australia, examining whether people use the bank’s budgeting app in a manner consistent with the survey data.

**Summary of Findings**

We document five primary facts. First, budgeting is highly prevalent across the income distribution, even when liquidity is relatively high. Across our full sample, roughly 65.6 percent of respondents report that they currently budget, either formally or informally. Second, the frequency at which individuals assess the state of their current spending relative to their intended budgets varies substantially and is highly correlated with financial wellbeing. While the propensity to budget is positively correlated with financial wellbeing, we find that, conditional on budgeting, the frequency at which respondents check their budgets is negatively correlated with financial wellbeing. Third, nearly all individuals who budget do so by tracking their spending within distinct categories of consumption. Fourth, there is wide heterogeneity in the level of granularity at which individuals categorize. For instance, some simply distinguish necessities from discretionary spending, while others maintain separate categories for internet, water, and gas utilities. Fifth, individuals respond asymmetrically when faced with too little versus too much slack in their budgets. While more than 85 percent of respondents would either adjust their spending or update their spending limits if they overspent within a budget category, less than 30 percent would make such changes if they underspent their limit.

**Statement of Key Contribution**
While budgeting is a common method of managing household finances and a key factor in determining how much to spend or save, surprisingly little is known about how people budget. Our paper makes three central contributions to the academic literature. First, we illuminate key features of budgeting behavior that help distinguish between theoretical models of budgeting and consumption-savings behavior. Second, our paper comprehensively examines a wide range of budgeting practices rather than studying each in isolation. Third, we examine a large, nationally-representative sample rather than focusing only on financially strained individuals. Our paper has important implications for policymakers and practitioners as well. Despite the relative scarcity of empirical research on the topic, budgeting is frequently promoted as a building block for financial management and remains a core skill emphasized in financial education programs. The government may be interested in understanding how budgetary categories affect households' marginal propensity to consume out of various disbursements, such as stimulus payments. Financial institutions may want to develop targeted financial tools that address common budgeting practices, and retailers may be interested in understanding which products and services fall within the same budget category and are subject to the same spending limit.
HOW DO ELDERLY CONSUMERS USE QUANTIFIED-SELF SMART DEVICES TO AGE WELL?

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Keywords: Elderly Consumers, Ageing Well, Smart Devices, Quantified-Self, Goals achievement

Description: This research aims to understand how senior consumers use digital QS technologies and to explore the relationship between these devices and their goal of aging well.

ABSTRACT

This paper presents the results of a qualitative study that aims to understand how senior consumers use digital QS technologies to achieve their priority goals of aging well. Its highlights the potential of these devices to improve the usual means to age well by promoting self-managing and healthy behavioral change.
INTRODUCTION

The aging of the world population is a global phenomenon. Nearly every country in the world is facing this unprecedented increase in the elderly part of its population. According to statistics from the State of World Population Report\(^1\), by 2050, one in six people in the world will be aged over 65 years (16\%) compared to one in eleven in 2019 (9\%). This phenomenon mainly affects countries in Europe and North America, where one person in four could be 65 years old or older by 2050. Faced with this demographic transition, the issue of seniors has never been more present in public debates. The “proper” aging of a society of longevity has thus become one of the priorities of public authorities and all health systems.

The aging process takes heterogeneous forms of gains and losses depending on resources (physiological, financial, social, etc.) and individual experiences (Ebner et al. 2006). This heterogeneity leads us to adopt a subjective approach to a desired, differential, and evolutionary method of aging (Baltes and Baltes, 1990; Baltes and Carstensen, 1996). Although the concept of aging well seems to be increasingly popular among researchers from various disciplines, its application in marketing and public policy literature is limited (Park et al. 2021).

As Michel Foucault says, old age, the age of retirement, is a reflexive moment, a moment through which the individual looks back on his/her past life, on his/her young years, to take stock of them (2001). Indeed, the passage to retirement represents a transition that needs to be managed, in particular by reorganizing one’s lifestyle in relation to the time freed up and the consequences of aging (Freund and Riediger, 2003). For this reason, this research focuses on people aged between 60 and 75 years, known as “young seniors” or “retirees.”

Aging can be modifiable (Marquez et al., 2008). Behavioral changes would make it possible to prevent, delay, and anticipate negative effects related to old age by acting individually (lifestyle

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and habits) or collectively (improvement of seniors’ living conditions). In this regard, the use of QS devices can help reduce the risk factors linked to advancing age, such as physical inactivity and being under- or overweight. Whether they are physical activity trackers or devices designed to measure the quality of sleep, these hygieno-dietetic objects can help promote the adoption of a healthy lifestyle in anticipation of a healthy aging process. QS devices not only make it easier to record the traces of our activities but also provide their users with “feedback” on their activities and performance. These tools contribute to the development of a form of voluntary self-reflexivity among their users (Swan, 2013).

However, few studies have attempted to understand the relationship between these devices and their elderly consumers in this logic of self, body, and health management. Taking into account the bodily and relational changes that emerge with age as well as the previous life course will enable a better understanding of the relationship between seniors and digital tools. To our knowledge, these questions have not been or have barely been explored by marketing research. This exploratory study aims to understand the extent to which QS devices can help the elderly in aging well. More specifically, it has three objectives: (1) To deepen the understanding of how seniors envisage aging well, particularly in terms of setting goals (2) To explore the logic of using QS devices by seniors (3) To understand how feedback can influence the behavior of senior consumers, in relationship with their goals of aging well.

CONCEPTUAL FRAMEWORK

1. Dimensions of the “Desired Aging Well” and Associated Goals

According to Rowe and Kahn (1997), successful aging lies in maintaining a balance among the following three dimensions: a low probability of disease and consequent disability; preserved physical and intellectual capacities; and active engagement in life. The limitations of this model have been widely pointed out, namely, that it does not examine the effects of spirituality on
health (Crowther et al., 2002) and that it does not integrate the subjective and personal perceptions of aging. Thus, a new component, “subjective well-being,” was added to the model by Ryff (1989). Conversely, we use the subjective approach initiated by Baltes and Baltes (1990), which assumes that individuals constantly seek to exert control over their lives by using a three-component strategy: selection–optimization–compensation (Freund and Baltes, 2002; Baltes and Carstensen, 1996; Baltes and Baltes, 1990).

1. Selection relates to the definition, development, and choice of goals.
2. Optimization is the selection and application of the best means to achieve these goals.
3. Compensation refers to the adoption of alternative means when the original means are no longer available or prove ineffective.

According to this theoretical approach, an individual’s skills diminish with age, and aging well means making the most of what remains of the resource or what could be available by using the selection–optimization–compensation strategy. Faced with the perceived manifestations of aging (losses and gains), the individual determines his/her desire to age well by selecting priority objectives. This generates age-adjusting consumption behaviors aimed at achieving these objectives (optimization and consumption compensation behavior).

2. Connected Objects, Feedback, and the Adoption of the virtuous Behaviors

To avoid incapacitating diseases and risk factors for disease, the adoption of good lifestyle habits promoted by the acquisition and use of devices is one possible method (Hermsen, 2018; Hermsen et al., 2016; Verplanken and Roy, 2016). The use of QS devices allows the individual to follow his/her evolution towards his/her goals and to intervene in his/her body and health. These tools not only facilitate the production and recording of traces of our activities but also provide the possibility for users to intervene in their activity flows. They contribute to the development of a form of voluntary reflexivity among users by enabling them to better
understand, manipulate, and even control their own behaviors (Lincoln et al., 2002; Swan, 2013). With their interactive interfaces, these devices have made it possible to evaluate past performance or behaviors—“reflection on action”—as well as provided a real opportunity to analyze real-time “reflection in action” behaviors (Schön, 1983). This practice is typically designed for a growing consumer audience interested in the self-writing, self-tracking, and self-management of their health (Swan, 2013).

**RESEARCH METHODOLOGY**

Following the literature review, we would like to provide some answers to the following questions: How do senior consumers get their desire to age well, particularly in terms of selecting priority goals? and how senior consumers use the digital quantified-self technologies? To answer these questions, our research protocol is based on an exploratory qualitative approach that consists of interviewing elderly consumers, whether they are users or non-users of QS devices. The interview guide was articulated around three main themes: lifestyle and levers for aging well; goals to be achieved and behavioral change; and feedback and behavioral change. At this stage, sixteen consumers aged between 60 and 75 years were interviewed with a variety of profiles in terms of age, health status, living environment, and level of engagement with the device. The interviews lasted between 30 and 70 minutes and were fully recorded, transcribed, and analyzed. In accordance with our methodology, since our research adopts an exploratory approach, the categories emerged posteriori (Spiggle, 1994) from the analysis of the corpus of data collected. The method of analysis used is based on thematic analysis (Braun and Clarke, 2006) using NVivo. The results are as follows.

*Theme 1: Conceptualization of Desired Aging Well by the Elderly and Its Goals*

We studied the expressions used by our informants to describe a state of aging-well current and/or future. We highlighted a conception of the desire to age well, composed of the following:
(i) a set of subjective goals—psychological, physical, cognitive, and social objectives—pursued by each person to anticipate and reduce the losses associated with advancing age; and (ii) behavioral strategies used in the pursuit of these goals.

These goals are set and pursued by elderly consumers based on (i) their individual resources and (ii) their subjective perception of a desired state of aging well. This may represent a current and/or future state. These strategies represent a set of virtuous behaviors and practices instituted by elderly consumers to anticipate and prevent losses related to advancing age.

Theme 2: Logics of Use of Quantified-Self Devices by Elderly Consumers

Our analysis grid allows us to identify four logics of use of self-quantification devices by senior consumers and the practices that emerge with and accompany them.

a) Self-Monitoring and Attainment of Goals

Senior consumers, more concerned about their state of health, wish to monitor it closely to stay in shape as long as possible. This is why they easily fall under a self-measurement and self-management approach. Monique (64 years old) states, “I try to supervisor my health a lot because my mother was diabetic. I always test my blood sugar, and from time to time, I do a complete checkup . . . I have to monitor myself all the time.” This is why self-quantification devices can be perceived by senior consumers as a technological resource that can assist them in this process of self-monitoring, making it possible to obtain the following:

- Feedback on their behavior in terms of well-being and health: “I often use an application that gives me the number of calories in the food or meal I want to consume, and this prevents me from doing stupid things and consuming high-calorie products” (Monique, 64 years old)

- Feedback on old habits: “So I try to see which foods I can eat, which obviously contain the essential nutrients and the required caloric intake. What I see is that I’m not really far from what I used to take except that I didn’t take enough” (Jean, 64 years old).
Feedback on their behaviors and strategies put in place to pursue their goals: “This return allows me to move towards my goals, to make more effort, and to motivate myself to move forward.” (Monique, 64 years old)

If senior consumers use these QS devices to track and monitor their health status, this is only possible if they set standards and reference values. These values represent the person’s goals for aging well. These goals can be in the areas of physical activity and/or nutrition, diet, and weight control. They can also be intellectual occupations to preserve cognitive resources. Gérard (66 years old) shares, “My objectives are intellectual occupation objectives. They are not health or sports activity objectives.” Finally, these objectives can be set by the person themselves as well as by a third party, most often the doctor. Michelle (74 years old) says, “If I have an activity that is prescribed by a doctor, I will be more motivated. For example, a prescription that requires me to do a certain number of hours of PA per week.” Goals can also be recommended/suggested by the self-measurement tool. Céline (74 years old) shares, “The application suggests that I walk 60 minutes a day, so I try to keep up.”

b) Reciprocity and Social Contribution

These artifacts can inscribe in their senior users reciprocity and social contribution. This represents the individual’s ability to interact with others and maintain social exchanges. Indeed, it demonstrates the ability to adjust to social norms and to participate in social interactions. These devices can therefore assist several forms of social participation, such as the following:

(i) A relationship of acculturation and accompaniment in use by the social and relational environment

The environment can be an important resource to accompany the use of devices. It can both prescribe and initiate the use of the tool. Michelle (74 years old) says, “It was my two sisters who bought me a connected bracelet.” It also encourages the user to integrate the gestures and knowledge necessary to appropriate the device. Céline (76 years old) states, “It was my
grandonson who taught me everything about these applications.” Finally, the social environment can be a source of outside help to deal with the difficulties encountered during use.

(ii) A relationship of social conformity and participation in the life of the group

Senior consumers wish to access these devices to continue participating in the life of the group. They refuse all forms of negative representations that refer to their digital exclusion. Michel (64 years old) says, "I am not backward. I am not overwhelmed . . . [It] is true that when there is something new, I like to know. I like to discover and try."

(iii) A peer comparison relationship

Users with the same goals are grouped together and motivate one another on the basis of sharing activity results/feedback. Louis (60 years old) shares, “Many of my friends have a watch connected. [We] use it every day, and we often compare our results. Moreover, the competitive aspect seems to be less prominent in the informants’ [discourse].”

c) The Search for Hedonistic Gratification

The elderlies are also attracted to the playful aspect and the novelty of the experience of using devices without committing to a self-monitoring process on a regular basis. Albert (66 years old) says, “It’s the fun aspect that interests me. I have a lot of fun taking pictures of my dish and calculating the number of calories it contains . . . but I know I’ll get bored quickly.”

People who follow this logic of appropriation are often in the phase of testing and exploration of the device. This explains why they may abandon the use of the device, just as they may switch to another logic, such as self-quantification.

d) Distancing between smart devices and behaviors adoption (Case of Disappropriation)

This logic regroups together those who resist the idea that a device could incite them to adopt a behavior or change a habit. These respondents also strongly emphasize the importance of social connection in the practice of any activity. Michelle (74 years old) shares, “I don’t think...
that a connected object is going to make me move. [It’s] the human presence of a person or group of people who are in the same situation as me that help me to practice physical activity.”

People who are part of this logic of dispossession physically separate themselves from devices, which can lead to the abandonment or surrender of these objects. Dominique (71 years old) states, “It [smart watch] has to be put away in my bedside table. I’m not going to measure the number of steps between my kitchen and my living room.”

Note that these figures and practices do not refer to a typology of people. The same individual can use the devices in different logics or switch from one logic to another.

**Theme 3: Digital QS technologies as a lever of the Desired Aging Well**

Our analysis puts into perspective the potential of digital Quantified Self technologies to constitute a lever of the Desired Aging Well, through the following observations. The devices can represent a technological resource that allows the person to do the following:

1. Compensate for physical, cognitive, or even social deficiencies. Gérard (66 years old) says, “I am currently testing a tele-assistance system, but contrary to the old models, I only have a connected bracelet that I put around my wrist in addition to the sensors . . . I find it quite interesting, especially for me, who wanders around . . . So, it could also be useful for a person suffering from Alzheimer’s” (physical and cognitive deficiencies). Michelle (74 years old) shares, “Historically, tele-assistance is designed for families who watch from a distance if the elderly person has got out of bed or stayed in the bathroom too long . . . I find their thing very interesting, but it is not my case because I live lonely” (social disability).

2. Achieve one’s goals in a logic of desire to age well. Monique (64 years old) states, “I try to supervisor my health a lot because my mother was diabetic. I always test my blood sugar, and from time to time, I do a complete checkup . . . I have to monitor myself all the time.”
(3) Monitor the state of health, especially if it is a particular problem. Guy (72 years old) states, “I am connected on a health level with a network for sleep apnea. I have a device to breathe a few times at night for two/three hours, and then the result is recorded and sent automatically to my cardiological and respiratory monitoring center.”

(4) Maintain social contact and share experiences with others. Guislaine (64 years old) says, “I use my watch mostly on weekends when I go hunting, and I have friends who are also connected. Now we challenge each other a bit and compare our results with each other.”

In this context, the use and appropriation of quantified-self devices (5) is more broadly part of an active and dynamic lifestyle that is becoming an important element in the construction of a positive social identity in the face of aging.

DISCUSSION AND RESEARCH CONTRIBUTIONS

The desire to age well is a dynamic process of the continuous adaptation of personal goals and individual behaviors to minimize age-related losses (Baltes and Carstensen, 1996). This research highlights the potential of the digital Quantified Self technologies to add to the usual levers of the “aging well” and to the means by which this state can be achieved. In this framework, the use of Quantified Self devices is more broadly part of an active and dynamic lifestyle that becomes an important element in the construction of a positive social identity in the face of aging. Our research is one of the first to highlight the link between digital QS technologies and the desire to age well. This research could usefully be extended by a longitudinal study whose objective would be to observe and understand over time, the use, appropriation and integration of QS devices in daily life, by seniors with variety of profiles (equipped with connected health objects). Furthermore, this research is part of the preventive approach, which aims to promote, throughout life, the adoption of good practices and the modification of undesirable habits. Indeed, the feedback provided through digital technology
constitutes a potentially effective ingredient to reinforce public authorities’ public health interventions toward fragile and vulnerable users. Finally, in the face of this demographic transition, public policies are working to improve the quality of life of the elderly and maintain their autonomy as long as possible.

REFERENCES:


How Marketing Can UNRAVEL Wicked Social Problems

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Keywords: wicked problems, social problems, marketing research, market systems

Description: In this conceptual paper, we specify tools to conceptualize and study the relationship between marketing and wicked social problems.

EXTENDED ABSTRACT

Many of society’s most significant challenges are wicked problems—intractable knots of causes, effects, actors, forces, and institutions with no obvious starting point for unraveling in pursuit of a solution. In this conceptual paper, we focus on wicked social problems (WSPs), which inflict harm on communities, society, and/or the natural environment. Given that many of these problems are perpetuated, and could be mitigated, by market systems, we argue that it is incumbent upon marketers to take actions to alleviate them. Yet, the wicked nature of these problems inhibits marketers’ ability to understand them and take effective action. In spite of the conceptual impediments and scarcity of empirical study, numerous companies have begun experimenting with using marketing activities and resources to address WSPs, such as poverty,
racial inequality, healthcare, and gun violence, and the marketing academe has recently issued calls for more scholarship in this domain.

Our paper contributes to marketing scholarship and practice by articulating three tools to conceptualize and study the relationship between marketing and WSPs, and we use the WSP of guns in America as an illustrative example of the tools. First, we present a conceptual model of wicked social problems entangled with market systems. This model draws on wicked problems research across disciplines, and specifies WSPs as social problems that lack an agreed-upon definition; are a network of harms; are entangled with interconnected social systems; are essentially unique; and have numerous possible solutions, all of which are varying degrees of better or worse.

Second, we specify the mindset shift needed to effectively undertake research on marketing’s relationship to WSPs. This mindset involves: expanding the research focus from theoretical and/or practical contributions to include contributions to substantive domains of research on WSPs; shifting from a firm-centric orientation to one that views firms as stakeholders in society; shifting the ultimate goal of marketing from improvement of firms’ financial performance to a goal of valuing and measuring alleviation of a WSP; and acknowledging and engaging with multiple, often conflicting definitions of problems.

Our third conceptual tool is a novel and normative research framework. Given the daunting nature of WSPs, engaging in research aimed at providing insight into ways that marketing does or could influence these problems can seem overwhelming or futile. Conventional marketing research perspectives – focused on micro-level actors, linear value chains, and static structural characteristics of markets – are inadequate for investigating market systems entwined with interrelated, multi-level networks of harms. Our framework is intended to
help researchers effectively design and communicate studies of marketing’s relationship to WSPs by recognizing and addressing key characteristics of these problems and of market systems. We capture these considerations in the acronym **UNRAVEL**. Each WSP is *Unique*, and researchers must attend to the distinctive characteristics of the problem by engaging with literature focused on the substantive problem across multiple disciplines. Researchers must consider the *Network* of harms in which the WSP is situated, and the networked nature of market agents, as well as the *Routines*, processes, and practices performed by market actors.

Identifying networked actors engaged in routines presumes that these actors have agency. Stakeholders’—including researchers—attributions of *Agency* substantially impact the way they define a problem. Researchers wishing to contribute to the body of knowledge about a WSP should be reflective and transparent about the way they attribute agency and how it influences their definition of the problem and ability to identify possible solutions. Reflexivity and transparency are also required in relation to *Viewpoints*; similar to firms’ use of paradoxical thinking to engage with varying stakeholder interests and the tensions between them, researchers should be explicit about whose viewpoint they adopt when designing, conducting, and communicating studies.

Researchers should attend to the *Evolution* of the WSPs, including how actors move in and out of the market system; shifts in power, agency, and material conditions of the network; and evolution of the harms produced by the problem. Researchers must also consider how the networks that structure and are shaped by the WSPs exist at multiple *Levels*, and attend to the manifestations of routines, agency, and harms at the micro-, meso-, and macro-levels.

We join scholars within and outside our discipline in calling for additional managerial attention, resources, and actions to address pressing and rapidly changing social and
environmental problems, including WSPs. We hope that our conceptual tools and framework for investigating relationships between marketing and wicked social problems will facilitate research that provides useful and accessible insights to aid practitioners in this much-needed work.
IN SEARCH OF MODERATION: HOW COUNTER-STEREOTYPICAL ENDORSERS ATTENUATE POLARIZATION OVER PUBLIC POLICIES

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Keywords: Polarization, Counter-stereotypical Endorser, Political Ideology, Public Policy

Description: This paper shows that counter-stereotypical endorsers (e.g., a conservative politician supporting cannabis legalization or a liberal politician supporting gun rights) attenuate polarization over public policies by persuading more their in-groups than by dissuading their out-groups.
Research Question

Political polarization is rising worldwide. As political orientation becomes increasingly central to people’s identities, preferences become more clearly defined along ideological lines. Indeed, political orientation has been shown to predict policy opinion on a range of social issues nearly three times as well as other relevant socio-demographic variables, such as race and gender.

Although much has been documented on how political orientation helps explain divergent opinions and tastes, much less is known on what can bring them together. In other words, what can lead preferences to converge across the ideological spectrum, and why? Across three studies, we show that counter-stereotypical endorsers (e.g., a conservative politician who supports cannabis legalization) systematically attenuate the well-established association between self-identified political orientation and policy preferences. Further, we demonstrate that such attenuation occurs asymmetrically: when a counter-stereotypical endorser supports a policy, it persuades in-groups (e.g., increases support for cannabis among conservative individuals) more than it dissuades out-groups (e.g., reduces support for cannabis among liberal individuals).

Finally, by conducting our studies in Brazil, a highly fragmented multi-party system, we move the debate away from the US and the “party over policy” effect to demonstrate that general political orientation also has a social-based influence into policy preferences.

Method And Data

Study 1 used a real-world context to provide initial evidence for the asymmetric attenuation effect. Participants (N = 226) recruited on the streets of Rio de Janeiro were asked to indicate their opinion about an actual cannabis-related bill after learning that either a famous left-wing (stereotypical) or a famous center-right (counter-stereotypical) politician supported it (both actually did).

Study 2 aimed to replicate the effects with a stereotypical right-wing policy (i.e., gun rights). To enhance internal validity, instead of using real politicians, study 2 identified the
endorsers based on their political orientation. Participants (N = 342) recruited through a Brazilian online panel read that a bill seeking to increase access to guns has received increasing support from conservative (stereotypical), liberal (counter-stereotypical) or some (control condition) congressmen, and then indicated their opinion about the bill. Study 3 (N = 412) employed a similar procedure, with three exceptions. First, we used an even more salient policy: abortion. Second, we excluded the stereotypical condition since it resembled the control. Third, we employed a 3-item measure of beliefs about the policy effectiveness to examine whether changes in preferences operated through changes in beliefs. In all studies, participants completed a continuous measure of political orientation.

**Summary of Findings**

Across studies, political orientation was a strong predictor of preferences in the stereotypical and control conditions (p’s <= .001): as conservatism increased, support for cannabis and abortion decreased, and support for gun rights increased. However, the interaction between political orientation and counter-stereotypical endorser was significant in all studies (p’s <= .05): when the endorser was counter-stereotypical, the effect of political orientation attenuated. Spotlight analyses revealed that such attenuation was driven more by in-group persuasion than by out-group dissuasion. A conservative endorser supporting cannabis and abortion swayed conservatives (p’s <= .029), but liberals hardly change their opinions (p’s >= .290). A liberal endorser supporting gun rights increased support among liberals (p = .002), but did not dissuade conservatives (p = .290).

This asymmetric change in preferences did not originate from a change in beliefs about policy effectiveness (study 3). The interaction between political orientation and endorser did not predict beliefs (p = .258), and the indirect effect of political orientation on abortion preferences through beliefs did not differ across conditions (p = .290). However, the indirect effect of political orientation on beliefs though preferences significantly differed across conditions (p = .039), which suggests that beliefs are updated given the new preferences.
Statement of Key Contributions

While research has consistently documented that political orientation is a strong predictor of preferences, much less is known about what can make liberals and conservatives to converge. Across three studies, we systematically demonstrate that counter-stereotypical endorsers attenuate polarization over policy preferences. Further, we document that this attenuation happens asymmetrically. When a counter-stereotypical endorser supports a policy, it persuades in-groups more than it dissuades out-groups. By considering the role of policy stereotypes, we help reconcile conflicting findings in the literature about asymmetric effects of endorsement cues. Finally, we conducted our studies in Brazil, a highly fragmented multi-party system. This context is particularly suitable to assess the extent to which general political orientation plays a social-based role into policy preferences.

This research also offers important practical contributions. In a highly polarized world, persuading people to support policies perceived to be associated with a given political group (e.g., cannabis legalization, abortion rights) is a key challenge often faced by policy-makers and by people in everyday interactions. Our findings suggest that counter-stereotypical endorsements significantly attenuate polarization, and do so more by persuading in-groups than by dissuading out-groups. Taken together, our results highlight the potential of counter-stereotypical endorsements as a persuasion tool to reduce polarization.
INFLUENCE OF NATIONAL CULTURE ON CORPORATE POLITICAL ACTIVITY (CPA) IN COLLECTIVIST COUNTRIES FOR ENVIRONMENTAL SUSTAINABILITY

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Keywords
National culture; corporate political activity, environment; sustainability

Description
This conceptual paper endeavours to present an idea to protect the environment by suggesting that national culture has the forces which can shape government and political environment, organization’s ability to acquire resources/capabilities, and the strategies (at the firm-level, institutional-level and corporate-level). These factors ultimately moulds the way CPA can be used as a marketing tool to influence both consumer behaviour and the government for environmental stability.

**EXTENDED ABSTRACT**

**Research Question:**

How can national culture influence and shape the way CPA can be used as a marketing tool?

**Summary of Findings:**

Extent literature has shown that politicians play an important role and has strong influence on business environment. It is this influence that affects the corporates’ performance (Bonardi, Hillman, & Keim, 2006). This paved way for the research on CPA (Liedong, 2020) which presents the opinions/suggestion to influence corporates strategies and hence forms a crucial part of the democratic process (where policy-making process is of prime importance) (Lawton, McGuire & Rajwani, 2012). Most of the studies have paid attention to relational strategies (Rajwani & Liedong, 2015) and focused on the personal and/or the social-ties among managers and the politicians (Guo, Xu & Jacobs, 2014). Such relational strategies can be favourable depending upon the cultural settings (especially in high context and collectivistic cultures) and the economic systems which are often relationship based in the developing countries (Liedong, 2020) like Pakistan. While extant research shows that CPA is mostly studied from the perspective of antecedents of political strategies (Liedong & Frynas 2017; White, Boddewyn & Galang, 2015), the nature/type of political activity (Barron 2011) and the outcomes of political activity (Hadani & Schuler 2013), there is a need to study the influence of high-context
collectivistic national culture on the CPA (especially as an influencing marketing tool) and environmental stability. This research article has tried to focus on this area by presenting a perspective which is open for empirical research.

**Key Contributions:**

While CPA is studied from the perspective of political strategies’ antecedents (Liedong & Frynas 2017; White, Boddewyn & Galang, 2015), CPA outcomes (Hadani & Schuler 2013) etc, there exist room for research on role of national culture’s influence on CPA. There is a need to study the influence of high-context collectivistic national culture on the CPA (especially as an influencing marketing tool) and environmental stability. This research article has tried to focus on this area by presenting a perspective which is open for empirical research. The research article suggest that national culture is comprised of the forces which shape government and political environment, influence the organization’s ability to acquire resources and brush up capabilities of the organization at the firm-level, institutional-level and corporate-level strategy. These factors ultimately influence the way CPA can be used as a marketing tool to influence both consumer behaviour (via CSR and promotional strategies) and convince government for rethinking some policy or for strategy formulation for the environmental stability.

“References are available upon request.”
Is my AIVA making me stupid? The effects of AIVA interactions on consumer cognition, search intention, and WOM

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Keywords: Cognitive ability, compensatory consumption, control, technology, information search

Description: This research investigates the effects of consumer search using an AIVA as compared to an online search engine, on their cognitive ability and subsequently on their search and WOM intentions.
EXTENDED ABSTRACT

Research Question

AI-enabled virtual assistants (AIVAs) have become popular (e.g., Amazon Alexa, Google Home) and assist consumers with a variety of tasks, including home automation, access to media, entertainment and shopping. Indeed, they have a significant influence on what their users hear, watch, and buy through offering suggestions in response to verbal commands (Segan & Greenwald, 2020). Despite their popularity, little is known about how consumer interactions with these devices can impact subsequent outcomes, including cognition, emotions and choice. Our research focus addresses this gap and focuses on one consumer outcome – cognitive performance. Specifically, drawing on research in educational psychology (Schukaljow et al. 2012) and perceived control (Chen, Lee & Yap 2016), we predict that interacting with AIVAs (search engines) will negatively impact consumers’ cognitive abilities, thereby impacting important downstream outcomes such as consumers’ desire to engage in additional information search as well as word of mouth behaviors. We suggest that these effects arise because information search using AIVAs offers less perceived control as compared to online search (e.g., inability to parse through a set of results,), thereby adversely impacting cognitive performance leading consumers to compensate for lost control through WOM intentions and interest in a subsequent search after search interactions with AIVAs.

Method and Data

We find support for our predictions across six studies, using different tasks to assess cognitive performance (verbal and quantitative), after interactions with both real (Amazon Alexa) and fake (Halo) AIVA brands, across different respondent populations (CloudResearch, MTurk, Prolific), thereby enhancing confidence in our findings. Studies 1-2 document the
performance disadvantage for AIVAs as compared to online search engines in both an online simulation experiment (study 1) and a real AIVA interaction study (study 2). Study 3 considers a moderator to this effect - interaction type, while study 4-5 document the mediating role of perceived control, and study 6 examines the effects of information search using AIVAs versus traditional online search engines on two outcomes of interest to marketers – interest in subsequent search and intentions to engage in word of mouth. Our prediction was that the loss of control during the search interaction with AIVAs would lead to two different ways to attempt to reassert control – increased interest in conducting a subsequent search, even if for unrelated topics, and an increased willingness to engage in WOM.

Summary of Findings

The results of studies 1 and 2 support our prediction that using an AIVA to search for information results in lower cognitive performance as compared to search engines. Study 3 provided evidence that the cognitive decline from interacting with AIVAs is found only when the search task is in the same context as the subsequent performance task, but not when the search was unrelated to the performance task, suggesting that the match between the search and performance tasks could be a potential moderator to the negative effects of interactions with AIVAs. The next two studies show that the negative effects of AIVAs are driven by a loss of perceived control over the interaction. We document that when control perceptions are manipulated (enhanced in study 4, diminished in study 5), the differences in cognitive performance are attenuated. Finally, Study 6 offers support for the downstream implications of increased search intentions and WOM behavior. Importantly, such interest appears to translate into greater interest in unrelated products that are advertised post the information search.

Statement of Key Contributions
This research contributes to the literature on technology’s effects on cognition (Strayer & Johnston 2001) and control (Endler, N. S., Speer, R. L., Johnson, J. M., & Flett, G. L. 2001) by showing that information search using AIVAs can lower consumers’ subsequent cognitive ability. We suggest this decline occurs because information search using AIVAs reduce perceived control as compared to search engines, thereby adversely impacting cognitive ability. We also contribute to the literature on compensatory consumption by replicating previous research illustrating that consumers attempt to restore lost control through word-of-mouth (Consiglio et al., 2018), and extend this work by documenting consumers consequently have an increased interest in continuing information search following control deprivation. In practice, understanding the effects is invaluable to marketers and policymakers. Limiting consumers’ cognitive resources influences countless aspects of their everyday lives, from their approaches to making decisions (Bettman et al. 1991) to their level of enjoyment of experiences (Weber et al. 2009). Specifically, we suggest that AIVAs can have negative effects, including lowered perceptions of control, leading to decreased cognitive functioning. The lowered control perceptions may consequently also lead to sub-optimal consumer outcomes, including greater impulse purchases, increased consumer spending, and increased susceptibility to persuasive advertising.

*References are available upon request.
Extended Abstract

**IS RENEWABLE ENERGY A POLICY ISSUE SEPARATING CITIZENS FROM CALIFORNIA AND TEXAS?**

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**Keywords**: renewable energy policy, conjoint analysis, political markets

**Description**: Using conjoint analysis, we find support for the conclusion that citizens in California and Texas have similar renewable energy policy preferences when faced with trade-off situations, and that part-worth models can be constructed to predict policy support in specific market segments to better align politicians with citizen preferences.

**EXTEDDED ABSTRACT**

**Research Question**: The primary research question is this: are preferences for renewable energy policies similar for citizens of California and Texas? Using the lens of service-dominant logic, we investigate the relationship between citizens and the government as a market co-creating value. In this context, California which relies heavily on policies and regulations, while Texas relies on market-driven solutions, yet both have had success and lead the nation in renewable energy generation. It also further explores the use of conjoint analysis to reveal consumer preferences when faced with trade-off situations, and how these results may be modeled to provide politicians a tool to estimate support from their constituency. Third, it provides support for the use of part-worth calculators to estimate citizen support of policies for...
specific market segments such as biological sex, and how policy features and messaging should be conducted.

**Method and Data:** Using Sawtooth’s Discover software, trade-off situations were modeled and a survey constructed to elicit part-worth’s for renewable energy policies with eight dimensions, with two or three levels. The dimensions are, energy costs (3-levels), GHG emissions (3), development of new energy technology (2), impact on traditional energy jobs (3), environmental impact (3), mandating renewable energy levels (2), sharing the cost of implementation (3), and impact on personal energy consumption (3). A total of 697 participants completed the survey, with 398 from California and 299 from Texas. The demographic make-up included 305 males, 392 females, 206 Republicans, 265 Democrats, and 147 independents. Part-worth values were estimated from the data and a policy support calculator was constructed to evaluate exemplar policies.

The models based upon the conjoint analysis were compared in AMOS using multi-group analysis to determine whether California and Texas had similar preferences. We also constructed three hypothetical renewable energy policies and estimated support of the policy using the part-worth’s in the calculator grouping by male and female to determine whether or not there were differences in support of these policies based upon biological sex.

**Summary of Findings:** First, on the surface these states appear to be at polar opposites of the liberal-conservative and Democrat-Republican spectrums, however we find that calculated p-values comparing the groups did not provide significant evidence to conclude that the citizens of California’s preferences differed from those of Texas. This suggests that Americans may not
be as divergent in their preferences as news reports portray, and that they may similarly support policies like those supporting renewable energy. The use of conjoint analysis facilitated the construction of a renewable energy policy support estimator (calculator) that can be used by politicians to better align their votes with their constituency in the future. We also find that there are biological sex differences in the support for more green energy policies in women than men, and that men support more traditional energy-based policies than women, but there is no statistical difference in support of the status quo.

**Statement of Key Contributions:** If politicians have better information about the wants and needs of their constituents, the political market is more efficient and provides increased value. Conjoint analysis can provide a model to estimate support for policies like those supporting renewable energy that politicians can reference in their decision making. Second, the use of conjoint analysis to put citizens into trade-off situations reveals support of multi-dimensional policies more accurately than unidimensional polling, which may uncover similarities like those in California and Texas that may otherwise go undiscovered. Lastly, hypothetical policy support may be modeled by using the estimated part-worth’s in the calculator to determine whether there are differences in support of these policies for specific sub-markets.

References are available upon request.
IT'S NOT THE CAR, IT’S THE DRIVER: IDENTITY BASED MOTIVATION IN ELECTRIC VEHICLE ADOPTION

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Keywords: Identity based motivation; Electric vehicles; Green consumption; Field study; Test-drive

Description: We conduct a quasi-experimental field study—an Electric Vehicle test-drive—to assess the test-drive’s influence on perceptions of the vehicle and the self, and to evaluate the influence of these perceptions on vehicle adoption intent.

EXTENDED ABSTRACT

Research Question – Encouraging people to shift from gasoline-powered to electric-powered vehicles is one promising route to reducing Green House Gas (GHG) emissions. However, electric vehicles (EVs) remain at a low market share in the U.S. (1.2%), despite monetary incentives for their adoption (International Energy Agency 2018). Car dealerships and manufacturers often advertise EVs by focusing on the vehicle’s concrete (i.e., instrumental) attributes, like range and performance. In addition to considering these factors, variables related to the EV’s symbolic value—the identity and self-expression benefits associated with the EV—can also influence adoption decisions. EV symbolic value perceptions are generally defined as
the extent to which people perceive EVs to reinforce aspects of self-identity (White and Sintov 2017). However, symbolic value has been measured heterogeneously across the EV literature, resulting in the conflation of two related yet distinct concepts: (1) EV attributes that convey prestige and support self-expression (e.g., perceptions of EVs as a status symbol), and (2) specific identities that EV ownership conveys (e.g., perceptions of EV owners as pro-environmentalists). We utilize a unique quasi experimental design to examine whether and to what extent changes of perceptions around the EV’s signaling ability or the driver’s identities are associated with EV adoption intent.

**Method And Data** – We employed a quasi-experimental research design, conducted with a federally funded program for urban transportation development. Participants completed a survey prior to the EV test drive (t1). Then, participants test drove an EV for about 15 minutes. Finally, participants completed a post-drive survey (t2). Participants who completed both the pre- and post-drive surveys (N = 275, 42.91% Female) constituted the study sample. In both surveys, participants reported their perceptions of the EV as signaling status and prestige, and the extent to which they identified as early adopters of technology, pro-environmentalists, and car authorities. We additionally measured perceived instrumental and environmental attributes of EVs. Pre-drive scores were subtracted from post-drive scores and the difference was taken to indicate the change from pre- to post-drive. In the post-drive survey, participants additionally reported their EV adoption likelihood. We find that pre- to post-drive changes in perceptions of EVs (i.e., instrumental attributes, environmental attributes, and signaling ability) are associated with little to no changes in EV adoption intent (all ps > .05). Conversely, pre- to post-drive
changes in two EV-congruent driver identities—pro-environmentalist ($B = .24, p < .01$) and car-authority ($B = .18, p < .01$)—were positively associated with EV adoption intent.

**Summary of Findings** – Results suggest that two factors related to the concept of EV symbolic value—EV signaling ability and drivers’ identity congruence—are differentially associated with EV adoption intent. These findings support IBM literature—they suggest that EV adoption, and perhaps adoption of innovative green products more generally, is strongly associated with consumers’ perceptions of themselves as holding product-congruent identities (Oyserman 2009, 2015), perhaps more so than their product perceptions. However, future research is needed to examine why some EV congruent identities are more predictive of adoption intent than others. It is possible, for example, that experiencing the innovative product with a group of others may have hindered the perception of the product as identity-congruent for early technology adopters.

In our study, cross-sectional examination of EV perceptions suggested that these perceptions play a considerable role in promoting EV adoption. However, pre-post analysis after EV exposure suggested that changes in EV perceptions played little to no role in predicting adoption intent. The measurement of perception changes is in line with the cognitive and affective changes experienced by consumers after product exposure and may be a more accurate and valid method to assess the factors influencing EV adoption in real-life settings (e.g., at dealerships).

**Statement of Key Contributions** – Previous literature often focuses on consumers’ EV perceptions and utilizes cross-sectional methodologies to identify consumers most likely to adopt EVs. This approach is lacking in several ways: (1) it varies considerably in the definition of a key construct predicting EV adoption—symbolic value, (2) it misses an opportunity to test
whether and how consumers’ perceptions may shift, thus increasing adoption intent, and (3) it neglects real-world environments in which consumers experience EVs. In our research, we address these gaps. First, we begin to clarify the fuzzy concept of symbolic value. Second, we demonstrate the use of a quasi-experimental, longitudinal methodological approach with high ecological validity—an EV test drive. Finally, we identify a pathway to encourage EV adoption. We find that a shift in consumers’ perception of the self as pro-environmental and a car authority, rather than perceptions of the EV, has significant impact on EV adoption intent. This finding suggests that a common advertising approach—marketing the EV as having high instrumental, environmental, and symbolic value—may not be optimal. Instead, municipalities should collaborate with manufacturers and dealerships to provide test-driving experiences to consumers and reinforce messages about consumers’ shifting identities rather than the value of the EV.

References are available upon request.
MARKETING PRO-CLIMATE BEHAVIOR FROM A PSYCHOLOGICAL BENEFIT PERSPECTIVE? AN EXPLORATIVE SEGMENTATION STUDY

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Keywords: Sustainability Marketing, Positive Psychology, Psychological Benefits, Audience Segmentation, Pro-Climate Behavior

Description: This empirical study—based on a survey of 2003 adults living in Québec (Canada)—contributes to the literature on sustainability marketing by demonstrating that positive psychological benefits of pro-climate behavior are relevant variables to explore in formative research, more specifically in audience segmentation.

EXTENDED ABSTRACT

Research Question

In recent years, segmentation analyses have increasingly been applied to environmental issues, and more specifically within climate change public engagement campaigns. They identified homogenous groups of people based what they think about climate change (beliefs), what they are doing (behaviors) and why (motivations and barriers). In sum, these segmentation studies are mostly based on the variables influencing pro-environmental behaviors (PEB). However, a growing body of research suggests that an
additional variable would be relevant in segmentation analyses related to climate change issues: the psychological benefits experienced by individuals. These are pleasant psychological states (e.g., moral satisfaction, pride) that are experienced while one is engaging in an activity. According to the reinforcement principle, many researchers posit that experiencing these positive psychological states while practicing a PEB can, in turn, promote the maintenance of this behavior over time.

From a sustainability marketing perspective, these findings suggest that organizations seeking to foster pro-climate behavior should consider harnessing these benefits when designing campaign strategies. However, there is a lack of knowledge on how these variables should be integrated and measured in formative research, and more precisely in an audience segmentation. The present study aims to fill this gap.

Method and Data

We conducted a survey of adults living in Québec (Canada) (n = 2003) using LEO, an online panel operated by the research firm Leger. Sample representativeness was ensured by weighting results according to the region, sex, age, mother tongue, level of education and number of children. Data were collected from September 14 to September 19, 2020. We measured 160 variables grouped into three categories: sociodemographic variables (e.g., gender, age, education), psychographic variables (e.g., climate change beliefs, perceived social norms) and behavioral variables (e.g., self-declared pro-climate behaviors). The questionnaire covered a list of 16 determinants of pro-climate behaviors (basic values, environmental values, environmental worldviews, awareness of consequences, awareness of responsibility, social norms, personal norms, attitudes, intention, perceived behavioral control, habits, and objective constraints), along with four
actual psychological benefits of adopting pro-climate behaviors: sense of usefulness, pride, moral satisfaction and hedonic experience. Variables were measured on a 4-point Likert scale from “strongly agree” to “strongly disagree.” A TwoStep cluster analysis was performed on the collected data. The final solution provided six clusters, or segments.

**Summary of Findings**

Each segment was given a name summarizing its essential characteristics regarding climate change issues: the *Engaged* (20%), the *Techno-optimists* (23%), the *Optimists* (18%), the *Worried* (13%), the *Inactives* (12%) and the *Unconcerned* (14%). They are distinct enough from each other in terms of experienced psychological benefits of pro-climate behavior to suggest that members from a same segment would respond similarly to a marketing strategy based on this dimension. For example, the first three segments report feeling a sense of usefulness, pride and moral satisfaction when they engage in a pro-climate behavior. To enhance these intrinsic rewards, campaigners should consider highlighting the societal benefits of mitigating climate change, rather than solely stressing the individual advantages. On the other hand, the last three segments are the least susceptible to have pleasant hedonic experiences when adopting pro-climate behaviors. For them, it requires a certain degree of effort or inconvenience. To shift this perspective, marketing strategies could seek to associate fun and excitement to specific proclimate behaviors. In sum, our results support the idea that including these variables in a segmentation audience study can be a useful way to design innovative differentiated marketing strategies.
Key Contributions

This paper is one of the first empirical studies at the junction of sustainability marketing, positive psychology and audience segmentation, and it contributes to the literature on sustainability marketing as it proposes an extension of previous audience segmentation methods regarding climate change issues.

All stakeholders interested in sustainability marketing will find value in the present study. Engaging the public about mitigating or adapting to climate issues poses important challenges, especially for non-profit and governmental organizations dedicated to this cause. The well-known attitude-behavior gap is deepening, as citizens are not massively adopting the most crucial pro-climate behaviors that are urgently needed (reducing car use, reducing meat consumption, etc.). In this context, how can sustainability marketing contribute to accelerating this societal shift? Previous research has highlighted the efficacy of positive emotions (e.g., hope) in marketing campaigns designed to promote PEB, particularly with regard to climate change. Positive psychology has emerged as a promising field that could lead to the improvement of audience segmentation methods, and thus to better designed strategies.

References

References are available upon request.
MOTIVATING MORALLY COURAGEOUS MARKETERS TO SUPPORT JUST BRANDS: USING THE INTEGRATIVE JUSTICE MODEL TO EVALUATE JUSTICE IN THE SUPPLY CHAIN

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Keywords: Marketing ethics, justice, modern slavery, Integrative Justice Model, supply chain

Description: Development of morally courageous marketers as “justice auditors” is catalyzed by familiarity with modern slavery in supply chains, the UN Sustainable Development Goals, and the normative ethical framework of the Integrative Justice Model.

Research Question

Recent estimates suggest that over 40 million people suffer in varied forms of slave labor today, annually generating $200 billion for the computer industry and $128 billion in the garment industries alone (Crane, 2019). Coupled with fish, cocoa, and sugar industries, it is clear that unconscious consumerism in developed countries has flourished at the expense of this oppressed population. But what can contemporary consumers do to bring about justice in the supply chains from which we benefit? Myriad levels of subcontractors and intermediaries in the supply chain impact the justice equation so to speak, leaving the end-user consumer completely unconscious of the sacrifices made by supply chain laborers to bring them their high-demand, low-cost products. We argue that, via justice-oriented and trained marketers, consumers can be influenced to support brands that evidence justice in their supply chains, as audited with the Integrative Justice Model (Santos and Laczniak, 2009), and reflective of the voices of supply chain stakeholders, primarily laborers, often the poorest, and geographically and economically furthest
contributors in the supply chain. Moral courage is required by marketers who must stand in solidarity with all members of their supply chains to evaluate and require fair and just conditions of employment vs. modern slavery. We suggest that development of morally courageous marketers as “justice auditors” is catalyzed by familiarity with modern slavery in supply chains, the UN SDGs, and the normative ethical framework of the Integrative Justice Model.

Method and Data

In this work, we analyze three years of qualitative feedback from senior-level undergraduate marketing majors in a private Midwestern US university regarding their perceptions of the potential usefulness of the capstone course’s concepts in their intended marketing careers. More specifically, which concepts and frameworks resonated most? Preliminary data analysis suggests students find the IJM and the SDGs to be valuable lenses through which they as marketers will be able to identify justice in the practices of the firms for which they work. Further, we evaluate the impact of the IJM on their moral courage as evidenced through their essay questions on the extent to which their learning impacted their self-perceptions of growth in intellect, character, leadership and service.

Summary of Findings

The Integrative Justice Model (IJM) is a normative ethical framework for marketers, and can be a useful tool to evaluate just practices in supply chains. The IJM postulates five inter-related components that are essential for treating poor consumers in a fair and just manner. These five elements are: (1) authentic engagement without exploitative intent; (2) co-creation of value; (3) investment in future consumption; (4) genuine interest representation of stakeholders; and (5) focus on long-term profit management, rather than short-term profit maximization. The elements
theoretically grounded in thirteen frameworks in moral philosophy, marketing theory, and contemporary management frameworks as well as religious doctrine.

Over the last two decades there has been heightened interest in what is termed as the base of the pyramid (BoP) market. With about two-thirds of the world’s population constituting this market, it is a segment that cannot be ignored when thinking about justice in the supply chain. Comprising the world’s poorest people, the BoP market has traditionally been underserved in the market economy. In the course of these two decades, a growing number of multinational companies such as Unilever, Proctor & Gamble, Danone etc., have ventured into the BoP market. There has also been a phenomenal growth in the field of social entrepreneurship and social innovation. However, most of these forays have been modeled along the lines of the western capitalistic paradigm.

Key Contributions:

Of course marketers have a responsibility to their firms to produce profit, but in recent decades business education has focused more on maximizing profit in the short-term, rather than managing it long-term. Thus, the academy has, albeit inadvertently, played a role in disconnecting marketers from those who produce that which they market. Familiarizing upcoming marketers with the realities of injustices in the supply chain, coupled with training on evaluative methods such as the IJM, can prepare them as “justice auditors” and ensure progress toward reduced inequalities and responsible consumption and production, two of the Sustainable Development Goals (UN SDGs, 2015-2030). Marketers ought to be armed with an understanding of the potential economic impact of working in solidarity with those in their supply chains. Further, as clarified by the IJM, representing their interests is integral to justice in the supply chain and this can only happen if the voices of the most disadvantaged and distant supply chain participants are heard. We propose the
operationalization of the IJM as a survey tool to be completed by as many representative supply chain participants as possible, yet with a focus on the poorest, most distant participants as primary stakeholders. Finally, we briefly discuss an application of the IJM with marginalized consumers, revealing the capacity of this justice auditing tool to facilitate prediction of transformation in quality of life.
NO NEWS IS BAD NEWS: POLITICAL CORRUPTION, NEWS DESERTS, AND THE DECLINE OF THE FOURTH ESTATE

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Keywords: corruption, journalism, digital platforms, econometrics

Description: We investigate how the closure of major daily newspapers leads to increases in corruption prosecutions.
EXTENDED ABSTRACT

Research Question
The newspaper industry is perhaps the most notable casualty of the digital age and the supplanting of print advertising with online marketing. We examine how this shift in marketing spending which devastated the revenue model of local newspapers influences political corruption. Business advertising historically supported investigative journalism in local communities, and we propose that income has dried up and newspapers have closed, corrupt actors are emboldened. We argue this occurs due to misperceptions of the functions of journalists, as well as decreased pressure through auditing mechanisms (e.g. FOIA), leading to increased risk seeking.

Method and Data
We draw data from the Federal Judicial Center’s (FJC) Integrated Database (IDB) on corruption and combine this with data on newspaper closures from the UNC News Deserts database. To estimate the effect, we exploit the dispersed geographic and temporal closure of newspapers using a difference in difference design. We further gathered newspaper articles from the Newsbank database to demonstrate that the closed newspapers did in fact cover corruption and conducted interviews with current and former AUSAs to provide clarity on the process of charging corruption. Finally, we also integrated data on the opening of local news site for Nextdoor and hyperpartisan “local” news sites.

Summary of Findings
We find that the closed newspapers did cover corruption, and that following their closure, there was a significant rise in federal corruption charges in the federal district in which they operated. These findings are robust to alternative specifications and the inclusion of time-varying controls. We also observe evidence consistent with increased risk seeking, with a significantly larger increase in guilty verdicts relative to plea deals, suggesting that corrupt actors, following charging, are willing to gamble on trials compared to the relative certainty of pleas. Strikingly, we observe no evidence that the rise in online-only newsvendors and hyperlocal news sources is able to ameliorate this effect.

**Key Contributions**

This work speaks to the impact of marketing on government functions through the newspaper industry. Our work focuses on than the broader social implications of the shift in advertising spending and subsequent collapse of the newspaper industry. We show evidence that the rise of news deserts has incentivized illegal behavior, but that the hoped for rise in citizen journalism which the Internet Era was supposed to facilitate has done little to stem this tide. Thus, our findings provide important insights for marketers on the externalities of their investment in advertising, as well as media organizations in the allocation of their resources. We also demonstrate the importance of a functioning press in holding public officials to account and shows material concerns with the shift of advertising spending to centralized media platforms. To the extent that little attention is paid by content aggregators or digital media outlets to local issues, this changing focus alters the decision-making calculus for malicious local actors. This is problematic, as federal investigations are expensive and create dead weight loss because
compensatory assets can rarely be seized, and further means that the resources which are devoted to the investigation cannot be allocated elsewhere.
RESISTANCE OR REVOLUTION: THE ROLE OF CONSUMER CHARACTERISTICS, CONSUMER KNOWLEDGE, AND LABEL INFORMATION ON THE ACCEPTANCE OF IN VITRO MEAT

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Keywords: Cell-based meat, meat alternatives, new food technology

Description: This research explores why consumers demonstrate reluctance to cell-based meat alternatives, and how label information can reduce the resistance to cell-based meat alternatives.

EXTENDED ABSTRACT

Research Question

Consumers’ reluctance to adopt new food technologies can be influenced by cognitive, affective, and motivational factors. We examine factors associated with consumer resistance to cell-based meat products, also known as in vitro meat (IVM). Specifically, we examine the role of product label information (product claims), consumer knowledge, and food technology neophobia (FTN) on the evaluation of IVM in retail settings. In addition to issues related to consumer knowledge, affect, and dispositional resistance, marketers of IVM also encounter regulatory challenges. Currently, there is no consensus among industry and regulatory bodies on how this new product should be categorized and labeled. Motivated by this current public policy and marketing debate centered on IVM products, we investigate whether semantically superior product names (clean vs. cell-cultured), appropriate label information, and an educational intervention can reduce much of the resistance to IVM products. In addition, we examine how consumers’ level of FTN (e.g., high vs. low) interacts with various promotional interventions (e.g., names, safety label, and consumer knowledge etc.) on the evaluation of IVM products. The
research resolves some important policy debates on IVM names, labels, and package design issues and provide general guidelines for both marketers and public policy makers.

**Method and Data**

A total of four experiments were conducted to examine the perceptions and evaluations of cell-based meat. We manipulated product-related cues, and consumer knowledge and tested their effects on product perceptions (e.g., attitude, healthfulness, and expected taste). Using analysis of variance and conditional PROCESS analysis, we examined how product cues and consumer knowledge interact with FTN in influencing product perceptions and purchase intention. Specifically, study 1a and study 2b investigated whether consumers demonstrate dispositional reluctance to cell-based meat alternatives using both implicit association tests (IAT) and between subject experiments. In study 2 and 3, we conducted between-subject experiments where we manipulated specific product label information, names, and applied education intervention to test their effects on healthfulness perception, willingness to pay, and purchase intention. Additionally, we measured consumers’ dispositional trait-food technology neophobia (FTN) to test the interaction between FTN and product related interventions in influencing product evaluation.

**Summary of Findings**

In study 1a (IAT) and study 1b, we demonstrate that consumers evaluate cell-based meat more negatively compared to conventional meat when all product related cues are controlled. Study 2 showed that using semantically superior product names eliminate resistance which increases positive perceptions and purchase intentions. Study 3 further demonstrates the role of safety claims on the product labels, consumer knowledge, and consumers’ level of FTN. Specifically, we show that product cue manipulation interacts with consumers’ FTN to buffer against the resistance. Higher FTN is associated with higher resistance to cell-based meat
compared to conventional meat products. However, this resistance is buffered by the application of superior product names such as clean vs. cell-cultured, safety claims such as “safer meat choice” vs. no claims and providing general education about the product processes vs. no education. Specifically, product related interventions attenuated the effect of FTN in the evaluation of cell-based meat products.

Statement of Key Contributions

Our research contributes to activation theory and the consumer inferential processing literatures within a product labeling and retail context. Results demonstrate how consumers’ inference about cell-based meat is formed through the activation of semantic memory networks and processing mechanisms. By highlighting both process and health-related claims on the product package, we demonstrate how consumers form perceptions about the product which lead to product purchase. Our research also contributes to the “Deficit Model” which predicts that consumers’ resistance is rooted in their lack of knowledge about object being resisted. We test whether cell-based meat products are resisted due to a lack of knowledge about the technology and consider other key factors, as well. Since IVM is a technology-based product, we extend the prior literature on food technology neophobia (FTN). Specifically, we investigate the potential differential effect of FTN on consumers’ judgment and decision-making processes within the context of IVM and conventional meat products.

Our research has significant implications for policy makers, manufacturers, and retailers. To date, policy makers, retailers, and manufacturers have not reached a consensus regarding the labeling and identification of cell-based meat products. This research provides insights into the complex issues associated with IVM that can help to inform the decision-making processes of public policy makers, retailers, and manufacturers.
“References are available upon request”
RETHINKING PERCEPTIONS OF DISABILITY: THE UNINTENDED HARM OF SIMPLIFIED INFERENCE

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Keywords: disability, accessibility, stereotypes, gift giving, preferences

Description: Disability labels and cues prompt nondisabled consumers to view disabled consumers as being perpetually “needing to be fixed,” which results in stereotyping and limiting of disabled consumers’ daily product and service preferences.

EXTENDED ABSTRACT

Research Question

Despite the prevalence of disabled consumers, consumer research tends to view insights about disability as “niche” (Olkin 2012), and disability justice advocates argue disabled individuals continue to feel overlooked, and even invisible, among policy makers and brands.
(Heumann and Wodatch 2020; Wong 2020b). Given the 30-year milestone of the Americans with Disabilities Act (ADA) in 2020, it is critical to better understand how consumers with disabilities are perceived, and the subsequent consequences of those perceptions (e.g., policy, consumer preference, well-being).

Disability policy like the ADA typically utilizes the *medical model* of disability - that disability is based on one’s functional, medically-determined limitations (Siminski 2003; DPI 1982; contrasts with the social model: disability is based on society, not one’s body, limiting daily life opportunities, fulfillment for disabled people, Oliver 1996; Siminski 2003). Consequently, we ask how the medical model of disability applies to the marketplace. Specifically, how do our stereotypes about disabled individuals shape nondisabled people’s expectations for disabled individuals’ preferences (e.g., for gifts, purchases)? Why does this take place? We expect consumers will think disabled (vs. nondisabled) consumers are more interested in utilitarian (over hedonic) products due to the perception that individuals with disabilities need to be “fixed.”

**Method and Data**

We test this prediction across four experiments. In Study 1 participants opted toward the utilitarian (vs. hedonic) massage gift both when their colleague’s disability was observable (M=3.54; F(1,449)=15.49, p<.0001; η²=.033) and disclosed, not observed (M=3.32; F(1,449)=22.94, p<.0001; η²=.048) relative to when she had no disability (M=4.54), showing nondisabled consumers expect people with disabilities, regardless of nature of disability, to prefer utilitarian (vs. hedonic) items, even as gifts.
In Study 2a we replicate Study 1 in a non-gift-giving domain, with different products, and with extensive information about the target. Participants were more likely to choose the utilitarian option when the target was disabled (vs. nondisabled; M_{disability_present}=3.48, M_{disability_absent}=3.69; F(1,502)=7.31, p=.007; \eta^2=.014), a pattern we replicate with a different domain and products in Study 2b.

In study 3 in a mixed design we show when a video target had a disability compared with when she did not, inferred interest in the utilitarian products was higher (M_{disability_present}=4.93, M_{disability_absent}=3.15; t(600)=-10.15; p<.0001) and expected interest in hedonic products was lower (M_{disability_present}=4.56, M_{disability_absent}=5.35; t(600)=5.65; p<.0001), and provide support for our proposed mediator.

**Summary of Findings**

We show that when nondisabled consumers learn of an individual’s disability, even if through just a label and regardless of the nature of the disability, they develop a perpetual perception of needing to be “fixed” in response to disability cues. In turn, we show that these perpetual needing-to-be-fixed perceptions may actually lead nondisabled consumers to unintentionally contribute to further disabling individuals by limiting and stereotyping their daily preferences. We demonstrate this inferred preference limitation across multiple consumption domains (e.g., utilitarian vs. hedonic product preference, gift-giving), and highlight that these effects occur due to any disability cue, regardless of how the disability is specifically manifested. We also provide process evidence. Together, these studies respond to the call for marketers to meaningfully address social issues by shedding a much-needed light on disability perceptions and their consequences.
Statement of Key Contributions

Together, this research supports the notion that nondisabled consumers view cues of disability as indicators of needing to be “fixed”, consistent with the medical model, and this affects expected preferences. As a result, nondisabled consumers may unintentionally paternalistically limit disabled people, thereby cordonning off the well-being humans naturally seek. We contribute to the limited research examining how disabled consumers are perceived and, ultimately, stereotyped. Through this research, we aim to foster a dialogue between researchers, policy makers, and consumers regarding the needs and wants of a prevalent, but frequently ignored, segment. Theoretically, we demonstrate the unique manifestations of the medical model of disability in the consumer context, and highlight how the examination of consumers with disabilities qualifies established findings in consumer research. Finally, this research contributes more broadly to increasing much-needed disability visibility (Wong 2020a), a lens which has broad implications since an eye for accessibility often leads to meaningful social change and improved equity for other groups, too (for a collection of perspectives on this, see Ford Foundation 2020). As such, we hope that this work not only stimulates future research in this area, but also prompts us all to meaningfully consider disability and accessibility in our daily lives.

References are available upon request.
SINGLE PARENTS’ PERCEIVED INFORMATION SENSITIVITY AND WILLINGNESS TO SHARE THEIR OWN AND CHILD’S DATA: IMPLICATIONS FOR SHARENTING AND PRIVACY

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Keywords: Children, Privacy, Sharenting, Social Media

Description: This study surveyed more than 200 single parents of young children to assess the perceived information sensitivity of their own and their child’s data and subsequent willingness to share with social media marketers.

EXTENDED ABSTRACT

Research Question

Prior research has asked adults about their sensitivity and willingness to share their own personally identifiable information (PII) (Milne et al. 2017; Markos, Labrecque and Milne 2018), but no study has investigated adults as parents evaluating the sensitivity of and willingness to share their child’s PII with social media marketers (i.e., sharenting). Fox and Hoy (2019) call for research “to explore how … single parents…may experience vulnerability and how it relates to protecting children’s online privacy” (p. 429).

We ask:
How do single parents evaluate their own and their children’s information sensitivity (RQ1) and willingness to share with social media marketers (RQ2)?

We hypothesize that compared to single fathers, single mothers will:
H1: have a higher level of perceived sensitivity related to their own information a) in general and b) for individual information items.
H2: have a higher level of perceived sensitivity related to their child’s information a) in general and b) for individual information items.
H3: be less willing to share their own information with social media marketers a) in general and b) for individual information items.
H4: be less willing to share their child’s information with social media marketers a) in general and b) for individual information items.

Method and Data

We used a nonstudent panel on Amazon Mechanical Turk in Spring 2020 to address our research questions and hypotheses. Participants evaluated 22 information items for themselves and 20
items for their child(ren) in terms of perceived sensitivity and willingness to share with social media marketers. Two items did not apply to children. These information types were based on the criteria of children’s PII according to COPPA (Federal Trade Commission 2013) and prior research (Milne et al. 2017; Markos, Labrecque and Milne 2018; Fox and Hoy 2019).

Participants answered the following question for each information item using 10-point Likert scales with endpoints not sensitive (1) and very sensitive (10): How sensitive would you consider the following information about yourself (about your child)? For willingness to share with social media marketers, they answered the following question for each information item using 10-point Likert scales with endpoints not at all willing (1) and very willing (10): How willing would you be to provide the following information about yourself (about your child) to marketers on social media?

Summary of Findings

Parents evaluated the following as highly sensitive child data: video, photograph, date of birth and audio file of voice – all commonly “sharented” items on social media. They expressed noticeable unwillingness to share, the child’s date of birth, photograph, video or audio file of their child. However, this information is, in fact, frequently shared with social media marketers (Fox and Hoy 2019).

There were no significant differences between single mothers and fathers for information sensitivity for their own or their child’s information in general (H1a and H2a). Single mothers, compared to single fathers, rated their home address, persistent identifiers, video, geolocation, and pregnancy ultrasound as more sensitive (H1b). Surprisingly, there were no significant differences between single mothers and single fathers with respect to the information sensitivity of their child’s data (H2b).

There were few significant differences between single mothers and fathers. Regarding willingness to share their own information, single mothers were more willing than single fathers to provide their date of birth, which is opposite the predicted direction. For their children’s data, single mothers were less willing than single fathers to share their child’s persistent identifier or email address. In sum, there was limited support for H3 and H4.

Statement of Key Contributions

Children’s information is inherently sensitive and the Children’s Online Privacy Act (COPPA) is the current regulation in place to protect their online privacy. However, social media marketer engagement tactics that encourage sharenting are not addressed by COPPA (Fox and Hoy 2019). In order to enhance children’s online privacy protection, public policy makers need deeper understanding of how parents respond to social media marketers’ requests to share their children’s information.

No prior study has examined single parents with respect to privacy nor assessed perceived information sensitivity of their children’s data or willingness to share it with social media marketers. We find a disconnect between what single parents report regarding the sensitivity of their child’s data and willingness to share versus actual behavior.
Although the literature suggested that single mothers, compared to single fathers, may evaluate their child’s information as more sensitive and be less willing to share with social media marketers, we found that when it came to their children’s information, single mothers and fathers held comparable views. The lack of gender differences in this context suggests that their consumer vulnerability may be based on parenting status, but future research should continue to study variables that may affect this underexplored issue.
SOCIAL MEDIA ANALYSIS APPLIED TO CHILDHOOD VACCINES IN ITALY:
INSIGHTS FOR REDEFINING THE INHS COMMUNICATION STRATEGIES

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Keywords: Vaccines, Social Marketing, Healthcare Marketing, Italy, Healthcare Communication

Description: This research analyses the online contents and sentiments on childhood vaccinations, contributing to the body of knowledge on the role of social media in healthcare marketing strategies and practices.

ABSTRACT

Italy is a country that provides an increasing number of vaccines free-of-charge to individuals, still, anti-vaccination movements are increasingly active. Since social networks represent today the most popular marketplace for ideas about health topics, the literature has started to study vaccine hesitancy online.

Our research objectives are: (1) To study the sentiment regarding childhood vaccines (sentiment analysis), classifying contents into three sentiment groups: positive, neutral, and negative; (2) to point out the key features of social media communication dynamics on vaccines.

Online conversations about vaccines in three Italian Regions (Veneto, Trentino and Alto Adige) in 2019 (in order to avoid bias from the COVID pandemics) are gathered and analysed, considering 421 web articles, 6698 Facebook comments and 931 tweets.

Our results suggest that Facebook is an effective platform for promoting public discussion and interactions about vaccines. An interesting relationship between the tone of voice of the original post, and the sentiment of the related users’ contents was also found. Furthermore, a relevant impact of personal storytelling on the level of engagement was registered. Further research, based on these insights, could now be developed on the anti-Covid 19 vaccination campaign now in progress, which was started at the end of 2020.

Social media are studied in many different disciplines from different perspectives, as computing science which is relevant in understanding and analysing large sets of shared content and their geo-spatial and temporal details. The theoretical background of our study is based on the literature around three main topics: (1) social media use for online discussion through text posts (specifically on Facebook and Twitter), (2) the more general context of vaccines evolution in Italy and (3) communication strategies in vaccinations.

By exploring ideas and sentiments of users online, this work, allows to understand the relevance of the different perspectives on vaccinations (positive, neutral and negative) and the way opinions are expressed. Doing this, the healthcare authorities will obtain useful insights on (a)
which online platform to use in order to engage people and (2) how to better communicate to people exploiting social media in order to reinforce the diffusion of a pro-vax perspective.

1 BACKGROUND: MANDATORY VACCINES IN THE PRE-COVID ERA

Despite the overwhelming evidences that vaccination programs are beneficial public health measures, vaccines are still perceived as unsafe and unnecessary by a growing share of the population (Alvira 2019). According to the World Health Organization (WHO) vaccine hesitancy "threatens to reverse progress made in tackling vaccine-preventable diseases" (Rada 2019), is among the top 2019 threats to global health. SAGE Immunization working group defined the phenomenon of vaccine hesitancy as “a delay in acceptance or refusal of vaccination despite availability of vaccination services” (2014). As hesitancy undermines vaccine demand, its negative impact on the success of immunization programs worldwide calls for a systematic monitoring of the problem.

The generalized European decline in vaccination rates has been partially ascribed to a decrease of public confidence towards immunization strategies (Larson et al. 2011). The level of trust towards healthcare systems is key for public health, as it is found to enhance patients’ willingness to seek care (Russel 2005) and comply with treatments (Hall et al. 2001). Achieving and maintaining high public trust in immunization programmes is fundamental to guarantee sustainable vaccines coverage rates.

In order to regain societal trust in the vaccines system, Black & Rappuoli (2010) call for a “credible, consistent and unified message developed from both private and public sectors that directly addresses public concerns”.

1.1 Mandatory vaccinations in Italy

Italy is a country that provides universal access to care and treatment, including the provision of an increasing number of vaccines offered free-of-charge to individuals according to the national vaccination schedule approved by the central government (Pezzotti et al. 2018). Up to the year 2016, only four vaccines were mandatory by law for all new-borns (anti-polio, tetanus, diphtheria, and hepatitis B). However, from 2016 to 2018, the political view shifted in favour of more mandatory provisions against falling vaccination coverage rates and heated public health risks. This political commitment translated into the so-called “Lorenzin Decree”, from the name of the then Italian Health Minister Beatrice Lorenzin, which became law in July 2017 (Italian Health Ministry 2017). The new National Vaccine Prevention Plan (PNPV) 2017-2019 extended for children 0–16 years old the free and mandatory vaccinations from four to ten, to include measles, mumps, rubella, pertussis, haemophilus influenzae type b, pneumococcus, and meningococcus C, and introduced fines and admission bans for unvaccinated children at school. The National Plan successfully rose coverage rates, but at the same time ignited the public debate on the ethical and social aspects of the decree related to the implied limit to free access to education. In order to study the mandatory vaccination policy’s success, Costantino et al. (2020) considered the case of the Sicily region showing that, after law 119/2017 was introduced, accesses to the LHU’s vaccination services remarkably increased.

1.2 Communication strategies about childhood vaccinations

Yaqub et al (2014) highlight how healthcare providers’ recommendation is among the most effective determinants of parents’ decision to vaccinate their children. The credibility of family physicians and their trust-rooted relationship with patients puts them in a privileged position to support parents in understanding and choosing vaccination for themselves and their children.
Healthcare providers should deliver univocal messages and information to individuals, yet 23% of Italian parents surveyed in 2017 (Giambi et al. 2018) lamented that they consulted more than one physician about compulsory vaccination and received discordant opinions, and that this confused them. Close relatives and friends with children can be relevant referents for vaccination decisions as well. However, as the literature highlights (Quadri-Sheriff et al. 2012), although parents listen to advice, this does not always turn into a motivational push to comply, as parents’ own beliefs tend to prevail. In this sense, the “private self” and the parental role tend to prevail over group norms or advice. The scholars notice that despite herd immunity being a relevant benefit for the community, as it produces positive externalities, the decision to vaccinate one’s child is felt as personal. Especially vaccine-sceptical parents do not perceive an obligation to put their children’s health at perceived risk for the sake of the common good. Brown et al. (2010) find similar results: for anti-vaccine parents, the herd immunity call is undesirable as it conflicts with their objective to protect their child, whilst for pro-vaccine parents, protecting the community through the vaccination of their child is a desirable side benefit, but not a driver of uptake.

1.3 Research insights on the role of social media in the discussions about vaccines
As social networks represent today the most commonly used marketplace for ideas, including viewpoints about health topics, the literature has been studying vaccine hesitancy also on these platforms. In this paragraph the most relevant research about discussions on social media related with vaccines are summarised.

The psychological factors
Hornsey et al. (2018) explore individuals’ antivaccination sentiments in relation to a number of psychological factors. They find that being high in conspiratorial thinking and/or low in tolerance for impingement of personal freedom are predictive factors of anti-vaccination attitudes. Moreover, they highlight that anti-vaccination sentiments online are common among individuals who feel disgust towards blood and needles, which provides a clear takeaway for the design of communication campaigns. The authors further recognize an issue of confirmation bias: online users select information adhering to their pre-existing system of beliefs. When presented with evidence opposing their thoughts, vaccine sceptical people tend to ignore such dissenting information. This promotes the polarization of the debate into “echo-chambers”, meaning clusters of like-minded individuals who keep advancing ideas they all share in the ingroup, while keeping little contact or debate with outer groups. Furthermore, Hornsey et al. (2018) find that individuals’ level of trait reactance is predictive of their tendency to oppose vaccination. Trait reactance is a human predisposition to perceive situations as threats to one’s personal freedom, and act in reaction to this. Specifically, there can be instances of negative reactance towards vaccines and/or scientific authorities when people perceive compulsory or highly recommended vaccination as a limitation of their freedom of choice; it can go as far as to make the subject engage in the behaviour perceived as not being free anymore, that is, to postpone or avoid vaccination. In fact, individuals with higher trait reactance are found to be more likely to refuse or delay vaccinations.

The online perception of health messages about immunization
Another relevant research topic explored on social media is how healthcare messages are perceived by online persons in the context of immunization. Valence framing refers to how attitudes and behaviours can change as a result of how differently the same information is represented. For instance, gain-framed messages highlight the benefits of adopting a given behaviour, whereas loss-framed messages emphasize the disadvantages from not adopting it. Lee & Cho (2017) and Gerend & Shepherd (2007) study the effects of message framing on social media in relation to the HPV vaccine. The former authors realize that loss-framed contents generated more interaction from the public and increase the perception of the disease’s
severity, the latter reveal that loss-framed message lead to relatively greater HPV vaccination acceptance.

The discussed topics and the adopted narrative styles

Fadda et al. (2015) analyse Italian online debates on paediatric vaccines to find which arguments are shared by users. They find a minor prevalence of negative (52.1%) vs. positive arguments, and that the most common anti-vaccine topics concern side effects (61.5%), efficacy (17.7%) and risks vs. benefits (7.5%). Moreover, vaccine sceptical users are the most active and present in the online debate in terms of posting. However, the authors also highlight the paucity of scientifically based contents; in fact, the most mentioned sources are users’ own experience (48.1%) and media (17.5%), while healthcare professionals are third (15.1%) and followed by word of mouth (13.5%). Their findings confirm that social media platforms tend to be dominated by personal narratives vs. scientific contents.

Further on the point on personal narratives, the work by Guidry et al. (2015) explores how vaccines and vaccination are portrayed on Pinterest, a popular social network. They analyse “pins” (images) posted on the platform and find a difference in the typology of information shared between pro- and anti-vaccine users. Anti-vaccine images primarily consist of narratives, while vaccine supporting contents are mainly statistical representations.

2 THE RESEARCH

2.1 Objectives and Methodology

Our research identifies and analyses online conversations about vaccines with the following specific objectives:

- To study the sentiment regarding "vaccines" (sentiment analysis), classifying contents into three sentiment groups: positive, neutral, and negative;
- To point out the key features of social media communication dynamics on vaccines.

The considered period is from January 1st to December 31st, 2019. This period was selected in order to avoid any bias from the COVID pandemics which spread in Italy in 2020.

Since 1979, Italian Healthcare has been managed under a National Health Service scheme, derived from the UK universal coverage model (NHS), where activities and services are planned and offered by each Region. For this reason, the research followed a geographical sampling, and the following Italian regions were considered: Veneto, Trentino, and Alto Adige. These areas, all located in the Northeast of Italy, have been chosen since they are characterised by comparable economic and socio-demographic features. Moreover, they result to be particularly relevant in terms of vaccination coverage, with Veneto and Trentino being among the top areas over the national average while Alto Adige is heavily under the national average (see table 1).

Table 1: Average vaccine coverage levels (24 months of age childhood immunization coverage rates for PNPV’s mandatory vaccinations, year 2019)

<table>
<thead>
<tr>
<th>GEOGRAPHIC AREA</th>
<th>MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>VENETO</td>
<td>94.97%</td>
</tr>
<tr>
<td>TRENTINO</td>
<td>94.68%</td>
</tr>
<tr>
<td>ALTO ADIGE</td>
<td>78.66%</td>
</tr>
<tr>
<td>ITALY</td>
<td>94.27%</td>
</tr>
</tbody>
</table>
In order to achieve the research objectives, the main sources of data used are web users’ comments and reactions (likes and sharing) to newspaper articles on vaccines published: (a) on the online websites of the newspapers, (b) on the official newspapers’ pages on Facebook and (c) on the official newspapers’ profiles on Twitter. These two platforms have been selected because they are the favourite social windows used by newspapers while Instagram adoption to this purpose is very limited. Furthermore, Facebook easily allows to access public pages and profiles and Twitter allows to analyze its posts through the use of queries. Special attention is paid to the mapping of:

- moods revealed in online conversations;
- content of online conversations;
- relational dynamics in the online conversations.

2.2 Data collection and analysis

Data are collected and analysed through a platform called #reputAction, which has been used to identify the sentiment of social and web contents about vaccines in Veneto, Trentino, and Alto Adige Italian regions. The platform collects and attributes a sentiment to all the Facebook comments, web articles, and twitter mentions which speak about “vaccines” (and the likes) in the chosen geographical areas and timeframe. Through #reputAction, the following data were gathered to perform the analysis:

- 421 web articles posted on the online websites of the local newspapers;
- 6698 Facebook comments relative to 147 articles posted by the newspapers of Veneto, Trentino, and Alto Adige on their social media pages;
- 931 tweets mentioning the “vaccination” topic and at least one of the regions or cities of the considered regions.

#reputAction is a tool that integrates Big Data, Business Intelligence and semantic analysis into a single application that provides a clear picture of the Sentiment around topics or brands. Through the use of queries, the application collects mentions from websites, blogs, online newspapers and social networks. All the mentions are automatically organized, categorized, and analyzed through different parameters.

To evaluate the social reactions on Facebook when the topic of vaccines is touched upon, all the users’ comments below articles about vaccines, published by local newspapers’ pages, were collected and analyzed. To do so, the authors selected ex ante all the existing local newspapers with an open official Facebook page. Once the list of newspapers’ pages was available, the #reputAction’s algorithm searched on these pages and extracted all the posts speaking about vaccines. Finally, users’ comments to the selected articles were uploaded on #reputAction, platform where it was possible to aggregate them and to attribute a sentiment.

On Twitter, the measuring of sentiment about vaccines, and the identification of the influencers in the considered areas, have been done through the elaboration of queries, in order to permit the extraction of mentions on Twitter that occurs trough API with the tool #reputAction. To identify tweets about vaccines in the given regions, the query was built including various keywords on the topic (e.g. vaccination, vaccine, vaccines. etc.) and the names of the region or cities of interest (e.g. Trentino, Trento, Venezia, etc.).

To assess and compare the presence of the topic on newspapers’ webpages in the areas, all the local online newspapers have been searched manually, and then uploaded on #reputAction. On the platform it was possible to count the articles and compare the impact of the topic in the different newspapers and geographic areas.
To the aim of this research, all the datapoints gathered were categorized, and analyzed using the following three parameters:

1. **Sentiment**: this metric defines if the topic of vaccine is mentioned in a positive, neutral, or negative way, on a scale out of 3: Positive, Neutral, Negative. The sentiment of every mention is attributed first with an automatic semantic analysis, that gives a temporary sentiment, based on keywords within the text, and afterwards validated through a manual review;

2. **Engagement**: this metric defines the number of interactions with the mention. It is calculated as the sum of social reactions, comments and shares;

3. **Impact**: this indicator gives to the mentions a value from 1 to 5 stars, to understand the potential power of a mention. Higher values signal higher probability that the given mention had greater visibility. Impact is calculated through an algorithm that considers the position of the website in the Alexa rank (a rank created by Amazon that synthesizes the visibility performance of websites all over the world), the position of the articles within the website, and the engagement (likes, comments, shares on Facebook).

### 3. MAIN INSIGHTS

#### 3.1 Social Media Platforms

Our analysis shows that Facebook is the most effective platform for promoting discussion and interactions about vaccines. Online newspapers websites are not able to create buzz, unless the same articles about vaccines are posted on the newspapers’ official Facebook pages (Table 2). Twitter as well is found to have very limited impact on social media debates on vaccines. In fact, on this social media, the discussion tends to be limited to the political sphere, with poor outcome in terms of buzz and sentiment (Table 3).

**Table 2: Online newspapers’ articles posted on Facebook are able to generate more buzz (user comments)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Articles published on newspapers’ websites</th>
<th>Comments on website articles</th>
<th>Average # comments per website article</th>
<th>Articles posted on newspapers’ Facebook pages</th>
<th>Comments on Facebook articles</th>
<th>Average # comments per Facebook article</th>
</tr>
</thead>
<tbody>
<tr>
<td>All areas</td>
<td>421</td>
<td>50</td>
<td>0.2</td>
<td>147</td>
<td>6,698</td>
<td>46</td>
</tr>
</tbody>
</table>

**Table 3: Newspapers’ tweets about vaccines generate low average engagement**

<table>
<thead>
<tr>
<th>Region</th>
<th>Total # tweets tweeted by local newspapers’ profiles</th>
<th>Total engagement generated by local newspapers’ profiles</th>
<th>Total # Followers of local newspapers’ profiles</th>
<th>Average engagement per tweet</th>
<th>Engagement per tweet standardized by # followers (x 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trentino</td>
<td>137</td>
<td>1,342</td>
<td>23,276</td>
<td>9.8</td>
<td>0.41</td>
</tr>
</tbody>
</table>
### 3.2 Online sentiment about vaccines

Despite some degree of polarization into very positive and very negative sentiments, a relevant amount of neutral posts and comments can be found on Facebook, especially in the most pro-vaccine regions (Veneto and Trentino). This evidence (shown in figure 1) is important, as it shows that a number of undecided individuals exists, and therefore it should represent the main target for vaccination communication campaigns on Facebook. Only in Alto Adige (where a greater reluctancy to vaccines has been traditionally registered) this layer of neutral sentiments is slightly more limited.

The sentiment on Twitter is very different, as shown in figure 2, we find higher levels of positive sentiment, a reduced volume of neutral posts, and a very limited amount of negative sentiments (especially in Alto Adige, where vaccine opponents seem not to choose Twitter as their favourite platform). This evidence clearly limits the role of Twitter as a channel for vaccines-related communications.

#### Figure 1: Sentiment on Facebook

<table>
<thead>
<tr>
<th>Region</th>
<th>Positive</th>
<th>Neutral</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trentino</td>
<td>29.3%</td>
<td>46.1%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Alto Adige</td>
<td>36.0%</td>
<td>44.3%</td>
<td>19.6%</td>
</tr>
<tr>
<td>Veneto</td>
<td>30.3%</td>
<td>51.8%</td>
<td>18.0%</td>
</tr>
</tbody>
</table>
3.3 Tone of voice
A relationship between the tone of voice of the original post, and the sentiment of the related users’ contents (comments, reactions) was found on Facebook. A positive and reassuring tone of voice is usually linked to more positive sentiments and reactions towards vaccines, if compared with alarmist statements. A valid example is shown in Figure 3, which offers a comparison between the results in terms of users’ reactions to the same article published with different titles and different “tone of voice”. On the left, the benefits of vaccines are mentioned in the post with an optimistic mood (“one thousand less infections thanks to vaccines”); on the right, the risks of vaccine refusal are emphasised (“No to vaccines, one thousand more diseases”). The optimistic perspective achieves better results in terms of impact as well as sentiment.

3.4 Narrative techniques
An impact of personal storytelling on the level of engagement was registered on Facebook. This technique is probably the most effective strategy adopted by anti-vaccinationists in order to generate negative buzz on vaccines and high engagement. On the opposite, supporters of vaccines mostly adopt a merely scientific narrative approach in order to support their opinions:
on one side, their credibility is augmented by this choice, but the drawback is the more limited impact and engagement generated by their arguments (see figure 4).

**Figure 4: A comparison between narrative techniques**

![Image of narrative techniques comparison](image)

Comment 1: my children are adults now... in the past there used to be none of these vaccines. They got all the infectious diseases: Measles, varicella, pertussis, fifth and sixth diseases. I used to keep them at home for 15 days under doctors’ advice. And they are healthy and both parents. All these vaccines they force us to do now, are just business for pharma companies and doctors. Then everybody behaves consequently.

Comment 2: Meningococci C vaccine’s cost: 73 euros. Cost of meningococci as a disease: direct costs: in case of recovery in IC 5000€ per day, in case of ordinary hospitalization 8000€ per day; indirect costs: costs to be borne lifelong if permanent problems arise (30% of the cases). Citizens choose. Regards, a doctor.

3.5 **Key topics**

On Facebook, issues related to the “school” topic were found to be the most debated, and the most effective in generating positive sentiments towards vaccines (Table 4). In particular, pro-vax individuals are more engaged by discussions concerning the exclusion of unvaccinated children from infant schooling services mandated by the law. As can be seen from the sentiment distribution (Figure 5), pro-vax parents, who arguably do vaccinate their children, seem not to dislike news on school bans for unvaccinated children.

Also the issue of herd immunity (which occurs when a viral disease cannot spread as it keeps encountering people who are protected against it) and the related public value of vaccines represent key topics in term of impact but are usually associated with a negative sentiment and are dominant in Alto Adige, the region with the worst vaccination records. This suggests that the topic of public value of vaccination for the society might not be the best driver to reinforce individuals’ propensity towards vaccines.

**Table 4: Distribution of Facebook comments by topic (all regions)**

<table>
<thead>
<tr>
<th>Sentiment</th>
<th>School</th>
<th>Politics (Racism)</th>
<th>Influencers</th>
<th>Television</th>
<th>Herd Immunity</th>
<th>Vaccines Benefits</th>
<th>Politics (Other)</th>
<th>Tuits</th>
<th>Anti-vax Events</th>
<th>Vaccination Campaigns</th>
<th>No-vax Propaganda</th>
<th>Measles</th>
<th>Unvaccinated people</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>809</td>
<td>256</td>
<td>231</td>
<td>199</td>
<td>196</td>
<td>125</td>
<td>72</td>
<td>28</td>
<td>40</td>
<td>32</td>
<td>15</td>
<td>19</td>
<td>21</td>
<td>129</td>
</tr>
<tr>
<td>Total</td>
<td>2681</td>
<td>751</td>
<td>740</td>
<td>682</td>
<td>630</td>
<td>382</td>
<td>289</td>
<td>232</td>
<td>274</td>
<td>130</td>
<td>130</td>
<td>82</td>
<td>65</td>
<td>668</td>
</tr>
</tbody>
</table>

Note: School is the most debated topic on Facebook

**Figure 5: Example of users’ comments to “school ban” topic and distribution of sentiments**

![Image of Facebook comments distribution](image)
Translation to figure 5:

Post 1: “Vaccines, 102 exclusion mails addressed to families of children up to 6 years old”

Post 2: “Vaccines, in Alto Adige 470 exclusion mails sent to families of children banned from kindergarten”

Post 3: “Vaccines, starting from tomorrow school can be accessed only with a vaccination certificate”

4 CONCLUSIONS
The debate on immunization seems to reflect a more general shift in the social system in relation to healthcare. Vaccination used to be a medical practice, but it has become a topic of public domain in the recent decades. Scientific information used to hold an authoritative appeal among citizens, who entrusted the National Healthcare System with the mandate to make public health and common good decisions. In the modern paradigm of healthcare, scientific expertise appears to be ambiguous and questionable. Activists are able to disseminate their ideas also because the balance of power has moved from health officials to common people, who look for answers to their doubts relying on non-traditional sources, such as social media. On the web, expertise and legitimacy are redefined while scientific facts are challenged. Public health communicators should be aware of these dynamics, as a meaningful vaccine campaign should begin from understanding what and how individuals discuss and communicate about vaccines. Based on these assumptions, Health Authorities are facing new challenges for defining an effective communication strategy about vaccines on Facebook: tone of voice, main topics and narrative style should be revised in order to increase the impact of campaigns and positively affect the sentiment on vaccinations. Further research, based on these insights, could now be developed on the anti-Covid 19 vaccination campaign now in progress, which has immediately become the new “trending topic”. Moreover, the analysis could be enriched by the investigation of other social media.

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SOCIETAL BENEFITS: A BRAND EQUITY VIEW ON CSR

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Keywords: sustainability, corporate social responsibility, brand equity, branding

Description: This work posits that CSR claims can generate societal associations (i.e., associations that communicate a brand’s efforts to meet societal needs), which influence consumer response to the brand in addition to the brand’s functional benefits.

EXTENDED ABSTRACT

Research Question

The current work draws from the customer-based brand equity framework (Keller 1993) to examine three aspects of the relationship between CSR claims and consumer choice. The customer-based brand equity framework highlights the importance of brand benefit associations given the value they create for consumers. First, we investigate the role of CSR claims in offering value in terms of socially- or environmentally-focused brand associations, or societal benefits, and their effect on consumer choice of socially responsible products. Second, we assess whether CSR claims are more likely to increase choice through societal benefits, for claims linked to a brand’s business practices or its philanthropic efforts. Research suggests that these two types of CSR claims are distinct as one targets the brand’s primary stakeholders, while the other targets secondary stakeholders. Third, we focus on the boundary conditions of centrality (business process CSR claims) and fit (philanthropic CSR claims) to explain when societal benefits are likely to exert the most substantial positive impact on consumer choice. In sum, we examine the mediating role of societal benefits and the moderating roles of message type, centrality, and fit to provide further clarity on the relationship between CSR and consumer choice.

Method And Data

This empirical assessment comprises a large-scale discrete choice experiment (484 Brazilian participants) across four different types of soft drink brands and four types of CSR messages. First, respondents participated in the online survey and were randomly assigned to evaluate one of five brands. In the four CSR claim conditions, we showed participants social media messages describing a brand’s efforts in water conservation, environmentally friendly actions, employment access, and healthy living. In the control condition, we showed participants non-CSR promotional social media messages. Before and after presenting the social media messages, we measured participants’ attitudes and perceptions of functional and societal benefits. We used
these measures to assess the effect of the social media messages on the participants’ baseline perceptions of the brands’ benefits. We then conducted a discrete choice conjoint analysis to measure consumer choice of products with CSR attributes, our dependent variable. The respondents saw nine choice sets comprising three different attribute level combinations as well as an option stating, “I would not select any of these choices.” To determine the utility estimates, we used multinomial logit (MNL) model specification.

Summary of Findings

We tested a model of the effect of CSR claims on consumer choice with societal benefits and functional benefits as parallel mediators. The results indicate that CSR claims significantly influenced societal benefits. Whereas the results demonstrated no mediation effect of functional benefits, the mediation effect of societal benefits was significant. The results also show that societal benefits mediate the relationship between business process CSR claims and choice of products with business process CSR attributes. In contrast, societal benefits do not mediate the relationship between philanthropic CSR claims and choice of products with philanthropic CSR attributes. We find that the effect of business process CSR claims on choice likelihood via societal benefits is greater for business process CSR claims that are less central to the product’s composition. We find that societal benefits mediate the relationship between philanthropic CSR claims and consumer choice of products with corresponding CSR attributes when the fit between the brand and message is lower.

Statement of Key Contributions

This work demonstrates that brands can connect to consumers by meeting not only their personal needs but also societal needs. While brands have focused much of their brand equity-building efforts on appealing to consumers’ self-interest, this work shows that a brand’s relationships with society are of concern to consumers as well.

Scholars have suggested that understanding the complexities of CSR requires a more fine-grained approach to studying CSR as a construct. The present study of CSR differentiates between the downstream effects of business process CSR and philanthropic CSR on consumer response. Such an approach can help both academics and brand managers understand why, despite the growing demand for CSR, consumer response to brands that engage in CSR is not always positive.

Finally, focusing on the Brazilian context offers practical and theoretical advantages. Recent surveys show that consumers in “developing” countries are among the most motivated and committed when it comes to CSR expectations and the purchase of socially responsible products. This work offers further evidence of the importance of CSR to consumers in the developing context. Furthermore, examining the effects of CSR in broader contexts extends the external validity and confidence in these phenomena.
“References are available upon request.”
Sustainability Marketing Education, Morality, and Students’ Intentions towards Sustainable Consumption

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Keywords: Sustainability marketing education, Morality, Sustainable consumption, TPB.

Description: Based on an extended theory of planned behaviour model, this study examines the influence of sustainability marketing education, morality, attitude, subjective norms, and perceived behavioural control on sustainable consumption intention among university students in a developing country, Nigeria.

EXTENDED ABSTRACT

Research Question

Increasingly, attention has focused on how to make the planet safer, healthier, and more prosperous by tackling the growing environmental, economic, and social challenges facing the world through sustainable human behaviour. Several initiatives have been deployed by the United Nations to achieve sustainable development, including the sustainable development goals
(SDGs) of 2015. SDGs 4 and 12 specifically expose the role of consumers (through their consumption decisions) and education (knowledge) in achieving sustainable development (UN, 2015), and marketing education and moral ethics have been mentioned as drivers of sustainable consumption (Sachdera et al., 2016; Harsa et al., 2016; Watkins et al., 2016; Borin & Metcalf, 2010; Wilhelm et al., 2015). However, there is paucity of empirical literature on the relationship between sustainability-oriented marketing education (SME), morality, and sustainable consumption intention, and none exists in the context of Nigeria – an emerging economy. The present study attempts to extend the theory of planned behaviour (TPB) (by integrating SME and morality) to unravel the drivers of sustainable consumption intention among university students in the country.

**Method and Data**

The study is quantitative in nature, and is based on an online survey of management science students (final year and graduate students) of three purposively chosen universities in Nigeria who participated in a seminar on sustainability marketing organized by the apex marketing body in Nigeria – National Institute of Marketing of Nigeria. We administered the likert five-point structured questionnaire of 24 items after experts’ assessment for face and content validity, and pretest on a sample of 25 students. In all, 212 students participated in the survey in return for course credit. Established scales measuring attitude, subjective norms, perceived behavioural control (PBC), morality, and sustainable consumption intention were adapted (Braga et al., 2019; Chaudhary & Bisai, 2018; Onel, 2016; Balderjahn et al., 2013; Forsyth, 1980). SME was conceptualized based on insights from literature review. The Partial least square structural equation modeling - Ringle et al.’s (2015) Smart PLS 3.2.6 - was used to test the proposed study model.
Summary of Findings

In this study, we show that sustainability-oriented marketing education can influence morality, attitude, subjective norms, PBC, and sustainable consumption positively and significantly. Morality has positive and significant influence on PBC, but has positive and non-significant influence on attitude, subjective norms, and sustainable consumption intention. Of the original TPB constructs, only attitude showed significant and positive relationship with sustainable consumption intention, while subjective norms and PBC showed positive but non-significant influence. The proposed model explains 18.7% variance in sustainable consumption intention among the students ($R^2 = 0.187$), and SME has greater influence on sustainable consumption intention, followed by attitude, morality, PBC and SNs.

Key Contributions

The issue of sustainability has occupied global attention in the last decade, and increasing efforts are being made to encourage humans towards more sustainable behaviour. As United Nations member States grapple with sustainability issues as outlined in the SDGs, a number of stakeholders have been identified that can fast-track the attainment of a sustainable future. Consumers, through their consumption pattern and universities through their approach to teaching and learning remain key stakeholders. Yet, not much is known currently of how sustainability-oriented marketing education that builds moral ethics can influence sustainable consumption intention (Watking et al., 2016; Agu & Etuk, 2020). The need for sustainability-oriented studies focusing on developing countries has been emphasized (Sachdera et al., 2016). Therefore, we contribute to marketing theory, practice, and public policy by proposing directions for effective sustainability-oriented marketing education that can spur sustainable consumption intention, especially in developing countries. Theoretically, the present study extends the TPB
model by suggesting the integration of SME and morality in understanding drivers of sustainable consumption intention among students. Policy wise, we show that giving “full course status” to SME at the undergraduate level, integrating morality, and strengthening aspects of attitude towards sustainability, SNs and PBC in general marketing education will prove effective strategy in achieving a sustainable future.

References are available upon request.
THE COMPASSIONATE CONSUMER: COMPASSION AND BEHAVIORS IN THE MARKETPLACE

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Keywords: compassion, sustainable consumption, consumer ethics, corporate social responsibility

Description: This research seeks to explore the role of compassion in consumption and to understand whether it might be a more fundamental motivation for a variety of consumption behaviors.

EXTENDED ABSTRACT

Research Question – 200 Words

While numerous frameworks exist to describe ethical behavior, many exhibit some form of compassion or consideration of others. Thus, we hypothesize that consumer who are higher in compassion will be more likely to exhibit ethical behaviors in the marketplace (H₁).

Likewise, compassion has been theoretically linked with environmentally sustainable consumption. Since environmental problems have a human toll, it is plausible that compassion will be positively related to environmentally conscious purchasing (H₂).

Researchers have shown that compassion can influence how consumers relate to brands and marketing communications, and it is reasonable that consumers with compassion might have a preference for brands and companies with a reputation for Corporate Social Responsibility (CSR), as exhibited in moral/ethical practices (H₃A), discretionary practices (H₃B), and relational practices (H₃C).

Miller et al. (2012) posit a relationship between compassion and a motivation to alleviate the suffering of others that results in the formation of social businesses, which are designed to use market mechanisms to address social problems. The same logic could be used to predict that...
compassion would cause consumers to seek out products that help alleviate - or prevent - the suffering of those involved in the supply chain, such as Fair Trade products (H₄).

**Method And Data**

To assess these hypotheses, a general US population was sought. Specifically, an online survey using a Qualtrics panel of 403 respondents was used. Respondents were profiled to be similar to US demographics in terms of gender, age, education, and income.

Compassion was measured using a 5-item scale (Hwang et al. 2008). The original consumer ethics scale developed by Vitell and Muncy (1992) was used, but four items were determined to be outdated and not included (e.g. Joining a CD club just to get some free CD’s with no intention of buying). The fourth factor in the ecologically conscious consumer behavior scale (Roberts and Bacon 1997) was used to measure ecologically conscious consumer buying (ECCB). This factor of the scale includes 12 items and measures the degree to which consumers attempt to make ecologically correct decisions about the products they buy. The 11-item scale for CSR purchasing is comprised of three categories: moral/ethical practices (5-items), discretionary practices (4-items), and relational practices (2-items) (David et al. 2005).

To measure the propensity to purchase fair trade items, a six-item scale was developed that focused on the importance and inclination to purchase fair trade products.

**Summary of Findings**

To test how compassion influences consumers in the marketplace, structural equation modeling was utilized in Lisrel. The model tested the four hypotheses as to how compassion influenced each outcome behavior. The model provided a good fit to the data: \( \chi^2=1124.84, p<.001, \text{GFI}=.86, \text{CFI}=.95, \text{SRMR}=.05 \text{ and } \text{RMSEA}=.05 \). Out of the four hypotheses, two were supported: H₁ and H₃. Compassion was significantly related to consumer ethics (\( t=-3.22, p<.01 \)). This suggests that those who are more compassionate are more likely to view certain moral
dilemmas as wrong. Compassion was also significantly related to CSR purchase intentions for the moral/ethics category \((t=2.77, p<.01)\) as well as the discretionary practices \((t=2.09, p<.02)\). These results suggest that those who are higher in compassion are more likely to buy from a company that acts morally in the marketplace and supports and contributes to social issues. However, compassion was not significantly related to the relational practices category, suggesting that compassion does not influence how consumers view companies’ relationships. Compassion was also not significantly related to ecologically conscious consumer behavior or to fair trade purchase propensity. This suggests that compassion does not impact consumer’s views on the environment or whether or not they purchase products labeled as fair trade.

**Statement of Key Contributions**

Somewhat surprisingly, our results indicate that compassion is not uniformly a motivator in pro-social consumption. Compassion appears to motivate consumers to be ethical themselves and buy from companies that are ethical. These findings suggest that consideration of others is a key factor in pro-social consumption. Rather than following rules or reasoned arguments, consumers might be more willing to behave and purchase ethically if the impact of their consumption on others is highlighted. Policy makers and practitioners alike should thus try to prime compassion and illuminate the externalities of consumption decisions in order to promote pro-social behaviors.

Interestingly, our results do not support a link between compassion and pro-environmental purchases and Fair Trade purchases. One explanation for this finding is that these types of purchases have a less-direct and less-salient impact on others. In the case of pro-environmental purchases, consumers might be more likely to think about the impact on the planet or on nature than the second-order impact on people that share that environment when
making purchases. Thus, our research suggests to policy makers and practitioners that compassion might not be the best way to motivate purchases of products that benefit abstract or far-removed others.

References are available upon request.
THE DENOMINATOR EFFECT: THE IMPACT OF DENOMINATOR MAGNITUDE ON PROBABILITY JUDGMENT

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Keywords: ratio information, probability judgment, proximity perceptions

We present evidence for the denominator effect, that is consumers’ reliance on the denominator when evaluating ratio information.
EXTENDED ABSTRACT

Research Question

How does the magnitude of denominator in ratio information affect consumers’ probability judgment?

Method and Data

We conducted six online experiments (N = 2,871). Participants were all employed from Amazon Mechanical Turk. In experiments 1, 1B, 2, and 2B, we tested the main effect by manipulating the framing of the ratio information. Participants received ratio information that were either presented with large numbers (e.g., 10 out of 100, 25 out of 100), or smaller numbers (e.g., 1 out of 10, 1 out of 4), and were asked to rate the probability of the outcome in the scenario. In experiment 3, we tested our proposed mediator. Participants again received ratio information in a large vs. small number format. This time we also measured psychological distance from the outcome as the mechanism underlying the denominator effect. In experiments 4, we tested denominator effect and denominator neglect simultaneously by adding a third condition where the numbers used in the ratio were extremely large (e.g., 1,500 out of 10,000) to see if the effect holds at such large numbers. In experiment 5, we tested city population as a possible moderator in a scenario about the infection rate of a disease. In experiment 6, we tested outcome volatility as another boundary condition.
Summary of Findings

In experiments 1, 1B, 2, and 2B, we found that participants rate the probability of outcomes when the ratio information is presented with small versus large numbers. For example, in experiment 1, they rated the chance of failure for a new business higher when they read that 1 out of 10 (vs. 10 out of 100) new businesses fail (M_{1outof10} = 4.13; M_{10outof100} = 3.22; t(204) = 3.674, \( p < .001 \)). In experiment 3, we found that psychological distance from an infectious disease mediated the positive effect of the small versus large denominator on perceived infection rate of the disease. In experiment 4, we found that at very large numbers, the denominator effect is reversed (M_{1 out of 7} = 5.10; M_{15 out of 100} = 4.49; M_{1500 out of 10000} = 5.28). In experiment 5, we showed that that the denominator effect is stronger for people who live in less crowded areas and can therefore relate more to ratio information presented by smaller denominators. Last, in experiment 6, we found that the more volatile (versus stable) a probabilistic prospect is, the stronger the denominator effect will be (F(1, 798) = 5.247, \( p = .022 \)).

Key Contributions

Theoretically, we add to the literature on ratio bias by demonstrating that the denominator neglect occurs not because consumers inherently dismiss the background (as opposed to the foreground) information, but rather in situations when the background information is communicated with such large numbers that it is difficult to comprehend. Given that consumers often have difficulty understanding and making sense of the ratio information, it is imperative for marketers and policymakers to understand the biases that people are prone to when processing
probabilistic information. This research furthers understanding of such biases and has implications for communicating information containing probabilities to elicit desired responses.
THE EFFECT OF ADVERTISING AGENCY OWNERSHIP ON REVENUE AND THE MODERATING ROLES OF RACE AND ETHNICITY OF THE ADVERTISING AGENCY CEO AND ADVERTISING AGENCY TYPE

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Keywords: diversity equity and inclusion, multicultural advertising, strategic alliances,

Description: This paper empirically explores the moderating effects of advertising agency CEO characteristics (race and ethnicity) and advertising agency type (multicultural or general market) on the relationship between advertising agency ownership (public or private) and revenues.
EXTENDED ABSTRACT

Research Question

Racial and ethnic employee diversity in the U.S. advertising industry has been studied by practitioners, academics, and the U.S. government since 1947 (e.g., Shankar, 2015; Bendick & Egan, 2009; Chambers, 2008; Davis, 2002; Sego, 1999; Cohen, 1970). However, there is little contribution to this subject that garners topical conversation within the advertising industry. The advertising industry has a controversial history with Chief Executive Officers (CEOs) of color in publicly-owned advertising agencies. A handful of CEOs of color manage publicly-owned advertising agencies, while the majority administer privately-owned multicultural agencies.

Grounded in the Theory of Economies of Scale, this study posits the predictive relationship of private (independent) and public (holding company) advertising agency ownership on revenues in the advertising industry. In other words, what are the differences between a privately-owned, independent advertising agency and a publicly-owned advertising agency in terms of revenue? Given the context of the advertising industry’s dismal history of hiring executives from diverse populations and leveraging the Theory of Economic Detour of Enterprise Development (Chambers, 2008; Davis, 2002), the advertising agency type (general market or multicultural) was hypothesized as a boundary condition of this relationship. The other boundary condition, race or ethnicity of the CEO, leverages Ambivalence Amplification Theory.

Method and Data

We used Advertising Age’s Annual Agency Report’s (2018) dataset (n=568); identifying agency revenue and ownership. Research assistants captured other variables (agency type – general or multicultural– and race and ethnicity of CEO) by visiting the advertising agency’s
official website. A majority of the advertising agencies are privately owned (62.8%) and categorized as general market (64.7%). White CEOs are the majority (82.1%).

An additive multiple moderation model was employed by using Hayes’ PROCESS model 2 (2017) with 10,000 bootstrap resamples. Categorical variables were coded as follows: publicly-owned=1 vs. privately-owned=0; general market=0 vs. multicultural=1; white CEO=0 vs. CEO of color=1.

We found a positive significant path from private-to-public advertising agency ownership to revenues ($\beta = .71, p < .001$). The interaction term (agency ownership X agency type) was significant ($\beta = .22, p < .05$), supporting the moderation effect of advertising agency type. Among multicultural advertising agencies, the relationship of ownership and revenues was stronger when the CEO was white ($\beta = .93, p < .001$). The interaction term (agency ownership X CEO’s race and ethnicity) also was significant ($\beta = -.52, p < .001$), supporting the moderation effect of the race or ethnicity of the CEO on advertising agency ownership and revenues. This relationship is no longer statistically significant ($\beta = .19, p = .29$) when the CEO is a person of color.

**Summary of Findings**

Publicly-owned advertising agency revenue is higher than privately-owned advertising agencies. Multicultural advertising agencies strengthened the positive relationship between ad agency ownership and revenues. It was unexpected to see the strength in revenue caused by multicultural agencies among advertising agency CEOs who are White. Lastly, CEOs of color do not weaken the positive relationship between advertising agency ownership and revenues.

The interaction effects of the additive multiple moderation model present an unanticipated finding. The CEO of color performs better, in terms of revenues, in both public and privately-owned agencies, whether managing a general market or a multicultural agency. Davis
(2002) stated that the last two stages of the Heuristic Model of the Theory of Economic Detour (Butler, 1991): (1) a decrease in the total amount of business opportunity available and a decline in the number of firms owned by people of color over time and (2) the conditions responsible for this decline (strategic alliances with holding companies) will eventually result in the complete removal of entrepreneurs of color from the competitive marketplace, had not been validated. However, the interaction effects demonstrate these last two stages occurring with multicultural advertising agency CEOs and entrepreneurs of color across private and publicly-owned agencies.

**Summary of Key Contributions**

This research demonstrates that publicly-owned advertising agencies predicted higher revenues, thereby confirming that, in general, publicly-owned advertising agencies have advantages over privately-owned agencies due to their financial intermediation and size differentiation (economies of scale; von Nordenflycht, 2007; 2011; Silk & Berndt, 2003; 1995; 1993). Next, evidence was found that multicultural advertising agencies strengthened the positive relationship between advertising agency ownership and revenues which further add to the Economic Detour Literature relative to real estate professionals (Silverman, 2012), the beauty industry (Silverman, 1999), physicians (Kornrich, 2009), the funeral industry (Cann, 2020; Bunch-Lyons, 2015) and the insurance and the advertising industry (Davis, 2002). Lastly, CEOs of color do not weaken the relationship between advertising agency ownership and revenues. Sego (1999) states that bias exists for advertising agency job candidates of color who have good qualifications but not for those with excellent credentials. Oftentimes, CEOs of color come from non-traditional backgrounds (Shankar, 2015; Burgos & Mobolade, 2011; Chambers, 2009). This non-traditional experience may explain bias among good (non-traditional) versus classically-
trained (excellent) CEOs of color which adds to the literature on Ambivalence Amplification Theory (e.g., Katz, Wakenhut & Glass, 1986; Sego, 1999).

References are available upon request.
THE GREEN SAFETY NET: WHEN AND WHY CONSUMERS REACT LESS NEGATIVELY FOLLOWING GREEN PRODUCT FAILURES

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Keywords: Green Products, Product Failure, Prosocial Motives, Consumer Reactions

Description: Consumers react less negatively to the failure of green (vs. conventional) products because doing so would harm the firm and that is not the prosocial thing to do.

EXTENDED ABSTRACT

Research Question

The last decade has seen a considerable increase in the number of green (i.e., environmentally-friendly) products available on the market (Kronthal-Sacco et al. 2020). In general, the market success of green products is a benefit to others and society at large. People even feel good, both overall and about themselves, when they buy and consume green products...
because it is the prosocial thing to do (Tezer and Bodur 2020). However, not all consumption experiences are presumed successful (e.g., Khamitov et al. 2020). Instead, products occasionally fail, whether they are considered green or not. Despite this, little is known about how consumer reactions might differ to a product failure depending on whether it is considered “green” or not. Interestingly, prior research notes that negative reactions to product failures are partially driven by a prosocial motive (i.e., helping others; Wetzer et al. 2007). Therefore, is reacting negatively to a product failure considered less prosocial when that product is green (vs. conventional) because it would harm a product that is otherwise beneficial for society?

**Method and Data**

*Study 1.* Analyzing 50 brands who have both a conventional and green version of the same product on Amazon showed that 11.94% of all reviews were 1-2 stars for green versions, but 16.58% for conventional versions ($F(1,49) = 15.33, p < .001, \eta_p^2 = .238$).

*Study 2.* Three separate experiments showed that participants in the green (vs. conventional) condition were more likely to forgive the brand (*Study 2A*: $M_s = 2.94$ vs. 2.46; $F(1,198) = 7.82, p = .006, \eta^2 = .038$), less likely to share negative reviews (*Study 2B*: $M_s = 4.56$ vs. 5.14; $F(1,138) = 4.44, p = .037, \eta^2 = .031$), and more likely to take a replacement product (*Study 2C*: $M_s = 3.62$ vs. 2.74; $F(1,143) = 5.07, p = .026, \eta^2 = .034$) after a product failure.

*Study 3-5.* Results revealed a significant indirect effect of product type on likelihood to post a negative review through prosocial behavior (*Study 3*: $\beta_{indirect} = -.21, SE = .08, CI_{95\%} = [-.372, -.059]$). This effect interacts with environmental-consciousness (*Study 4*: $\beta = -.38, t = -3.74, p < .001$) and dissipates if the product was made green-unintentionally (*Study 5*: $F < 1, p > .60$).
Summary of Findings

The current research examined consumer reactions to product failures of products that happened to be either green (i.e., eco-friendly) or conventional (i.e., non-green). Across multiple product categories and operationalizations of negative reactions to failure, the results showed that consumers overall react less negatively to the failure of a green (vs. conventional) product. We demonstrated that the attenuation of negative reactions manifests as a lower likelihood to post negative reviews (Study 1, 2B, 3, 4, 5), a higher likelihood to forgive the brand (Study 2A), and a stronger preference for a replacement product over a refund for compensation (Study 2C). Process evidence suggests that this effect is driven by consumers perceiving that reacting negatively to a failure of a green (vs. conventional) product as less of a prosocial behavior. In other words, reacting negatively against a firm that is otherwise trying to do “good” for society, is not seen as prosocial and therefore negative reactions are dampened (Study 3). Additionally, our results provide evidence for several managerially relevant boundary conditions. Specifically, this effect is shown to dissipate (i) among less environmentally-conscious consumers (Study 4), and (ii), when the green product is made environmentally-friendly unintentionally (Study 5).

Key Contributions

Overall, results suggest that firms who sell green products will experience less backlash if those products fail. Currently, there are numerous institutions in place for a consumer who experiences a failure, such as legal (product liability laws), advocacy (bbb.org), non-profit (Consumer Federation of America), and state/federal protections (Bureau of Consumer Protection/Affairs). Considering the hesitation by consumers who experience a failure of a green product and the prosocial mechanism by which it operates, these institutions should develop
specific policies for the failure of green products. This will help consumers who have been wronged, protect potential consumers, and deter opportunistic firms.

Considering that these findings may easily be manipulated by opportunistic firms who seek both the monetary savings of low-quality products and protection from consumer wrath, there are currently no public policy safeguards in effect to protect consumers from such devious behaviors. More stringent and specific quality control measures should be put in place for any firm with products claiming to be eco-friendly. Along with added education to consumers, policy makers should consider better consumer rights when it comes to the sale of “green” products, as firms may choose to withhold from ensuring certain quality measures. Future research should test such policies.

References are available upon request.
THE IMPACT OF INCREASED DISABILITY REPRESENTATION IN MEDIA ON ATTITUDE TOWARD THE DISABILITY COMMUNITY AND ATTITUDE TOWARD THE FIRM

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Keywords: disability, stigma, shared attention theory, media, attitude

Description: Using survey data, we explore whether firms can help defuse stigma toward the disability community by frequently including positive representations of individuals with disabilities in their media content and how this impacts attitude toward the firm.

EXTENDED ABSTRACT

Research Question: How do attitudes toward the disability community and the firm change in response to firm media that include actors with disabilities?

Method and Data: Survey data was collected via Qualtrics and Prolific in the summer of 2020 and was analyzed via SPSS.

Summary of Findings: We found that the interaction between increased positive disability representation in firm media content and shared attention significantly impacted firm attitude, but not attitude toward the disability community.

Key Contributions: Little research outside of the disability and sport communication literatures has focused on stigma surrounding the disability community. In the shadow of the 30th
anniversary of the ADA and President Bush’s call to action focused on the business community’s role in defusing stigma, this research attempts to explore how firms can reduce stigma toward the disability community through firm media content. This paper introduces shared attention theory to the field of marketing. A practical contribution of this research is that it attempts to help managers of for-profit firms determine how often they should include positive representations of individuals with disabilities in their communications with consumers in order to directly benefit their firms via more positive attitude toward the firm, in addition to benefiting the disability community.
THE IMPACT OF VISUAL PERSPECTIVE ON FEELINGS OF SATIATION

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Keywords: Satiation, Visual Perspective, Virtual Reality

Description: The purpose of this study is to understand how changes in the way in which individuals visualize a consumption event has a direct effect on enjoyment and, alternatively, on feelings of satiation.

EXTENDED ABSTRACT

Research Question: Individuals can visualize a consumption event by imagining it, or by observing it taking place virtually. However, these visualizations can be altered by placing the focal individual either as an actor (thus observing the event unfolding from a first-person perspective) or as an external observer (thus observing the event unfolding from a third-person perspective). Our main research question circles around how these visual changes affect feelings of satiation and - conversely - enjoyment. Furthermore, we are interested in teasing out the mechanisms that channel these behaviors, that is, to explore the role of cognitive appraisals mediating these effects. As an additional process evidence, we are interested in the role of information processing by comparing how “cognitive congruencies/incongruencies” influence feelings of satiation. Lastly, we are interested in considering the role that product type (i.e., hedonic vs. utilitarian) may have moderating the proposed effects.
**Method and Data:** Studies 1 and 2 (N=1,011) are scenario-based experiments where we asked participants to imagine themselves visiting a museum and observing a familiar (Study 1), or unfamiliar painting (Study 2). Visual perspective was manipulated by presenting an image of the painting from a first-person perspective, or by including a shadow - along with the painting - and asking participants to place themselves in that shadow such that they could see themselves as well as the painting. Study 2 replicated these manipulations with a different sample, while it also included mediating measures (i.e., cognitive appraisals).

For Study 3 we used virtual reality (N = 102) to simulate a business context (i.e. car dealership, vehicle). Participants in the first-person perspective would only observe “what was in-front of them” as we see the outside world naturally. Participants in the third-person perspective also observed an avatar and were told to imagine themselves taking its place.

For Studies 4 and 5 (N = 647) we presented visual information through a video clip. Study 4 explored the role of “cognitive congruencies” by manipulating information processing. Lastly, in Study 5 we manipulated product type (i.e., hedonic vs. utilitarian) as a moderating factor.

**Summary of Findings:** We observed that a first-person visual perspective extended enjoyment and reduced feelings of satiation compared to a visual experience observed from a third-person perspective. This occurred when consumers experienced a product that s/he were familiar or unfamiliar with (Studies 1 and 2), through mental imagery (Studies 1 and 2), through virtual reality (Study 3) and through video clips (Studies 4 and 5). We also found that “cognitive appraisals” (Hung and Mukhopadhyay 2012) mediated these effects. Furthermore, we found that “cognitive congruencies” (e.g., a first-person visual perspective with an analytic processing, or a third-person visual perspective with a holistic processing) sped up feelings of satiation, whereas introduced incongruencies (e.g., a first-person visual perspective with a holistic processing, or a
third-person perspective with an analytic processing) slowed satiation down. Lastly, we provided a boundary condition such that the characteristics of an offering (i.e., utilitarian versus hedonic) moderated initial results. When the offering was considered hedonic, enjoyment was sustained so long as the visual experience was observed from a first-person perspective. However, a third-person perspective helped delay feelings of satiation - while extended enjoyment - when the offering was considered utilitarian.

**Statement of Contribution:** We contribute to the literature by introducing a novel and relevant factor that influences satiation. While most of this literature has focused on auditory, or gustatory inputs, there is a limited number of studies that have investigated the role of satiation from visual stimuli. Furthermore, while past studies have considered the role of strategies including memory, variety seeking, social goals, or situational contexts to mitigate these effects, to the best of our knowledge, this is the first study that considers the role of visual perspectives lessening feelings of fatigue and satiation.

Results from this study could benefit government agencies and policy makers as visual information provided to the general population (e.g., public announcements) can be manipulated such that it becomes less satiating. These results could also benefit non-profit organizations, particularly as they face the challenges of closures and social distancing due to COVID. Virtual tours - for example - could be manipulated to extend enjoyment based upon the characteristics of the offering. Finally, for-profit organizations are already implementing visualization technologies (e.g., VOLVO, Marriott, Facebook). However, their strategies moving forward need to be based on a clear understanding of how individuals respond to such efforts.

“**References are available upon request**”
THE IMPORTANCE OF SOCIAL RESPONSIBILITY AND EMBARRASSMENT IN EVOKING SUSTAINABLE CONSUMPTION TO OVERCOME INACTION INERTIA

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Keywords: consumer behavior, sustainability, emotions, inaction inertia

Description: This research extends knowledge on sustainability and emotions by examining how and why consumers might overcome their tendency toward inaction inertia in relation to sustainable consumption behaviors.

References are available upon request.
EXTENDED ABSTRACT

Marketers are challenged to consumers who have not taken advantage of sustainable consumption opportunities in the past to compensate for such decisions. These scenarios reflect the need to counter consumers’ tendencies toward inaction inertia—the phenomenon whereby an initial failure to act makes subsequent similar behaviors less likely (Tykocinski and Pittman 1998). Extant research (Allard and White 2015; Chen and Sengupta 2014; Peloza, White, and Shang 2013) suggests that consumers are more likely to engage in compensatory behaviors when they experience guilt—a negatively valenced emotion evoked by feeling that one has fallen short of a personal standard (Baumeister, Stillwell, and Heatherton 1994)—rather than when they experience embarrassment (Miller 1995; Moore et al. 2008)—a negatively valenced emotion evoked when one feels he/she has fallen short of a social standard (Sarkar and Sarkar 2017). However, such research focuses on consumers’ past actions—instances in which they feel guilty or embarrassed for something they did. This research proposes that the unique context of past inaction—instances where consumers experience guilt or embarrassment related to things they did not do—evokes a contrasting psychological mechanism that reverses extant findings, making embarrassment a more effective driver of compensatory sustainable consumption in such contexts.

Research Question

This research seeks to determine whether experiencing social-responsibility and embarrassment (versus personal-responsibility and guilt) might increase the likelihood of consumers’ overcoming their tendency toward inaction inertia in relation to sustainable
consumption. This question is assessed through three studies. Study 1, a field study, establishes initial support for the theorized effectiveness of embarrassment in increasing sustainability-related behaviors among consumers whose past inactions are salient. Study 2 manipulates the boundary condition of inaction salience, and results indicate that, though consumers experience both guilt and embarrassment from being reminded of their past inactions, only the latter is related to enhanced feelings of social-responsibility. Finally, study 3 assess the complete conceptual model to show that consumers’ feelings of embarrassment and social-responsibility provide the underlying mechanisms through which their downstream preference for sustainable products and intentions to engage in recycling behaviors are derived.

**Method and Data**

*Study 1.* Thirty-four students indicated whether they donated to their university’s food pantry and selected a snack from 18 options rated by the EWG’s food scores (Environmental Working Group 2020; IRR = 58.82%). Students completed measures of guilt (α=.9) and embarrassment (α=.92). Regression analyses revealed that embarrassment correlated with the selection healthier snack items (F(1, 33) = 5.77, β = .35, p = .022, R2=.12).

*Study 2.* Two hundred forty-five Amazon Mturkers were randomly assigned to an inaction (n = 111) or neutral condition (n = 134) and completed measures for embarrassment, guilt, personal-(α=.86) and social-responsibility (α = .84). Mediation analyses using PROCESS model 6 revealed that only embarrassment is related to social-responsibility.

*Study 3.* One hundred seventy-nine Amazon Mturkers completed measures for social-responsibility (α = .96), were randomly assigned to inaction (n = 87) or neutral (n = 92) conditions, and completed measures of embarrassment. They indicated their preferences for
(non)sustainable products (Y1) and recycling intentions (Y2; \( \alpha = .95 \); Kidwell et al. 2013).

Mediation analyses using PROCESS model 6 revealed a complete serial mediation for Y1(F(4, 174) = 17.63, \( p = .000 \), \( R^2 = .29 \)) and Y2(F(4, 174) = 32.96, \( p = .000 \), \( R^2 = .43 \)).

**Summary of Findings**

The results of these studies provide converging evidence that consumers’ experience of embarrassment related to the salience of their inactions leads to a sense of social-responsibility and increased sustainability-related behaviors. Study 1 demonstrates that embarrassment leads to a greater preference for more sustainably produced snack items among students who opted against participating in a food drive. Study 2 lays the groundwork for the theorized model, establishing that embarrassment of past inactions leads to a sense of social-responsibility. Study 3 showcases embarrassment and social-responsibility as the underlying mechanisms through which consumers whose inactions are salient express a preference for sustainable products and greater recycling intent.

**Key Contributions**

The results of these studies suggest that marketers seeking to encourage consumers who have opted against engaging in sustainable consumption in the past to do so in the present and future might achieve such results by framing their communications and promotional messages to elicit embarrassment among those consumers who are confronted with their past inactions. The experience of embarrassment then would serve to engage these consumers’ feelings of social-responsibility, which would increase the likelihood that they would engage in sustainability-related behaviors as they seek to compensate for their salient past inactions.
THE MARKETING OF PRIMARY AND SECONDARY SCHOOLS:  
A SYSTEMATIC LITERATURE REVIEW

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Keywords: School Choice, Competition, School Marketing, Marketing Communications, Social Division

Description: This paper is a systematic review of the literature on the marketing of primary and secondary schools

EXTENDED ABSTRACT

Research Question

The marketing of primary and secondary schools is an under-researched topic around the world. The key research question addressed in this paper is therefore what do we know about the practice and consequences of the marketing of primary and secondary education?

Method and Data

The review comprised research in English from all social science disciplines with no restrictions on geography, time or study design, and included empirical studies on state and private schools in peer reviewed articles, grey literature and academic books. Search terms
were: Marketing*, Promotion*, Marketing communication*, Marketi*ation* AND School* OR Education* NOT Universit* Higher education*. Electronic search was supplemented by bibliographic hand searches, reverse citation mapping and additional searches of the relevant grey literature. The search yielded 2,504 papers which were reduced to 81 papers after two rounds of screening adhering to systematic review protocols. Analysis categorisations were agreed a priori and an iterative process of examining the primary data produced five themes: Competition and Local Education Markets; Involvement of Principals and Staff; Marketing Activities; Substantive Changes in Schools that Have Adopted Marketing; and Misleading/Deceptive Marketing,

**Summary of Findings**

The review found, first of all, that whilst the Education literature has produced research in this area, the Marketing literature has been almost completely silent. Marketing can, in principle, improve the match between education provision and the needs of a local market, community, or set of parents. However, the review finds limited evidence of substantive changes made by schools to accompany marketing communication activity. Moreover, it shows how marketing can contribute to social division; divert educational resource and effort away from curricular enhancement; and can even be deceptive and misleading. The paper is a call to action for marketing scholars to begin research in this area and to policy makers to take a closer look at the social consequences of school marketing.

**Key Contributions**

This paper will be of value to schools operating within a choice regime by enabling them to see trends across the world and to inform their thinking, practice and social responsibility. It will also be of value to marketing regulators. There is currently no special provision in the
International Chamber of Commerce regulations (the font of the world’s advertising self-regulatory regime) that provides guidance for the marketing of primary and secondary education to parents.

This literature review will also be of value to local and national governments and policy makers seeking to ensure that the role of marketing in primary and secondary education does not lead to any social detriment.

It is hoped that this paper will kick start new streams of research into: the broad debate over the role that marketing can and should play in primary and secondary education; the social consequences (intended or unintended) of schools’ marketing – particularly in terms of inequality; and the effectiveness of marketing in this setting.
THE MULTIDIMENSIONAL PLANNING SCALE: ASSESSING WHETHER AND WHY CONSUMERS PLAN

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Keywords: Planning, self-regulation, goal pursuit, scale development

Description: We present the Multidimensional Planning Scale, an instrument assessing whether consumers use or avoid planning tools and their reasons for doing so.

EXTENDED ABSTRACT

Research Question

The purpose of our research is to develop the Multidimensional Planning Scale (MPS). While a great deal of research has shown that planning helps consumers to achieve valued goals, much less work has examined factors which shape the likelihood that consumers do or do not engage in planning. As such, the MPS aims to examine not just whether people plan, but also the influences that prompt people to use planning tools or push them away from doing so. Our work complements existing measures of the propensity to plan by examining not just whether people are likely to plan but also investigating reasons why they do so (or avoid doing so).
Method and Data

We report the results of six studies designed to develop and validate the MPS. Study 1 used exploratory factor analysis to reduce items and identify relevant factors. Study 2 included confirmatory factor analysis to validate the MPS, confirm its factor structure, and test its reliability, convergent, discriminant, and criterion validity. Study 3A further examined the relationship between the MPS and related psychological constructs, along with an assessment of socially desirable responding. Study 3B assessed the relationship of the MPS to additional psychological variables and also examined the impact of common method variance. Study 3C assessed the test-retest reliability of the MPS. Study 4 investigated whether the MPS predicts judgments, attitudes, and outcomes in a consequential consumer goal context.

Summary of Findings

Study 1 yielded a five-factor solution with dimensions focusing on motivational outcomes of planning, importance and skillfulness in scheduling, stress of strategic thinking, muddling and initiative issues, and preference for spontaneity. A confirmatory factor analysis in Study 2 revealed that the spontaneity subscale exhibited insufficient convergent / divergent validity and this factor was dropped. The resulting four-factor solution fit well, with adequate reliability, internal consistency, and convergent validity. In Study 3A, a confirmatory factor analysis again demonstrated adequate fit, along with relationships between the MPS and a range of psychological variables such as procrastination, self-esteem, self-efficacy, need for structure, and impulsivity. Additional analyses confirmed a low potential for the contamination of MPS responses by socially desirable responding tendencies. Study 3B demonstrated relationships between the MPS and psychological constructs such as resilience, optimism, perseverance, etc. Additionally, common method variance did not significantly influence the measurement or
correlational structure of the MPS. Study 3C confirmed adequate test-retest reliability. Finally, Study 4 assessed the predictive validity of the MPS using a two-part holiday shopping task. An index of the MPS dimensions predicted more successful outcomes in terms of when participants finished their shopping, along with their expectations and judgments about the shopping experience.

**Key Contributions**

When consumers achieve goals, individuals and organizations both benefit. Plans increase the likelihood of goal attainment, but there remains much to learn about factors that increase or decrease the chances that consumers will use plans in their daily lives. To maximize the benefits of planning, researchers and practitioners must develop an in-depth understanding of both the propensity to plan and the reasons that drive such behaviors.

The MPS contributes to the literature and complements existing work by revealing both whether and why consumers choose to plan. As in many consumer behavior contexts, asking “why” is valuable, as consumers may choose to use or avoid plans for reasons that differ from person-to-person or across contexts. It seems likely that interventions which are tailored to one’s specific underlying influences on behavior would increase the likelihood of success compared to those which are more general in nature. We are aiming to investigate the application of the MPS to develop such possible interventions.

Finally, the MPS has many practical advantages. The 12-item format is easy to administer. It yields good reliability, internal consistency, convergent validity, and discriminant validity. We continue to investigate additional predictive validity and relationships between the MPS and other psychological constructs.
THE NEED FOR REVISITING EXISTING FRAMEWORKS

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Keywords
Co-branding; image; positioning; co-brand identity framework

Description
The intention is to highlight (in the light of the literature) and empirically demonstrate that the existing frameworks’ applicability in differing contexts, settings and for different concepts (e.g. co-brand image and positioning) warrant empirical examination.

EXTENDED ABSTRACT

Research Question:
How do political brands image and positioning influence and impact the political co-brands from an external perspective?

How does the image transference occur between the corporate political brands and political co-brands, from an external perspective?

How Political Co-brand Identity Framework can be applied as a tool for exploring and investigating concepts like political co-brand image and positioning, from external perspective?

Methods & Data:

Sequential exploratory mixed method design was employed to test the applicability of the Political Co-brand Identity Framework by Armannsdottir et al. (2019) in different settings to test a different concept. It was employed to assess co-brand image and positioning in different settings. Sequential exploratory designs are useful when the researcher wants to generalize, assess/test the qualitative exploratory results (Baran & Jones, 2020). Qualitative data analysis (thematic analysis) revealed seven themes, which emerged on their own and fit well in the six dimensions of the Political Co-brand Identity framework. As a result, a new framework emerged for co-brand image and positioning, names as the Political Co-brand Image and Positioning Framework. Qualitative analysis (survey) also aided in identifying a conceptual model to be tested with variables which were then tested quantitatively with a different set of respondents to triangulate the qualitative findings.

Summary of Findings:

While the factors identified by the qualitative data analysis fit well into the 6 dimensions of the Political Co-brand Identity framework, these factors were different than the ones discovered by Armannsdottir et al. (2019). This led to the development of the new framework while testing...
the applicability of the existing framework. Future research can compare the results of Political Co-brand Identity framework and the Political Co-brand Image & Positioning Framework.

Testing of the finding through quantitative method confirmed that the candidate brand image plays a significant role in positioning the co-brand (at the constituency level). Electorates assess the co-brand relying on the candidate brand image as short-cut for making voting decisions. If electorates have developed negative perception of the candidate, this negative image of the candidate brand adversely influence the overall image and positioning of the co-brand. It was also observed that candidate brand image moderates the relationship between the service quality of the candidate and brand-fit (between the candidate and the party in the co-brand relationship). The negative performance of the co-brand ultimately adversely influences the image of the corporate brand (party, leadership, and policies).

**Key Contributions:**

1. This mixed method study highlights the importance of revisiting the existing theories and frameworks to assess the applicability and strength of the existing framework. The intention is to help marketers and policy makers to improve quality of life in the light of the so developed frameworks and theories, as well as to highlight that the existing frameworks' applicability in differing contexts, settings and for different concepts warrant empirical examination.

2. To demonstrate this empirically, this study assessed Political Brand Identity Framework for studying brand image and positioning. In this way, this study has managed to present a new framework for co-brand image and positioning using the existing framework.
3. The new framework will aid the governments and political brands (parties and candidates) in formulating appropriate marketing and public policies. The findings will be useful for the researchers, policy makers and marketing professionals.

4. The finding will aid future researchers in studying the interplay between brand identity elements to explore political brand image.

5. This study also managed to assess the reliability of newly developed scales (political marketing mix and VOTQUAL) in different settings and contexts.

"References are available upon request."
THE RISE OF A NUDGE: FIELD EXPERIMENT AND MACHINE LEARNING ON MINIMUM AND FULL CREDIT CARD PAYMENTS

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Keywords: nudge, financial decision-making, debt, anchoring, causal random forests.

Description: A large field experiment examines the effect of a novel statement-balance warning on the payment behavior of credit card debtors.

EXTENDED ABSTRACT

Research Question

Do minimum and statement-balance warnings change credit card payment behavior? And, in what circumstances would cardholders change their payment behavior?

Method and Data

The minimum payment warning, a notice that informs credit cardholders of the downside of making the minimum payment, has been described as a perverse nudge because it negatively affects those who would pay more than the minimum, presumably due to the anchoring bias. This issue is tackled in a massive field experiment by introducing a new “statement balance warning” that informs the interest charges for paying less than the statement balance. Credit
card debtors (N = 179,706) received an email reminder to pay their credit card a few days before it was due. The message randomly varied in 4 groups, either adding a minimum payment warning and/or a statement balance warning. All customers received their credit card statements in a separate communication, which included the statement balance and minimum payment amounts. The analysis is combined with causal random forests to find heterogeneous treatment effects and with an online experiment to further examine conditions in which the warnings affect payment behavior.

**Summary of Findings**

All warning messages reduced the probability of not paying or paying less than the minimum compared to the control condition (plain remainder without any warning message), which directly translates into a lower credit card delinquency rate. For the statement balance payments, which decreases additional revolving interest, the likelihood of debtors who received any message with the statement-balance warning making payment in full increased, while for debtors who received the minimum-payment warning, there was no decrease in the chance of payment in full. These results responded to changes in payment distribution: compared to the control condition, debtors who received the minimum-payment warning were more likely to shift their payments primarily from low or no payments toward the minimum amount. In contrast, debtors who received a message including the statement-balance warning relatively shifted their low payments, compared to the control condition, almost entirely toward paying in full.

Finally, the statement balance warning significantly increased payments by cardholders who usually partially repaid their balance, are more likely to make deliberate decisions every month, and understand less the consequences of paying less than the statement balance.
Key Contributions

First, this research contributes to the literature on minimum-payment saliency in financial decisions. Because the main study in this paper is based on random assignment, it overcomes the potential identification problems of secondary-data analysis studies. Because it is also conducted as a natural field experiment, it is not subject to potential social desirability or Hawthorne effects that may confound results in lab experiments compared to those conducted in the field. Second, this research proposes a novel solution to tackle the perverse effect of minimum-payment saliency highlighted in the literature, and to help decrease household debt. Households that pay the minimum end up paying higher interest and may potentially never pay their debt. Third, the experimental setting contributes to the consumer behavior literature examining people’s pursuit of goals or targets. Psychology research suggests that when there is a hierarchy of goals, one goal is prioritized and non-prioritized goals are ignored. Once a goal is activated, research has shown how the different tenents of prospect theory’s value function can affect people’s motivation and effort. Both sets of research would predict that credit card payment may depend on which target values are prioritized through the warning messages.
THE SHIFT IN CLIMATE CHANGE ATTITUDES IN RESPONSE TO THE COVID-19 PANDEMIC

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Keywords: Climate Change, COVID-19 Pandemic, Psychological Distance, Attitudes

Description: We find evidence that large and immediate crises, such as the COVID-19 pandemic, may reduce psychological barriers that prevent collective action to mitigate other crises, specifically the climate crisis.

EXTENDED ABSTRACT

Research Question

Collective response to mitigate the spread of COVID-19 in the U.S. only increased after local cases spiked. Even though the World Health Organization declared a public health emergency in January 2020, it wasn’t until the incidence of COVID-19 cases increased locally that the public started to respond. The pandemic was on the doorstep, and compliance with protective measures (e.g., social distancing, mask wearing) increased and became new social

References are available upon request.
norms. Climate change, another global threat, has never been met with the same level of heightened collective action, despite its severe and long-lasting consequences (Edelman, 2020; Kunreuther & Slovic, 2020; Weber, 2020). In this research, we ask how does one’s experience with one crisis and, relatedly, a decrease in the psychological distance associated with that crisis (the COVID-19 pandemic) affects one’s attitudes about another psychologically distant phenomenon (climate change)?

**Method and Data**

In a pre-registered survey (AsPredicted.org: #42274), we explored how one’s attitudes, skepticism, and feelings of efficacy surrounding the pandemic relate to parallel items (i.e., attitudes, skepticism, and efficacy) surrounding climate change. Participants (N=1,821; 53.32% female; M_{age} = 34.51 years; SD = 47.33 years), who were recruited from each of the fifty states and Washington, D.C. through Prolific Academic, were presented with two counterbalanced sections of questions that assessed (1) perceptions of climate change and (2) perceptions of the COVID-19 pandemic.

In the climate change block, participants indicated their level of agreement on a five-point scale for three measures: general climate change attitudes adapted from Attari et al. (2010), feelings of efficacy adapted from Zomeren et al. (2010), and skepticism adapted from Poortinga et al. (2011). Parallel questions were adapted for the COVID-19 pandemic block. All the items for each measure loaded onto a single factor for that construct. The average of these items served as our composite measures for climate change and pandemic attitudes, efficacy, and skepticism respectively.
As prior research suggests, one aspect of psychological distance involves the likelihood of an event occurring (Trope and Liberman, 2010). Therefore, in order to assess the possibility that changes in the psychological distance associated with climate change drive the relationship between pandemic attitudes and climate change attitudes, participants also reported their perceived likelihood of being directly affected, of others around them being affected, and of future generations being affected by climate change, as well as COVID-19 and similar diseases, using a seven-point scale. Participants ended the survey with a set of demographic questions (e.g., sex, age, ZIP code of current residence, ethnicity, employment status, highest level of education, marital status, number of children, household income).

**Summary of Findings**

The results from our pre-registered survey show an overall positive relationship between pandemic attitudes and climate change attitudes, controlling for demographics, and political leaning \((b = 0.40, SE = 0.03, p < .001, 95\% CI = [0.34, 0.46])\). Given the prominent and extraordinary nature of the pandemic, experimentally manipulating participants’ COVID-19 attitudes in a convincing way was likely to be difficult during our study period. Instead, we leveraged the quasi-experimental nature of pandemic-driven experiences to control for reverse causality and omitted variable biases. Using a two-stage least squares (2SLS) regression, we treated the pandemic as a natural, random shock since different participants had varying levels of experience with the event. Results showed that COVID-19 experience measures drove COVID-19 attitudes, which significantly predicted climate change attitudes, and this relationship held when controlling for demographics, and political leaning \((b = 0.79, SE = 0.14, p < .001, 95\% CI = [0.52, 1.07], \text{First-Stage F-Statistic} = 73.29)\).
Next, we explored whether the relationship between pandemic attitudes and climate change attitudes was mediated by changes in the psychological distance of climate change, as measured by the likelihood of being affected by climate change. We tested this indirect effect using Model 4 of PROCESS MACRO (Hayes 2017) with 5,000 bootstrapped samples and 95% confidence intervals. When we included the measure of climate change likelihood, the effect of COVID-19 attitudes on climate change attitudes were significantly reduced from $b = 0.47$ to $b = 0.25$, $SE = 0.02$, $p < 0.001$. Furthermore, we found a significant indirect effect of climate change likelihood ($ab = 0.33$, $SE = 0.02$, 95% CIboot [0.29, 0.36]).

**Statement of Key Contributions**

We found that one’s attitudes towards the COVID-19 pandemic were significantly and positively associated with climate change attitudes. Moreover, this relationship shifted when including the likelihood of being affected by climate change. This suggests a decrease in the psychological distance with climate change as a result of experiencing the pandemic, regardless of whether the threat of the climate crisis increased. Our findings further suggest that large and immediate crises, such as the COVID-19 pandemic, may reduce psychological barriers that prevent collective action to mitigate other crises, specifically the climate crisis.
THERE WON’T BE A NEXT TIME: THE ROLE OF ACUTE SCARCITY IN FINANCIAL GOAL SETTING

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Keywords: Acute Scarcity, Goal Setting, Financial Goal, Financial Well-being, Financial Vulnerability

Description: Whereas chronic scarcity of financial resources has received considerable attention, acute scarcity, a temporary moment of scarcity followed by a temporary recovery, has largely been ignored. Results of this study suggest acute scarcity is positively and significantly associated with a higher likelihood of financial goal setting, with a lower sense of financial security partially explains the observed relationship.

EXTENDED ABSTRACT

Research Question:

Existing research suggests that the setting and pursuit of financial goals are associated with higher levels of financial well-being. However, statistics suggest that 39% of Americans do not set financial goals. Living in a condition of chronic scarcity is one factor that has been associated with an inability to set financial goals that require a near or long-term view of one’s financial situation. While chronic scarcity of financial resources has received considerable attention, acute scarcity, meaning a temporary moment of scarcity followed by a temporary recovery, has largely been ignored. In this paper, we argue that individuals who experience acute scarcity will be more likely to set financial goals to decrease spending, increase savings, and/or pay down debt than
individuals experiencing chronic scarcity or no scarcity. Using 8,209 survey responses of US adults collected in May 2020, we examine the role that acute scarcity has on goal setting.

Method and Data

The data for this study came from the Prosper Insights & Analytics monthly consumer market survey collected by Prosper Insights. For this study, we used the May 2020 survey wave with 8,209 total surveys. The May data was collected between May 1 and 8, 2020.

The dependent variables for this study are three binary variables that indicate whether the individual intends to decrease spending, increase savings, and decrease debt in the next three months. The primary independent variable for this study is whether a respondent experiences acute scarcity in their finances. Financial security is measured by a single item that captures how the individual feels about their financial situation. The control variables are income, age in years, sex, race/ethnicity, household income, and marital status.

Descriptive statistics were calculated to examine sample characteristics and the distributions of our variables of interest. Correlations between the variables of interest were calculated using eta given the binary nature of the variables. We used logistic regression to estimate three models examining the relationship between acute scarcity and the goals of 1) decreased spending, 2) increased savings, and 3) decreased debt. All analyses were conducted in SPSS Version 26.

Summary of Findings

In contrast to expectations with chronic scarcity, individuals who experience acute scarcity are more likely to report they have goals to decrease spending, increase savings, and/or decrease debt. This increased likelihood is partially explained by the negative association between acute scarcity and financial security. Individuals who experience acute scarcity report lower levels of financial security. In turn, financial security is negatively related to setting goals to decrease spending or debt. Thus, acute scarcity may increase an individual’s concern about their financial situation.
which leads to a greater likelihood of goal setting for decreased spending and debt. This possible explanation reversed direction for the goal of increased savings where a positive association was observed between financial security and the likelihood of setting this particular goal. This finding would suggest that for increased savings, the individual who experiences acute scarcity has a lower sense of financial security which decreases their likelihood of setting this goal. Even with this reversal, the direct relationship between acute scarcity and setting a goal to increase savings was positive and significant.

**Key Contributions**

Our study contributes to the financial vulnerability/well-being literature by demonstrating the relevance of acute scarcity in intentions to pay down debt, increase savings, and reduce consumption. Previous work has focused primarily on chronic scarcity and its impact on more immediate actions over near-term financial goals that might improve an individual’s situation.

From a practical perspective, acute scarcity may represent a moment at which the individual is open to support in the form of advice or education to help them avoid future experiences of acute scarcity. While acute scarcity is more likely to occur with lower income, non-white, and unmarried individuals, it occurs at a meaningful rate across demographics. For example, about 28% of households with above-median income experience acute scarcity. This percentage is well below the 40% of households with below-median incomes but still a meaningful percentage. For-profit and non-profit organizations can leverage the motivation these temporary situations produce to help their clients accelerate improvements in financial habits and behavior, ultimately supporting a decrease in the risk of significant financial hardship and an increase in financial well-being.

References are available upon request.
THIRD PLACE AND SOCIAL DISTANCING RENEGADES: THE INFLUENCE OF
PERCEIVED TERRITORIALITY ON WELLBEING

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Keywords: Wellbeing; COVID-19; Hospitality; Perceived Territoriality

Description: The aim of this paper is to investigate consumers’ dining experiences and wellbeing perceptions while practicing social distancing at restaurants.

EXTENDED ABSTRACT

Research Question

The ongoing pandemic caused by the COVID-19 virus has led to a major global crisis affecting billions of people, creating service mega-disruptions and a destructive impact on global economies (Kabadayi et al., 2020). The restaurant industry has been one of the worst hit industries (Dixon, 2020; Haas et al., 2020a; Zeit Online, 2020). Facing either the option of service hibernation or service continuity (Tuzovic and Kabadayi, 2020), many restaurants rapidly pivoted to off-premise channels, including drive-through, delivery, and takeout (Haas et al., 2020b). As stay-at-home restrictions were being lifted around the world after the first wave, restaurant owners started to develop comprehensive reopening plans (CBRE, 2020).
However, multiple countries around the world have faced new increased surges of daily COVID-19 cases (Bradley and Ing, 2020; Taylor, 2020). In addition to new government-imposed shutdowns, consumers continue to be anxious of dining out despite all the efforts to ensure their safety (Haas et al., 2020b; Rao, 2020). Given the uncertain nature of recovery, the topic of wellbeing is of utmost importance for the hospitality sector. While prior research in hospitality demonstrates that wellbeing considerations are critical for value perceptions and behavioral intentions among restaurant patrons (e.g., Attri and Kushwaha, 2018; Kim et al., 2012), less is known how virus-containment policies such as social distancing will affect dining experiences and consumer perceptions of wellbeing.

Method and Data

The goal of the current study was to investigate consumers’ decision process to dine out during the first reopening phase of restaurants as well as their dining experiences and wellbeing perceptions while practicing social distancing at restaurants. Given the nature of the topic, we decided to adopt an exploratory qualitative research design (Patton, 2015) to elicit consumer opinions about restaurant dining during the COVID-19 pandemic. The study was conducted in Germany where a partial lockdown was implemented in mid-March 2020, compared to a strict lockdown in Italy and Spain (for an overview of lockdown measures and lifting of restrictions across Europe see Hirsch, 2020a; 2020b).

An interview guide in German was prepared with questions stemming from key themes based on our literature review. Data was collected from 15 participants using the videoconferencing software Zoom over a four-week period between May and June 2020. All interviews were recorded and transcribed verbatim afterwards. We used NVivo as platform to import all transcripts. Following other qualitative studies in hospitality (e.g. Putra and Cho,
2019), we applied thematic analysis to discover emerging themes within the raw data that included the three phases of open, axial, and selective coding (Braun and Clarke, 2006).

**Summary of Findings**

The study reveals that wellbeing of restaurant diners is a collective concept comprised of multiple domains of a service system. More specifically, we find that public health measures of social distancing have led to an increased concern about space and perceived territoriality, influencing how diners feel at full-service dining establishments. To entice customers back to on-premise dining, we propose a framework of spatial wellbeing to understand the impact of perceived territoriality on consumers’ dining experience. Specifically, restaurants should adopt a customer journey approach to map all physical customer touchpoints, from arriving at the restaurant to placing and receiving an order, eating inside the establishment, and leaving the restaurant. Initial focus should be modifying the physical environment to reduce perceived crowding and/or interactions with other customers (i.e., limiting capacity, rethinking layout and design, optimizing interior walking routes). But in addition, restaurants need to adapt their spatial service operations by (1) digitalizing the menu to reduce the level of physical interactions with employees, (2) sanitizing surfaces to increase trust in the physical environment, and (3) enforcing social distancing and public health regulations (e.g. mask wearing) to avoid negative customer-to-customer interactions.

**Statement of Key Contributions**

This study provides several implications for theory. First, the paper contributes to multiple literature streams, including those addressing wellbeing and service systems, hospitality environments and atmospheres, and the customer experience. While the concept of social
distancing has become a part of daily life all around the world, an understanding of how it affects consumers’ wellbeing perceptions of their dining experiences has been limited. This study is one of the first to empirically examine consumers’ dining out decision as government lockdown measures are being eased.

This research presents also several important implications for the hospitality industry. The study offers restaurant owners a framework for adopting a holistic approach to their operations, as consumers consider various cues simultaneously in forming the opinion about the service environment and the implementation and enforcement of social distancing rules. Restaurant owners need to signal that they are not only aware of and are following the government’s public health regulations, but that they also have the resources needed to provide a physical environment that implements those mandates. Furthermore, the study provides an alternative perspective to help restaurant owners understand how actors view wellbeing inside the restaurant premises. The findings provide empirical evidence confirming recent media coverage that reviews health practices in the restaurant industry.

References are available upon request.
TO DELETE OR NOT DELETE: EFFECTS OF DATA REQUEST FRAMES ON CONSUMERS’ WILLINGNESS TO SHARE THEIR PERSONAL INFORMATION

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Keywords: Data Privacy, Framing, Autonomy, Information Sharing, Mixed Effects Regression

Description: Exploring the effects of deletion transparency through data request framing and action cues on the consumers’ willingness to share personal information.

EXTENDED ABSTRACT

Research Questions:
The General Data Protection Regulation (GDPR) requires firms to offer consumers the ‘right to erasure.’ However, the GDPR does not provide guidance for how firms should provide this option to consumers. To fill this gap, this research explores the operationalization of data transparency by investigating the impact of three different frames that firms can use to request consumer information on consumers’ willingness to provide various degrees of sensitive information. Specifically, we explore the implications of asking consumers to keep or delete (already) collected information and compare this with the more traditional situation of consumers providing information.

Method and Data:
Four experiments using participants from online panels (mTurk, Prolific) tested our hypotheses. Using a 3-cell design (frame: provide, keep, delete), Study 1 (N = 205) tested the effect of frame on autonomy. Studies 2 (N = 511) and 3 (N = 500) used a 3 (frame: provide, keep, delete) x 3
mixed design. Study 4 (N = 212) tested the underlying mechanism using a 3 cell (frame: provide, keep, delete) between-subject design.

**Summary of Findings:**

The studies confirmed the hypotheses. Study 1 ANOVA confirmed that frame significantly impacted autonomy ($F(2,203) = 20.62, p<.001$), with the keep condition ($M_{keep}=4.15$) leading to lower perceived autonomy than the delete condition ($M_{delete}=5.36, p<.001$). Perceived autonomy was similar for keep and provide conditions ($M_{provide}=4.27, p>.05$). Study 2 then tested the effect of frame on willingness to share. A mixed effects regression supported that willingness to share was lowest in the keep condition, as predicted (vs. delete, $p<.001$; vs. provide, $p<.001$). Study 3 replicated these results (provide vs. keep, $p<.001$; delete vs. keep, $p<.001$). Finally, Study 4 supported that the differences in autonomy observed in Study 1 explained the differences in willingness to share observed in Studies 2 and 3. Specifically, a logistic regression confirmed that autonomy in the keep condition was significantly lower than in the delete condition ($b=9.19, p<.001$) and a linear regression confirmed that autonomy predicted willingness to share ($b=-0.46, p=.09$).

**Statement of Key Contributions:**

With the implementation of the GDPR and CCPA, the data privacy landscape is changing. Both regulations include provisions for consumers to have data erased, but the implications of how the ability to delete data will impact consumers and their data sharing has not been explored. The guidelines regarding how the deletion option should be communicated to consumers have not
been provided by any regulation. In this research, we explore the implications of asking consumers to keep or delete information and compare this with the more traditional situation of consumers providing information. Our findings indicate that the framing of the request impacts consumers’ likelihood of sharing personal information, with consumers least likely to share information in the keep frame due to reduced perceived autonomy.

These findings have practical implications for policy makers and for marketers by highlighting situations in which consumers may be more or less likely to share personal information. By shedding light on the mechanism underlying these effects, we contribute to the literature on framing by highlighting new pathways by which linguistic frames impact decision-making. We also contribute to the privacy literature by providing an increased understanding of how the deletion option impacts sharing behavior and factors moderating these effects.
TOUCHING TEMPTATIONS ON A TOUCHSCREEN REDUCES SUBSEQUENT CONSUMPTION

Yunxin Liu and Siegfried Dewitte, KU Leuven

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Keywords: pre-exposure, direct-touch, self-control, hedonic consumption

Description: Touching the tempting foods on a touchscreen (as compared to clicking them via a mouse) in a context of a game or a simulated online shopping task, reduced the consumption of hedonic foods (i.e., the direct-touch effect).

EXTENDED ABSTRACT

Research Question

Obesity has grown into a major global epidemic that influences individuals’ health. The widespread availability of hedonic foods, such as candies and chocolates, has been regarded as a major factor triggering obesity (de Ridder et al. 2013). The rise of smartphones and personal computers is only compounding this problem as individuals are facing more opportunities to buy those foods. Consumers can select takeaway foods or make online purchases by simply clicking on computers through a mouse or directly touching their smartphones or tablets. These sites provide a lot of pictures, even videos, showing hedonic foods vividly. Will the advent of new technologies like a touchscreen interface influence food consumption? The present research investigates the extent to which interaction with pictures of tempting foods (direct-touch vs. simple-click) increases or reduces subsequent consumption. With direct-touch, we indicate that individuals directly touch pictures of foods on a touchscreen and then make their food choices,
while the simple-click indicates that individuals interact with pictures of foods on a computer with a mouse. The present work aims to explore whether touching tempting foods on a touchscreen will lead to increased subsequent consumption of similar hedonic foods, or rather reduce it.

**Method and Data**

We conducted three preregistered lab studies to examine the effect of picture temptations on subsequent consumption of hedonic foods (i.e., M&M candies). Across three studies, we recruited participants from a Western European student subject pool, with local and international students. In study 1, participants were asked to complete an online memory game (i.e., 32 cards turned upside down) with either tempting foods (i.e., Smarties candies) and non-tempting objects (i.e., tokens) on a touchscreen. Following that we measured the subsequent consumption with a taste test of M&M candies (two bowls of the same volume). During the taste test, participants were allowed to eat as many as they needed to evaluate tempting foods on several dimensions.

We also measured several control variables like the liking of M&M candies and the hunger level. In study 2, we again used the online memory game and asked participants to handle pictures of tempting foods either by means of direct-touch or simple-click. To approach the actual using experience of touchscreens, study 3 used an online shopping task of 12 different tempting foods as the manipulation. In studies 2&3, we also measured perceived ownership and explored whether it would be a potential mechanism underlying the direct-touch effect.

**Summary of Findings**

The current research investigated the extent to which the interaction with pictures of tempting foods (direct-touch vs. simple click) increases or reduces subsequent consumption. Across three preregistered lab studies (total $n = 280$), we first cleaned the data before analysis consistent with prior research (Goddyn and Dewitte 2017) by excluding those participants who did not like the
chocolate nuts of their taste test at all and who did not taste any candies at all. Also, we excluded those participants whose consumption deviated 3SD or more from their group mean. Note that the exclusion did not affect our results in most cases. Controlling for the liking of M&M candies and hunger, we conducted a one-way ANCOVA with the consumption of M&M candies as the dependent variable and pre-exposure (direct-touch temptations vs. direct-touch of non-tempting objects)/exposure mode (direct-touch vs. simple-click) as the independent variable. We found that pre-exposure to direct-touch picture temptations reduces subsequent consumption when similar tempting food appears, as compared to direct-touch of non-tempting objects or simple-click picture temptations (i.e., the direct-touch effect). We further examined whether perceived ownership was a potential mechanism underlying the direct-touch effect. However, the mediation analysis did not reveal an indirect effect of perceived ownership.

**Statement of Key Contributions**

Our research contributes to the literature on sensory marketing. Shen, Zhang, and Krishna (2016) and Chung, Kramer, and Wong (2018) examined the effect of a touchscreen interface (vs. mouse) on the food choice between hedonic and utilitarian products. However, they did not measure the actual choice in offline settings, instead, they conducted several online studies. This research examines the influence of computer interfaces (touchscreen vs. mouse) on subsequent consumption in offline settings with a taste test. We demonstrate that touching picture temptations on a touchscreen interface reduces subsequent consumption compared to a mouse interface. This advances our understanding of the effect of sensory factors (i.e., touch) on tempting food consumption. Our findings also have practical implications for marketers. The self-ordering touchscreen has become a highly popular trend in the fast-food industry. Therefore, there is a concern that abundant picture temptations may lead to an increase in hedonic consumption. Our findings may mitigate this concern by showing that touching pictures of
tempting foods on a touchscreen reduces hedonic consumption. This finding may suggest that consumers may benefit from using a touchscreen interface when making hedonic food choices but this remains to be replicated in other situations.
Understanding people's pro-environmental behavioral intention towards green energy – a mitigation strategy in the fight against climate change

Abstract
Climate change can be treated as a "wicked" problem, fundamentally linked to energy consumption; therefore, a radical change in values and behaviors towards a paradigm of lower consumption is necessary. The study stands in the perspective of Australian standpoint, regards the green energy consumption intention (GCI) in response to the climate change as pro-environmental behaviors, and verifies an innovative pro-environmental behavioral intention model. Our study evaluates the psychological factors leading to the formation of a theoretical model based on Environmental Theory of Planned Behavior (ETPB, Ajzen, 1991; Mancha & Yoder, 2015) aimed at predicting people's intentions to engage in green energy consumption that can help to mitigate climate change problems in Australia. The study expands the theory and examine the effects of environmental sustainability awareness, social responsibility and moral norm on GCI that encourages the green energy initiatives to mitigate climate change problem. Applying the refined ETPB on a sample of 385 households in Australia, and using Partial Least Squares-Structural Equation Modelling (PLS-SEM), the study finds that moral norm ranks high in merit followed by perceived consumer effectiveness in predicting people's intention to engage in green energy consumption action against the climate change in Australia. Our findings add to previous work on psychological predictors and provide a new theoretical perspective to guide the energy policy and explain sustainable behavioral intent towards green energy adoption against the climate change.

Introduction and context
Consumption of electricity produced from fossil fuel leads to environmental problems such as climate change and air pollution connected with the greenhouse gas (GHG) emission or negative impacts on people and the planet. Climate change can be treated as a "wicked" problem, which is fundamentally linked to energy consumption; therefore, a radical change in values, behaviors and institutions towards a paradigm of lower consumption is necessary. (Lorenzoni et al., 2006; Chen, 2016). Recognizing the need for energy transition, many countries, including developed, developing and transition economies, settled ambitious targets to develop alternative energy options. Green energy is an alternative to fossil fuel energy sources which can enable the satisfaction of growing energy demand without GHG (Ahmed et al. 2020). Consumption of green energy can reduce the pressure on environment and to reach targets of climate change mitigation (Hammami & Triki, 2016; Hossain et al. 2017; Yaghoubi et al. 2019). Since green energy is an international trend and there is a close link between climate change and energy consumption, it is time for consumer to change their mind and make necessary efforts to change the energy consumption choice behavior to reduce carbon emissions, thereby reducing the impacts of climate change on people and the planet.

Although in many countries government have adopted green energy consumption choice as one of the major technique in response to the climate change, relying on government regulations, subsidies to combat the impact of climate change, the work could be in vain; the willingness to adopt the green energy consumption contribute to the wellbeing of the environment should spring from within consumers (Ahmed et al. 2019, 2020). Studies have explored many psychological
factors in predicting pro-environmental behavioral intention based on a behavioral model with the purpose of helping mitigate climate change across a wide range of eco-friendly contexts, such as energy saving (Chen, 2016), green products in generic (Yu et al. 2017) for the climate change. However, little attention has been given to explain people's intentions to engage in green energy choice behavior against the GHG and climate change issues. This topic is a concrete research work, which has little work done on it in the past. For instance, there is an extensive research about consumer attitude towards green energy purchase (Palandino & Pandit, 2019). But to our knowledge, no research has been conducted to investigate the psychological factors explaining people's intentions to engage in green energy consumption action for carbon reduction mitigate the climate change. The study addresses this research gap by developing and testing a behavioral model of GCI to mitigate the climate change in a developed market; Australia ranked as the worst performing country in its mitigation efforts (Climate Transparency, 2016; Howard et al. 2018). Reportedly, among the G20 nations Australia is one of the world's highest per capita emitters of GHG (World Bank, 2013). To minimise this impact, Australian government set a much more substantial target as part of the global effort to transition away from the dominant use of fossil fuels-based electricity to predominantly renewable electricity or green energy to reduce its GHG emissions by 26e28% by 2030 (Howard et al. 2018). Accordingly, the initiatives taken by the Australian government to promote green energy through legal and commercial incentives. However, people's intention to engage in pro-environmental energy choice behavior often overridden by more immediate and selective personal motives to meet their pressing needs (Kollmuss & Agyeman, 2002; Ahmed et al. 2020).

In light of the discussion above, the current study aims to investigate from the perspective of environmental sustainability, people’s consumption intentions of green energy in the context of a developed nation; Australia, wherein the psychological factors as the key determinants are enquired about; whether or not these factors viz. are affecting people’s intention to adopt green energy against the climate change. The application of reciprocal determinism and the viewing of psychological factors as determinants of GCI mitigating the climate change would provide an improved understanding of consumer behavior which may, in turn, help in encouraging and reinforcing the actual behavior among consumers. To achieve the research aim, the current work attempts to answer the following research questions:

- What are the factors that influence people’s intention toward the adoption of green energy to mitigate the climate change?
- What is the appropriate model to reflect the influence of identified factors in predicting people’s intentions to engage in green energy consumption and carbon reduction behaviors to mitigate climate change problem?

### Theoretical model and hypotheses

The center of this research is the behavioral model. To better understand the factors leading to the formation of green energy behavioral intent to mitigate the climate change, the theoretical model of this study is originated from the Theory of Planned Behavior (Ajzen, 1991), the major theoretic frameworks employed by many studies to examine the various forms of ecological behaviors in western countries. In the TPB model, (a) attitude towards the behavior, (b) subjective norms about the behavior and (c) Perceived behavioural control (PBC) regarding the performance of the behavior are three principal factors that determine behavioral intention.
Various researchers (e.g., Joshi & Rahman, 2019) have highlighted certain limitations of TPB and proposed various other frameworks to study consumer sustainable behavior. Mancha & Yoder (2015) incorporated and validated the Environmental Theory of Planned Behavior (ETPB) adapted from Ajzen’s TPB and recommended a new framework of reciprocal determinism to understand consumer environmental behavior. ETPB provides a reasonable perspective on the present research questions. Therefore, the study takes into consideration essential components of the ETPB modified from TPB, namely, green attitude, green subjective norm, green perceived behavioral control (GPBC) and tests these in the context of GCI. In contrast to common interpretations of the constructs, subjective norm are conceptualized not as green subjective norms but as green social pressure, whereas green GPBC is not operationalized in a general fashion, but explicitly as green perceived consumer effectiveness (GPCE) for green energy attributes. Perceived social pressure referred as important referents to purchase green (Taufique & Vaithianathan, 2018). PCE is used for measuring the ability of a customer to affect environmental issues (Antil & Bennett, 1979).

To effectively predict people’s GCI in the context of mitigating climate change, the current study extended the ETPB with additional three constructs viz. consumer social responsibility, environmental sustainability awareness, and consumer moral norm as TPB permits the discovery of the influence of some other related factors that may also significantly describe that behavior (Ajzen, 1991). Schlaile et al.’s (2018) compilations of social responsibility definitions have shown the term to be closely related to consumers’ consumption choice in shifting towards socially and environment friendly products. Environmental sustainability focuses on upholding or improving the integrity of earth’s life supporting systems (Kasayanond et al. 2019). Conner and Armitage (1998) defined moral norms as ‘one’s own socially determined and socially validated values attached to a particular behaviour’. The conceptual hypothetical framework of this work is shown in Fig. 1 and the relationship among the constructs explained as follows:

**Hypotheses development – ETPB**

Drawing from the original formulation of the theory of planned behavior (Ajzen, 1991), multiple evaluations of the theory (e.g., Mancha & Yoder, 2015; Chen, 2016) findings supporting the precedence of psychological factors over environmental behavioral intention, and Armitage and Conner’s (2001) meta-analysis, we postulate that the three salient elements of ETPB will positively relate to intended green energy consumption for the climate change action. The following three directional hypotheses capture these relationships:

H1: Green consumer attitude for climate change is positively related to purchase intention of green energy
H2: Green social pressure for climate change is positively related to purchase intention of green energy
H3: Green perceived consumer effectiveness for climate change is positively related to purchase intention of green energy

**Hypotheses development – Extending ETPB**

In light of recent research that identifies consumer social responsibility (CSR), environmental sustainability awareness (ESA), and consumer moral norm (CMN) at green consumption level it is apparent that an important relationship between consumption, environment and morality continues to be of relevance and interest to consumer research. CSR, ESA and CMN towards behavioural intention relationship has been documented in many studies. Previous studies provide evidence that CSR, ESA and CMN were the main factor in explaining pro-environmental behaviors, such as in green purchase intention (e.g., Taufique & Vaithianathan, 2018; Panda et al.
Based on the prior literature support and evidence, we propose the hypotheses (H4–H6) to be tested as follows:

H4: Consumer social responsibility for climate change is positively related to purchase intention of green energy
H5: Environmental sustainability awareness for climate change is positively related to purchase intention of green energy
H6: Consumer moral norm for climate change is positively related to purchase intention of green energy

Fig 1: The Theoretical Model (ETPB- GCIMC)

Methodology

The current study employed a quantitative research design by means of a survey questionnaire method. Total of 386 usable respondents living in the NSW, Australia were captured using random sample of consumers drawn from the white pages telephone directory across NSW, Australia. A questionnaire was designed using data from a postal survey finding. The data were collected from August to December 2018. NSW, Australia. The state NSW was chosen because it has the largest heterogeneous and homogenous group of people.

The psychometric scale development procedure for questionnaire followed the recommendations of DeVellis (2003). The 7-point Likert-style questionnaire was based on an extensive literature review (ranging from 1: strongly disagree to 7: strongly agree). The measured items for the study were first identified from green marketing literature and modified with field experts. Developed by Ringle et al. (2015), Smart-PLS 3 was used to perform the partial least squares structural equation modelling (PLS-SEM) in the current study for data analysis. PLS-SEM has several advantages, including its suitability in explorative research and targets’ prediction, and its flexibility in handling non-normal data and small sample sizes (Hair et al. 2019; Sultan et al. 2020). Therefore, PLS was used in the study. Following a two-step analytical procedure approach, measurement and structural models were assessed (Anderson & Gerbing, 1988). In this purpose, the factor structure was assessed through measurement model, which were respecified based on item reliability, factor loadings, standardized residuals, and modification indices. Next, the model fit was assessed, and postulated relationships were tested through a structural model. The adequacy
of model fit was examined through the following the goodness-of-fit indices: standardized Root-Mean-Square Residual (SRMR) and coefficient of determination ($R^2$).

**Results and discussions**

**Model evaluation: measurement model results**
All the measures were subjected to a refinement process to assess their construct reliability, convergent validity and discriminant validity. The composite reliabilities of the constructs are higher than the minimum requirement of 0.70, and the values of constructs’ convergent validity (Average Validity Extracted e AVE) are higher than the 0.50 minimum value as suggested in the literature (Hair et al., 2019). Discriminant validity is assessed using Heterotrait and Monotrait (HTMT) ratio of correction technique on both the complete and split datasets Henseler et al. (2015) do not violate the threshold value of HTMT.85 (Kline, 2011) indicating that discriminant validity has been ascertained.

**Model evaluation: structural model results**
This empirical work is to exam the hypothesised association. A quantitative method, based on the PLS-SEM, was used to verify the proposed hypotheses. To validate the proposed hypotheses and the structural model, the study analyzed paths between the constructs with SEM-PLS and represented each path with a standardized coefficient. To assess the significance of coefficient for every path proposed in the model, a bootstrapping technique was performed with 2000 re-samples (Sultan et al.2020). The results from the data analysis revealed that all six hypotheses constructed through the conceptual framework based on our literature review were supported by PLS-SEM analysis.

Table 1 confirms the causal hypotheses of the ETPB model in the context of GCI in Australia. Assessment of the path coefficient showed that all hypotheses (H1, H2, H3, H4, H5, H6) were supported. Based on the analysis, it indicates that GCI are influenced by all driver factors of GCI, i.e. the support found from the hypothesized model indicates that people’s GCI positively associated with their evaluation of the consequences of a green energy purchase attitude ($\beta = 0.175$, $p < 0.01$), perceived social pressure from important referents ($\beta = 0.255$, $p < 0.01$), PCE ($\beta = 0.466$, $p < 0.01$) over the barriers for a green energy buying, environmental sustainability awareness ($\beta = 0.347$, $p < 0.01$), consumer social responsibility ($\beta=0.320$, $p < 0.01$) and moral norm ($\beta=0.529$, $p < 0.01$) over green energy consumption indicating people's intentions to engage in green energy consumption and carbon reduction behaviors to mitigate climate change problems in Australia. Knowledge of these results indicate similar findings from previous studies by Chen, 2016; Tan et al.2017; Schlaile et al.2018; Panda et al.2019; Joshi & Rahman, 2019; Sultan et al.2020).

**Model fit results**
The test of model fit is used to determine the approximate model fit. According to Henselar et al. (2016), the approximate model fit criteria will help to answer the question of how substantial the discrepancy between is the model-implied and the empirical matrix. For PLS path modelling, a test of standardized root mean square residual (SRMR) is used to determine the approximate model fit. The SRMR is defined as the difference between the observed correlation and the model implied correlation matrix whereby values less than 0.08 (Hu & Bentler, 1998) are considered a good fit. The value of SRMR for this study is 0.030 which is<0.08 indicating the data fits the model well.
The goodness-of-fit value for the model is the square root of the product of average AVE and average R², which is 0.781, where a value>0.36 is considered adequate (Hair et al. 2014; Sultan et al.2020). Overall, the predictive validity and model fit indices were satisfactory. The results obtained from the extended ETPB model, which includes GCA, GSP, GPCE, CSR, ESA and CMN reveal that the all the six antecedent variables included in this model can explain about 78% of the variance (R²) on people's intention to engage in green energy consumption action to reduce the GHG mitigating climate change problems. Further, when examined the variables affecting the GCI, it is seen that moral norm has the highest effect (β=0.529, p<0.01) followed by GPCE (β=0.466, p<0.01), environmental sustainability awareness (β=0.347, p<0.01), consumer social responsibility (β=0.320, p<0.01), green social pressure (β=0.255, p<0.01) and green attitude (β=0.175, p<0.01). It is possible to say that the moral norm variable added to the model is an important variable that improved and strengthens the measurement model. Moral norm added to the model are compatible with Ajzen’s original TPB model. Contribution of the moral norm in the proposed model indicates that if an individual possesses strong moral norm then he/she would like to overcome the perceived difficulties - PBC (e.g., lack of resources such as time, money, skills, and the cooperation of others as well as opportunities) to engage in green energy consumption and carbon reduction behaviors to mitigate the climate change.

<table>
<thead>
<tr>
<th>Causal hypothesis</th>
<th>β-values</th>
<th>t-values</th>
<th>p-values</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: GCA - GCI</td>
<td>0.175</td>
<td>2.235</td>
<td>0.008**</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2: GSP - GCI</td>
<td>0.255</td>
<td>3.235</td>
<td>0.001**</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3: GPCE-GCI</td>
<td>0.466</td>
<td>8.325</td>
<td>0.000**</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4: CSR-GCI</td>
<td>0.320</td>
<td>5.22</td>
<td>0.000**</td>
<td>Accepted</td>
</tr>
<tr>
<td>H5: ESA-GCI</td>
<td>0.347</td>
<td>5.565</td>
<td>0.000**</td>
<td>Accepted</td>
</tr>
<tr>
<td>H6: CMN-GCI</td>
<td>0.529</td>
<td>11.524</td>
<td>0.000**</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Notes: t-value is greater than 1.96 (*p<0.05); if the t-value is greater than 2.58 (**p<0.01)

Table 1: Hypotheses testing and structural results

Research contributions

The study provides both theoretical and practical contribution for comprehending the determinants of people's intention to engage in green energy consumption action for carbon reduction behaviors to mitigate global climate change.

Theoretical contribution

This research has several theoretical contributions to the current academic literature. The study contributes to the literature in the following ways:

- The study established a theoretical model where green attitude, green social pressure, green perceived consumer effectiveness, environmental sustainability awareness, social responsibility and moral norm linked with people’s green energy consumption intention to the formation of a theoretical model predicting people’s intentions to engage in green energy consumption; in existing literature, no studies have rarely assessed the influence of these factors on consumers' green energy purchasing to explain the intention mitigating the climate change.
With the help of aforementioned constructs linked with consumers’ GCI, the theoretical model of the study extends the existing framework of the TPB and explores the decision-making framework under the umbrella of ethical behavioural intention by demonstrating the major psychological factors determining people’s GCI and their respective relevance to mitigate the climate change.

Our findings add to previous work on psychological predictors and provide a new theoretical perspective to guide energy policy and explain sustainable behavioral intent towards green energy adoption for the climate change. Thus the study helps widen the use of ETPB beyond its traditional applications into research of green energy behavioral research to mitigate climate change. The findings also provide an extended support to the applicability and robustness of the ETPB model in predicting consumers’ GCI in the Australian context, as it has enhanced the predictive ability of the proposed theoretical model (from 59% to 78%).

**Practical contribution**

Even though this study has sought to link each of the aforementioned factors to the GCI, established and evaluated a behavioral model to investigate adaptive behavioral intention toward fighting global climate change, it is important to analyze how practical and managerially relevant this framework is. The model incorporated adaptation strategies of psychological determinants of GCI will help marketers in framing strategies for encouraging consumers green energy purchasing to adapt to and/or mitigate climate change. For instance, government may focus more and more on spreading awareness among people about sustainability (social and environmental) issues in order to guide their purchase behaviour to align with environmental protection concerns. Similarly, energy marketers should also consider this finding while designing green advertisements and promotions.

**Conclusion**

For a society with a mature stage of sustainability consumption, green energy consumption should be seen as a solid responsibility for environmental sustainability and a powerful strategy for combating climate change. Based on connectedness to nature theoretical model, the key psychological predictors enhance people’s intentions to engage in green energy consumption action in response to climate change. This study has shown that the proposed model is useful and comprehensive to indicate that ETPB is a useful framework predicting people’s GCI in response to climate change. This study is valuable to provide an individual under environmental ethical mission to seek successes and values for mitigating climate change. However, additional examination of the formation process and treatment in energy consumption and carbon reduction behaviors to mitigate the climate change is warranted.
References


Understanding the Role of Children’s Advertising Literacy in Their Susceptibility to Advertising with The Help of Theory of Planned Behaviour

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Keywords

Children’s advertising Literacy; Attitudinal Advertising Literacy; Conceptual Advertising Literacy

Description

This study presents a model which can be tested empirical (both qualitatively and quantitatively) to understand the effects of and the role advertising literacy plays in children’s vulnerability to advertising, from the perspective of TPB.

EXTENDED ABSTRACT
**Research Question:**

How can we test children advertising literacy empirically?

**Summary of Findings:**

A conceptual model is presented in this study with constructs like Attitudinal Advertising, Conceptual Advertising Literacy, Parental Advertising and Mediation, children’s assertion, and desire to buy the product. Literacy is based on their understanding of advertising bias, scepticism towards advertising, and disliking of advertising. Conceptual Advertising Literacy is based on if they can recognize advertising and its source persuasive intent as well as tactics, their understanding of the selling intent, and perception of the intended audience (Rozendaal et al, 2014). Parental Advertising Mediation and Control (on watching TV) are treated as the Subjective Norms in this study. Parents’ attitude (regarding their children’s abilities) influence children’s attitude (Parsons, Adler, & Kaczala, 1982). Assertions of Confidence are studied as perceived behavioural control. It is one of the seven strategies for persuasion distinguished by Jacks & Cameron (2003). It reflects confidence in oneself and ability to resist a would-be persuader. Since it is related to one’s assertion that nothing could change his/her opinion (Jacks & Cameron, 2003), it is treated as the perceived behavioural control in this study. Intention/Desire mediates the relationship. The focus in this study is basically on the desire to buy the product. It is a heavily commercialised era today where children are living (Opree, Buijzen, van Reijmersdal & Valkenburg, 2013). The-Request-Children-Make-In-Response-To-Advertising is the behaviour. This behaviour is triggered by the level of product Desire developed (which has resulted due to their current level of Advertising Literacy, parent’s control or lack of control and their confidence in resisting a persuader).

**Key Contributions:**
There is a lack of believable empirical evidence in the literature which could support the belief that children are less vulnerable when they understand advertising tactics and intents. This implies that children do not apply this knowledge to understand the ad they come across. The view supporting cognitive defence is still being widely accepted in the academic as well as societal debate on children and advertising, albeit. In addition to that, the research carried out to study the effects of advertising on children often employed one of the two paradigms: *Empowered child* (where children are looked at as streetwise, capable of processing the message, and the research here focuses on the intended effects of advertising i.e. to check the child’s brand preference, attitude regarding the brand, etc), and, *Vulnerable child* (where children are viewed as naïve, people lacking cognitive skills and venerable, and therefore, there research here mainly focuses on checking the unintended advertising affects, i.e. the negative effects of advertisings) (Buijzen & Valkenburg, 2003).

Keeping this in mind, this study presents a model in the light of literature. This model can be tested empirically to understand the effects through the eye of a child. It is expected that this model will help in understanding the role advertising literacy plays in children’s vulnerability to advertising, from the perspective of Theory of Planned Behaviour.

“References are available upon request.”
VENDOR PRICING AND PARTICIPATION IN BUSINESS MARKETS WITH AFFIRMATIVE ACTION POLICIES

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Keywords: Pricing, Online Platforms, Government Markets, Auctions, Procurement

Description: Affirmative action programs in B2B markets have a strong effect on vendors’ decisions regarding whether to bid on contracts, but they do not affect their pricing decisions.

EXTENDED ABSTRACT

Research Question

Buyers in business-to-business and business-to-government markets often take non-price factors into consideration when deciding which vendor to purchase from. In recent years, increasing numbers of buyers have stated that they would like to purchase from a diverse group of vendors, and are therefore willing to spend more money to purchase from a small business, a local vendor, a minority-owned vendor; etc. These types of affirmative action policies (whether formal or informal) distort the marketplace, and vendors would be expected to strategically alter their behavior in response. In fact, given the increasing prevalence of affirmative action policies in B2B and B2G markets, vendors with the ability to strategically account for these programs will be at a distinct advantage in the marketplace. This research examines how vendors alter two key
decisions in response to the buyer’s affirmative action policy: whether to compete for a specific contract, and what price to charge.

Method and Data

Our analysis uses bid-level data from the Virginia public procurement market in 2006 and 2007. Under the 2006 rules, Virginia made it easier for small, women-owned, and minority-owned (SWaM) vendors to win state contracts. In 2007, small businesses continued to receive this preferential treatment but woman- and minority-owned businesses did not. We examine how moving from a wider affirmative action program to a narrower affirmative action program affects vendor behavior, where “wider” and “narrower” refer to the size of the protected class of vendors. In particular, the specific vendor behaviors we examine are the decision to bid on a given contract and what price the vendor sets for that contract.

Our approach is to focus on contracts that appear in both 2006 and 2007. We also further refine this comparison by then focusing on vendor - contract title dyads; i.e., what price did vendor A set for the same contract when bidding in 2006 vs. when bidding in 2007? By making comparisons for vendors who bid on the same contract titles repeatedly, we can better isolate the effect of the affirmative action policy change on vendors’ choices of whether to participate and what price to set.

Summary of Findings

We find that vendors respond to the policy change (moving from a policy which helps all SWaM vendors to one which only helps small vendors) in two ways: (1)
minority- and woman-owned vendors largely exit the bidding process, and (2) the remaining vendors maintain the same pricing strategy that they had before. Furthermore, the overall number of bidders remains relatively stable, as the exiting minority and woman-owned vendors are replaced almost completely by new small and non-SWaM vendors. We demonstrate that these results are consistent with a boundedly rational model of vendor behavior in which vendors focus on their own capabilities and rely upon heuristics when deciding what price to set and whether to compete for a contract.

**Key Contributions**

The details of the affirmative action program have a large effect on vendors’ participation decisions: vendors who benefit from the program choose to participate in much larger numbers, while vendors who do not benefit curtail their participation. However, the effect on pricing is minimal: vendors’ prices remain relatively stable despite the policy change.

This paper demonstrates that vendors are behaving in a “boundedly rational” way, perhaps because they do not have full information about their competitors. Buyers that are thinking about using affirmative action programs in their B2B or B2G marketplaces should account for this information when designing their marketplaces. Furthermore, there is an opportunity for vendors as well: vendors that sell in these marketplaces could improve their profits if they were able to better respond to these kinds of affirmative action programs.
When Less is More: Consumers Prefer Brands that Donate More in Relative versus Absolute Terms

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Keywords: Cause-Related Marketing, Corporate Donations, Charity, Generosity

Description: Across six experiments we show that consumers prefer brands that donate less in absolute dollars if it reflects a higher proportion of profits compared to brands that donate more in absolute dollars when it reflects a smaller proportion of profits, because consumers use the relative size (vs. absolute dollar amount) of the donation as a stronger indicator of the brand’s generosity.

EXTENDED ABSTRACT

Research Question

Companies collectively donate billions of dollars of profits to charitable causes, in part to appear virtuous to consumers. Ample research has investigated factors that affect whether a brand is considered “good” or “moral,” and how brands can appear more generous and altruistic,
including factors related to cause sponsorship (e.g., Barone, Miyazaki, and Taylor 2000; Barone, Norman, and Miyazaki 2007; Berglind and Nakata 2005; Chang 2008; Gershon and Cryder 2018; Pracejus and Olsen 2004; Webb and Mohr 1998). However, one aspect of cause sponsorship that has received little attention is understanding how consumers interpret firm donations described in relative vs. absolute terms. In the present research we ask, do consumers care more about the relative amount of money given (e.g., percentage of profits) or the overall dollar amount donated?

We propose consumers will prefer brands that donate less in absolute dollars if it reflects a higher proportion of profits compared to brands that donate more money overall when it reflects a smaller proportion of profits. We suggest that this preference emerges because consumers use the relative size of the donation as a stronger indicator of the brand’s generosity than the absolute dollar amount.

**Method and Data**

Experiment 1a (consequential) offered participants (N = 201; Mturk) a $1 off coupon to one of two known ice cream places whose donations were described in both relative (% of profits) and absolute (dollar amount) terms. In one condition, Cold Stone donated a higher relative amount, while Baskin-Robbins donated a lower relative amount, but higher absolute amount. In a second condition, the information was switched. Participants indicated which coupon they would like.

Experiment 1b (N = 200; Mturk) described donations (higher relative, lower dollar vs. lower relative, higher dollar) from a hypothetical brand (Company X) in a separate evaluation paradigm, and measured purchase interest.
Experiment 2 (N = 100; MTurk) was designed similarly to experiment 1, and measured purchase intent, generosity, and donation impact.

Experiment 3 (consequential) asked participants (N = 200; MTurk) to choose a gift card to one of two known home improvement stores whose donation information was manipulated similar to experiment 1. Participants also reported perceptions of each brands’ generosity.

Experiments 4a (N = 201; MTurk; separate evaluation) and 4b (N = 102; Mturk; joint evaluation) were similar to 1b and included a time manipulation (donation from profits earned over one week vs. one year).

**Summary of Findings**

Experiments 1a and 1b show that consumers prefer brands that donate more to charity in relative (vs. absolute) terms (1a coupon choice: $\chi^2 (1) = 17.48, p < .001; \varphi = .295$; 1b purchase interest: $t(198) = 2.11, p = .04$). Experiment 2 shows the preference for brands that donate more in relative (vs. absolute) terms relates to greater perceived generosity, despite understanding that larger donations have more impact (brand choice: $z = 3.00, p < .01$; perceived generosity: $t(99) = 6.635, p < .01$; perceived impact: $t(99) = 5.74, p < .01$). Experiment 3 shows that preference for brands that donate more in relative (vs. absolute) terms is mediated by perceived generosity (gift card choice: $\chi^2 (1) = 3.36, p = .07; \varphi = .13$; Lowe’s indirect effect = .2267; CI [0.0518, 0.4593]; Home Depot indirect effect = .2881; CI [0.1085, 0.5462]. Finally, experiments 4a and 4b replicate earlier results and show that effects persist even when the brand donates more in relative terms, because it does so over a shorter time frame, e.g., % of one week’s profits versus one year’s profits, (4a: $t(1, 199) = 4.72, p < .001$; 4b: $t(1, 101) = 5.23, p < .001$).
Statement of Key Contributions

Across six experiments, using both within- and between-subjects designs and varying relative and absolute donation magnitudes, we find that consumers prefer brands that donate a smaller amount of money to charity that reflects a larger proportion of profits over brands that donate a greater sum of money reflecting a smaller proportion of profits. We demonstrate that this preference is mediated by perceived generosity. We also show that the preference for brands that donate more in relative (vs. absolute) terms persists even when the brand donates more in relative terms because it does so over a shorter time frame. The current research adds to our understanding of how consumers perceive brands that engage in cause-related marketing and cause sponsorship. Moreover, the findings presented here offer practical strategies for brands seeking to maximize the positive brand consequences of cause-related marketing without suffering financially.

References are available upon request.
THE CONSUMER'S WILLINGNESS TO ADOPT PLANT-BASED MEAT:
AN INTERACTION BETWEEN PERCEIVED NUTRITION LITERACY AND
PLANT-BASED MEAT FAMILIARITY

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Keywords Plant-based meat · Willingness to adopt plant-based meat · Plant-based meat
familiarity · Perceived nutrition literacy

Description: This study investigates the consumer’s perceived nutrition literacy on the
consumer’s willingness to adopt PBM and the moderating impact of plant-based meat
familiarity.

ABSTRACT

Consumers remain reluctant to adopt Plant-Based Meat (PBM). This study
investigates the consumer’s perceived nutrition literacy on the willingness to adopt PBM
and the moderating impact of PBM familiarity. A positive relationship was found
between perceived nutrition literacy and willingness to adopt PBM with PBM familiarity
strengthening the relationship.

INTRODUCTION

The adoption of Plant-Based Meat (PBM) may offset the negative impact that
animal-based meat has on human health and the environment. Since the 1960s,
animal-based meat consumption has increased in most developed countries (Basu 2015).
For example, in the U.S., total meat consumption has nearly doubled between 1909 and
2007 (Bentley 2019) and the total animal-based meat consumption in the U.S. has reached 100 kilograms/capital (OECD/FAO 2020). To date, the U.S. remains the highest meat producer and consumer of red meat among all developed countries (Daniel et al. 2010).

The increase in animal-based meat consumption has had a negative impact on human and animal life as well as the environment. First, studies have shown that animal-based intake is associated with an increase in cardiovascular diseases (Bronzato and Durante 2017), prostate cancer (Rohrmann et al. 2007), and obesity (Wang and Beydoun, 2009). Second, animal-based meat consumption has been associated with a lack of sustainability in farm animal production (Salter, 2018) and has contributed to greenhouse gas emissions (Ercin, Aldaya and Hoekstra 2011). It has also increased animal suffering (Pierschel 2017). Therefore, research is needed that will encourage consumers to adopt alternative forms of meat.

Incorporating PBM into a person’s diet can reduce overall animal-based consumption (Bianchi et al. 2019). Research indicates that PBM is viewed as a more favorable choice than animal-based meat for individuals who aim to consume more ethically and morally (Circus and Robison 2019). According to Circus & Robison, the production and consumption of meat alternatives was viewed as more sustainable than the consumption of animal-based meat among consumers. Therefore, efforts should be made to move consumers towards more sustainable and ethical forms of consumption such as PBM.

Despite the increase in benefits and adoption of PBM in some consumers, the majority of consumers remain reluctant in adopting this meat alternative. Plant-based
alternatives are unfamiliar to most and appear less attractive than conventional meats (Hoek et al. 2011). This may explain consumers’ resistance to adopt more PBM options in their diet (Elzerman, van Boekel and Luning 2013). The National Cattlemen's Beef Association indicates that consumers are confused regarding the ingredient composition and the benefits of plant-based meat (NCBA 2020). Therefore, more research is needed to identify the antecedents that will raise awareness in consumers about the importance, composition and value of PBM.

Research reveals that certain factors may increase willingness to adopt plant-based meat, namely, nutrition literacy and product familiarity. Very little research has been focused on the relationship between nutrition literacy and the willingness to adopt PBM. Related research reveals that general nutrition literacy is positively linked to various food-related behaviors such as diet and health monitoring (Gibbs and Chapman-Novakofski 2012). Therefore, these findings can be applied to products such as PBM given that they have been viewed as more favorable than animal-based meat.

Research also shows that product specific familiarity can also have an impact on the adoption of PBM (Elzerman et al. 2013). Consumers who were more familiar with such a product were more likely to adopt it than consumers who were less familiar with it (Elzerman et al. 2013). Nonetheless, it remains unclear whether some type of interaction exists among an individual’s perceived nutrition literacy, product-specific familiarity and the willingness for consumers to adopt PBM. Nonetheless, according to Alba & Hutchison (1987), basic level knowledge is needed for more product specific information to be incorporated into a knowledge structure. Thus, the consumer’s basic nutrition
knowledge would facilitate the absorption of more specific PBM brand knowledge and increase willingness to adopt PBM.

The object of this study is to investigate the impact of perceived nutrition literacy on the consumer’s willingness to adopt PBM and the moderating impact of PBM familiarity. The expected outcome is that individuals who show greater perceived nutrition literacy are more likely to adopt PBM and that PBM familiarity will strengthen the relationship while less PBM familiarity will weaken it.

The present investigation contributes to the field of sustainable consumption. It focuses on the consumer’s willingness to adopt PBM and on the different knowledge structures and their interaction. From a managerial standpoint, if resources were limited, practitioners should focus their resources on increasing PBM familiarity in order to generate greater willingness to adopt PBM.

LITERATURE REVIEW

Willingness to Adopt Plant Based Meat

There is no clear definition of PBM. PBM has been referred to in several ways, namely, plant-based meat alternatives, plant-based beef, or plant-based meat substitutes (He et al. 2020). Some have focused on the ingredients that produce PBM. Mostly, it is constructed from proteins extracted from plants with the appropriate structuring process (Joshi and Kumar 2015). It is primarily made with soy, pea and/or potato proteins to form a meat-like texture (Seehafer and Bartels 2019). Another study highlights the experiential aspect of PBM. In this context, Goldstein et al. (2017) define PBM as “a substitute designed to match the experience of cooking and consuming ground beef” (p.3). It is made to “have a similar appearance and color to fresh raw meat” (He et al.
2020, p.10). Operationally, the focus is on the consumer’s Willingness to Adopt PBM and is taken from De Koning et al. (2020). Thus, Willingness to Adopt PBM is referred to as the behavioral intentions (willingness to try, buy, and pay) to adopt plant-based meat.

Research has focused on identifying antecedents related to the consumers’ willingness to adopt PBM. They have concentrated on personality traits (Hoek et al. 2011), beliefs and attitude (e.g., De Koning et al. 2020). Yet, several studies have identified different forms of knowledge as being important antecedents in moving consumers towards adopting new foods namely general nutritional information (Worsley 2002) and product-specific familiarity (Circus and Robison 2019). The following two subsections review some important findings related to general nutritional information and product-specific familiarity.

**The Impact of Perceived Nutrition Literacy**

Nutrition literacy commonly refers to “people's capacity to engage with information relevant to promoting and managing health within food and nutrition contexts” (Hakami et al. 2018, p.166). It is “the abilities necessary to obtain and understand nutrition information” (Krause et al. 2018, p.1). Essentially, nutrition literacy refers to the individual’s capacity or ability to obtain and/or understand nutrition information related to the promotion of one’s health. In the present investigation, nutrition literacy is focused on the consumer perception of that capacity or ability to obtain and/or understand nutrition information related to the promotion of one’s health. It is referred, henceforth, as the Perceived Nutrition Literacy.

The relationship between perceived nutrition literacy and willingness to adopt PBM is not well researched. There is no research that has been focused on the impact that
perceived nutrition literacy has on the willingness to adopt PBM. Nonetheless, the research by Gibbs and Chapman-Novakofski (2012) is revealing because individuals who enrich themselves with knowledge of nutrition often pay more attention to their eating habits and thus, constantly adjust their eating structure to achieve a healthier state. Another study shows that nutrition knowledge has a positive relationship with dietary intake (Spronk et al. 2014). Other research further suggests that poor nutrition literacy increases consumer confusion on nutrition knowledge, literacy, and dietary behavior (Spiteri-Cornish and Moraes 2015). These finding suggest that nutrition knowledge leads consumers to adopt a healthier lifestyle and that the willingness to adopt of PBM would be more likely to be accepted given its perceived healthier nature.

One study discusses the limitation of general nutritional knowledge (Worsley 2002). Worsley states that general nutritional knowledge may play only a small role in the adoption of food habits. “It is necessary but not sufficient for changes in food behavior” (p. 579). This line of reasoning suggests that more specific types of consumer knowledge may be at play in leading consumers towards increasing their willingness to adopt PBM.

**The Moderating Impact of PBM Familiarity**

The notion of product familiarity has been extensively investigated (e.g., Gefen 2000; Marks and Olson 1981; Park and Lessig 1981) and has been used interchangeably with the notion of product knowledge (Park and Lessig 1981). Product familiarity is defined in terms of “the cognitive structures of knowledge concerning the product that is stored in memory” (Marks and Olson 1981, p.145). According to Park and Lessig (1981) product familiarity has two dimensions. There is an objective and subjective component of familiarity. The objective component focuses on “how much a person knows about the
product” while the subjective component focuses on “how much a person thinks s/he knows about the product” (p. 223). Parc and Lessig adds that the subjective form includes a component of self-confidence. Subjective knowledge has also been shown to have greater predictive strength than objective knowledge (Raju, Lonial and Mangold 1995). The present study focuses on the subjective component of product familiarity related to PBM. That is, on the perceived confidence of how much a consumer thinks s/he knows of PBM. It is, henceforth, referred to as PBM Familiarity.

No study has focused on the moderating impact of PBM familiarity on the relationship between the consumer’s perceived nutrition literacy and their willingness to adopt PBM. Studies have focused on the antecedents related to consumers willingness to adopt PBM or other meat substitutes. Mostly, they have been focused on psychological factors. Consumers who tended to adopt PBM were more likely to have positive attitudes and/or beliefs (De Koning et al. 2020) about such food and were generally more willing to try new foods in general. They also found that product familiarity was another important barrier that kept consumers from adopting PBM (Hoek et al. 2011).

Nonetheless, no research has looked at the interaction between the different types of knowledge, namely, the consumer's perceived capacity to understand nutritional literacy and more specific knowledge such as PBM familiarity. The present investigation focuses on the interaction between these two subjective knowledge factors.

**CONCEPTUAL MODEL & HYPOTHESIS**

This investigation focuses on the impact of perceived nutrition literacy on the willingness to adopt PBM and the moderating impact that PBM familiarity has on the relationship. The model is composed of three major constructs namely: Willingness to
Adopt PBM, Perceived Nutrition Literacy, and PBM Familiarity. Willingness to Adopt
PBM represents the behavioral intentions (willingness to try, buy, and pay) to adopt
plant-based meat. Perceived Nutrition Literacy represents the consumer perception of that
capacity or ability to obtain and/or understand nutrition information related to the
promotion of one’s health. PBM Familiarity refers to the perceived confidence of how
much a consumer thinks s/he knows of PBM. Based on the discussed literature, it is
expected that perceived nutrition literacy will have a positive relationship with the
consumer’s willingness to adopt PBM and that the relationship will be moderated by the
product familiarity with PBM.

METHODOLOGY

A convenient sample consisting of 100 people was used for the present study; 56
identified as female and 41 identified as male. Three identified as ‘other’. The age of the
participants ranged from 18 to 30, although most (92.2%) were aged between 18 and 29.
The sample was ethnically diverse and included Asian (40%), African Americans (24%),
Caucasian (14%), Latino (16%), Native American (1%) and other (5%). In terms of
dietary profile, it included flexitarians (15%), vegetarians (10%), vegans (6%),
pescetarians (7%), gluten intolerant (7%), general allergy (3%), meat-eaters (45%) and
other (7%). This study was conducted using an internet platform (i.e., Qualtrics.com) and
promoted through social media and in person. This survey was accessible for two weeks
between November and December 2019. Participation in person was rewarded with
chocolate.

Willingness to adopt PBM was assessed with four items that were inspired from 3
different scales, namely, Food Neophobia Scale (Pliner and Hobden 1992), Food
Technology Scale (Cox and Evans 2008) and the Meet Attachment Questionnaire (Graca, Oliveira and Calheiros 2015) on a seven-point Likert type scale scale and included such items as: “I would like to try plant-based meat” or “I would substitute animal-based meat to plant-based meat for my meal.” (1 = I strongly disagree to 7 = I strongly agree. PBM Familiarity was evaluated using the Zhang and Merunka (2015) scale with four items on a 7-point Likert type scale. It included items such as: “I'm familiar with plant-based meat” or “I have frequently seen or heard of plant-based meat that has been bought for this particular circumstance” (1 = I strongly disagree to 7 = I strongly agree). Perceived Nutrition Literacy was adopted from Gréa Krause et al. (2018). It was measured with four items on a five-point Likert type scale by asking participants: “In general, how well do you understand the following types of nutritional information for (1) Nutrition information leaflets (2) Food label information, (3) TV or radio program on nutrition, (4) Oral recommendation regarding nutrition from professionals.” (1 = I don’t understand at all, 5 = I understand very well).

RESULTS

Willingness to Adopt PBM was measured using four items. Principal component analysis conducted on the four items led to a single factor that accounted for 70.86% of the total variance on the basis of the Kaiser (eigenvalue greater than one) criterion with an eigenvalue 2.84. The Cronbach alpha for internal consistency was .86, which indicated that the measure was very good. Thus, the final Willingness to Adopt PBM factor, was averaged. The mean was 3.91 with a standard deviation of 1.46.
Perceived Nutrition Literacy was measured using five items. The Cronbach alpha for internal consistency was .81. Further examination revealed that if the fifth item was deleted, it would lead to a stronger Cronbach alpha for the remaining four items (a=.83). Thus, this item was purified. Subsequent principal component analysis conducted on the remaining items led to a single factor that accounted for 66.61% of the total variance on the basis of the Kaiser (eigenvalue greater than one) criterion and with an eigenvalue of 2.66. Perceived Nutrition Literacy factor includes the first four items and was averaged. The mean was 3.07 with a standard deviation of .96.

PBM Familiarity was measured using four items. Principal component analysis conducted on the four items led to a single factor that accounted for 63.113% of the total variance on the basis of the Kaiser (eigenvalue greater than one) criterion and with an eigenvalue 2.42. The Cronbach alpha for internal consistency was .78 which confirmed that the measure was good. Thus the final PBM Familiarity factor included all four items and was averaged. The mean was 3.88 with a standard deviation of 1.51.

The conceptual framework of this research proposes that the customer’s willingness to adopt PBM results from the interaction effects of two variables: Perceived Nutrition Literacy and PBM Familiarity. The adequacy of this theoretical model was tested by means of multiple regression. In this multiple regression model, Willingness to Adopt PBM is a linear function of the main effect of Perceived Nutrition Literacy and PBM Familiarity as well as one two-way interaction between the independent variables. The interaction term was abstained by multiplying the corresponding variables. According to the proposed hypothesis, the two-way interaction (Perceived Nutrition Literacy \times \text{PBM Familiarity}) is expected to be statistically significant.
Perceived Nutrition Literacy and PBM Familiarity were centered to minimize multicollinearity. That is, Perceived Nutrition Literacy was centered and is a function of the average ($\mu$) being subtracted from each value of Perceived Nutrition Literacy ($x_i$) and then summated ($\Sigma$). Similarly, PBM Familiarity was also centered and is a function of the average ($\mu$) being subtracted from each value of PBM Familiarity ($x_i$) and then summated ($\Sigma$). A regression analysis revealed that the proposed model provides statistically significant fit for the data ($F (3, 99) = 10.19, p < .01$). In addition, the multiple $R$ of model is .49 and the coefficient of determination ($R^2$) equals .24. The independent variables in the model explain a significant portion of the variance for willingness to adopt PBM. The statistical model for Willingness to Adopt PBM is:

$$\text{Willingness to Adopt PBM} = 3.89 + -.14 \text{ Perceived Nutrition Literacy} + .41 \text{ PBM Familiarity} + .08 \text{ Perceived Nutrition Literacy } \times \text{ PBM Familiarity} + \varepsilon$$

To investigate the interaction effect between Perceived Nutrition Literacy and PBM Familiarity, the two variables were dichotomized using a median split. The median split for Perceived Nutrition Literacy was - .73 and for the PBM Familiarity was -.13. All values that were less than or equal to -.73 were coded as Low Perceived Nutrition Literacy and all values above -.73 were coded as High Perceived Nutrition Literacy. For PBM Familiarity, all values that were less than or equal to -.13 were coded as Low PBM Familiarity and all values above -.13 were coded as PBM Familiarity.

An analysis of variance was conducted with the two independent factors. The estimated means associated with the dichotomized independent variables. The relationship reveals that there is an interaction effect between Perceived Nutrition
Literacy and PBM Familiarity. The results revealed a relationship between Perceived Nutrition Literacy and the Willingness to Adopt PBM. It also revealed that the relationship is moderated by PBM Familiarity \( (t = 2.06, p < .05) \). In the High Perceived Nutrition Literacy condition, the Willingness to Adopt PBM was greater for those who were more familiar with PBM \( (M = 4.10; SE = .23) \) than those that were less familiar with PBM \( (M = 3.10; SE = .65) \). In the Low Perceived Nutrition Literacy condition, the willingness to adopt PBM was greater when PBM familiarity was high \( (M = 3.93; SE = .25) \) than when PBM familiarity was low \( (M = 3.65, SE = .34) \). In other words, consumers relied on their familiarity with PBM more heavily when nutrition literacy was low.

**DISCUSSION**

The present investigation focused on the consumers' perceived nutrition literacy and their willingness to adopt PBM as well as the moderating role of PBM familiarity. The findings revealed an interaction effect between perceived nutrition literacy and PBM familiarity. It also shows that this relationship became stronger when consumers had greater product familiarity than when they had less product familiarity. Consumers with low perceived nutrition literacy relied on their PBM familiarity. High perceived nutrition literacy with low PBM was not beneficial in increasing willingness to adopt PBM. These findings suggest that high perceived nutrition literacy is only beneficial when it is paired with product specific familiarity.

The small sample limits generalizability. Larger samples are needed to determine model robustness. Scales were not pretested and thus, limits the internal validity of the factors. Subjective and/or objective knowledge scales should be evaluated and compared. A comparison of different dietary profiles should also be conducted.
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A QUALITATIVE INVESTIGATION OF WOMEN ACADEMICS’ CITATION EXPERIENCES

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Keywords: academic careers, citation, citation metrics, interpretive phenomenology, women

Description: Inspired by studies that suggest women academics are less likely to self-cite than men, this study takes a qualitative approach to investigate and make sense of women academics’ perspectives of citation, citation metrics, and self-promotion in their academic careers.

EXTENDED ABSTRACT

Research Question
We ask: How do women academics experience and rationalize citation decisions? In responding to debates around gendered citation behaviours, some research concludes that women cite themselves less than their male colleagues do (King, Bergstrom, Correll, Jacquet, & West, 2017; Maliniak, Powers, & Walter, 2013), while others argue that the gender gap in self-citation does not exist at all (Andersen, Schneider, Jagsi, & Nielsen, 2019).

Understanding how women think about citation and citation metrics is important because citation metrics impact academics’ careers in various ways, such as tenure, promotion, and grant allocation decisions. Moreover, exploring self-citation offers unique insights into understanding women academics’ self-promotion behaviors for the purpose of career advancement. To the best of our knowledge, there is no empirical study that has attempted to understand women academics’ citation experiences through qualitative lenses. Thus, this study fills the gap by making sense of women academics’ experience when they read, comprehend, and use citations—including self-citation—in their research. We aim to provide rich understanding of women's decision-making processes around their citation practices.

Method and Data
This study is guided by Interpretative Phenomenological Analysis (IPA), a qualitative methodology informed by and built on phenomenology, hermeneutics, and idiography. IPA emphasizes the double hermeneutics cycle which acknowledges the difference between the realities of the lived experience and the researcher’s interpretation. Through iterative and interpretative data analysis, IPA researchers aim to get closer to and make sense of participants’ lived experiences.

This study employed in-depth semi-structured interviews to explore women academics’ lived experience of citation, citation metrics, and self-promotion. Semi-structured interviews encouraged conversations of participants’ perceptions, decisions, and tensions around their experiences of citation to generate rich descriptions and interpretations of female academics’ lived experiences on this subject matter. All interviews were conducted online via WebEx.
Afterwards, interviews were transcribed verbatim, anonymized, and analyzed following steps prescribed by IPA methodologists (Smith, Flowers, & Larkin, 2009). Eleven women academics in the fields of marketing and management that have published five or more peer-reviewed journal articles have participated to date. Participants are at different career stages from not tenured, tenured, to full professors.

**Summary of Findings**
Three emergent superordinate themes capture the essence of how women academics experience citation: (1) connectedness, (2) open-mindedness, and (3) image management.

First, participants understand citation as a web that connects ideas, arguments, papers, research, and researchers together. Participants’ experiences of learning about citation also reveal connectedness through relationships and networks from which participants infer a system of their own citation practice. Second, participants experience citation in light of open-mindedness, which is showcased through participants’ critical yet compassionate perspectives on citation. Participants reported that citation metrics are but one measure—and that citation metrics are relative, flawed, yet useful. We view criticism towards citation as a form of open-mindedness that inspires discussion around real impact. Third, participants experienced citation through image management. Our data revealed that some participants regarded the act of citing oneself as “boastful” and “cocky” (P2), and they regarded people who self-cite a lot as “in love with their own ideas” (P7) and as having a closed, narrow worldview (P9). Participants’ citation practices reflect an active management (i.e., positioning self as researcher, self-promotion strategy) of how they wish to be perceived by peers, journal reviewers and editors, and other readers of their work.

**Statement of Key Contributions**
By delving into women academics’ lived experience of citation and (self-)promotion in their academic careers, we uncover the lived experiences behind citation and citation metrics. Moreover, this study identifies multiple barriers that women academics are facing when it comes to self-promotion.

This study is useful to multiple stakeholders in higher education and in the academy. First, the findings allow new or emerging scholars to gain insights from other academics’ lived experiences that shape understandings of and attitudes towards metrics, impact measurement, and academic career progression. Second, this study can help women academics to re-visit their self-promotion practices or at least become more awareness of their current self-promotion practices. This study is also important to policy makers and decision-makers in the academy as a reminder to think critically and compassionately about citation indices. This study encourages diversified evaluation measures to capture academics’ impact. Finally, this study calls for awareness and mindfulness in terms of citation practices from both academic and evaluator perspectives to honor and respect the collective space of academia.

*References are available upon request.*
AN ANALYSIS OF PARALYMPIC ADVERTISING 2000-2020

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Keywords: Advertising, Paralympic Games, YouTube, Perceptual Map.

Description: This poster presentation analyses 18 advertisements related to the Paralympic Games from 2000 (Sydney) to 2020/21 (Tokyo) that appear on YouTube, and proposes a perceptual map based on the level of reality and the emotional intent, which has resulted in 4 quadrants: fake, authentic, charity and supercrip.

EXTENDED ABSTRACT

Research Question: What images and messages have been used in the Paralympic-related ads from 2000 to 2020? Can a perceptual map be developed to gain an understanding of the type of messages used in the advertisements?

Method and Data:

After searching YouTube for Paralympic advertisements, a total of 18 advertisements from 2000 (Sydney) to 2000 (Tokyo) were found. The organisations sponsoring these advertisements range from Paralympic Teams (Paralympics GB, Czech Paralympic Team and Canadian Paralympic Committee), media (ntv7 Malaysia and Channel 4 UK) and commercial companies (Westpac, Toyota, Samsung, Allianz, and Swisse). Using semiotic analysis to examine the images presented in the advertisements, it can be seen that there has been an evolution in the images portraying disability in the ads. More specifically, the signals and themes in the advertisements have gone from using sympathy to raise money to showing the amazing physical abilities of Paralympians.

Summary of Findings:

The early ads were more about asking for donations to assist the Paralympians. Often there was the use of sympathy. In 2008 the Beijing Organising Committee ran an ad that encouraged people to cheer on Paralympians, although the first half of the ad related to feeling sorry and helping people with disabilities. However, it was at these Games that the exciting ad for Paralympics GB revolutionised the image by focusing on the athletes with the music being Paul McCartney singing “Live and Let Die”. This was followed in 2012 by the ad for Channel 4’s coverage “Meet the Superhumans”, to the sounds of "Harder than you think" by Public Enemy. This was a landmark advertisement that got a lot of praise. In 2017 the Rio ad for Channel 4 was “We’re the Superhumans”, which is a visually amazing ad with the song “Yes I Can”, with images of disabled musicians, dancers and athletes. Therefore, the images in the Paralympic ads have evolved from
charity to champions. From the analysis a perceptual map was developed based on the level of reality and the emotional intent, which has resulted in 4 quadrants: fake, authentic, charity and supercrip.

**Key Contributions:**

This study provides an important contribution to the understanding of images of disability over a 20-year period as the perceptions of the Paralympics have also changed. Previous studies have looked at issues like sport media representation, inclusiveness, accessibility, the history and legacy of the Paralympics, but this is the first analysis of advertisements for the Paralympics, which has also developed a perceptual mapping of images of people with a disability. From a public policy perspective, this study will also assist in guiding practitioners in promoting images that are not offensive to the Paralympic and disability community and increase their understanding of presenting images of people with disabilities. Future research can test the mapping on other Paralympic ads in the print media and other non-Paralympic advertisements showing people with disabilities.

*References are available upon request.*
Changing Consumer Attitudes Toward Reckless Driving Controls

Statement of Key Contributions:

A libertarian is someone who believes in minimal state intervention in the lives of citizens. The recent resistance to mask-wearing led us to search for studies of the impact of libertarianism on consumer behavior, specifically attitudes toward reckless driving controls (RDCs).

We found no such research and could not even find a validated scale that measures libertarianism. We have developed such a scale and studied its influence on attitude toward various reckless driving controls. How influential is libertarianism compared to a history of reckless driving, age, gender, and education? We further theorized and tested whether the immediacy, directness and personal applicability of the intervention (the type of control) moderated libertarianism’s influence on RDC attitude.

The MTurk survey studies that were undertaken included control of self-presentation and common method variance biases. The first study identified four related dimensions of libertarianism and three of them significantly influenced RDC attitude, collectively far more than any other determinant including respondent’s reckless driving history. The final study tested libertarianism’s differential effect on attitude toward (1) automated fine controls, (2) automated adjustment of insurance premiums as a control, and, (3) automated mechanical controls such as governors and automated braking. We did not observe that libertarianism was a greater influence on attitudes toward automated mechanical controls as predicted. Attitudes toward the latter were generally more positive than expected.

Our results offer important actionable insights for policymakers, insurance companies, and developers of driverless car safety technologies. Future policy and PR campaigns should be targeted at libertarians who are significantly more accepting of reckless driving controls use on “at-risk” segments. We also observed that attitudes toward the judicious use of new technology control such as speed cameras in “at-risk” contexts are less influenced by libertarianism. Libertarians are somewhat rational and, hence potentially persuadable.
Extended Abstract:

The purpose of the following research undertaken in a driver survey was to: (1) identify libertarianism and whether it influences acceptance of innovations in reckless driving control (RDC) systems, and, (2) whether there are specific types of RDC systems that libertarians particularly reject. We undertook a field experiment that tested assimilation-contrast theory (Sherif, Taub, and Hovland 1958) in attitudes toward reckless driving controls. In popular vernacular, we studied a frog-boiling phenomenon. If the concepts are introduced in order of their acceptability to drivers then it will result in more positive attitudes and behavioral intentions toward such controls, particularly libertarians. The attitudes proved to be robust, not affected by this treatment.

Driver Speeding and Reckless Driving Controls (RDCs):

In 2013 the National Highway Traffic Safety Administration published a study of driver attitudes toward speeding and several existing and possible reckless driving controls (Schroeder, Kostyniuk and Mack 2013). It was based on a meticulously undertaken national sample and telephone survey of 6,144 U.S. Households. The results indicated speeders thoughtless of such RDCs but women thought more of the RDCs across the board. There were no detectable effects of age on attitudes toward RDCs but interestingly the higher educated had more negative attitudes but perhaps this was confounded with a higher income effect and a resulting increased likelihood of speeding. The above results spurred our interest in undertaking a more comprehensive study of a greater variety of RDCs and studying libertarianism in this regard.
Studying Libertarianism

In studying the effect of libertarianism, a Social Sciences Citation Index search of the Web of Science for papers on the topic “Libertarianism measurement” resulted in a single article that had been cited twice (Cheng, Bynner, Wiggins and Schoon 2012). The paper reported a seven-item scale with an alpha reliability of 0.67 and test-retest reliability over 10 years with the same very large national election sample of Britain’s of 0.66. In considering using this scale we decided that its death penalty and divorce questions had become dated so we based our 12 item scale on three measurement dimensions that appeared to be present in Cheng et al. (2012) and the only other scale we could find (Heath, Evans and Martin 1993): (1) believing in individual rights (2) resistance to the overreaching of authority and, (3) a concern over the state teaching children discipline and the obeying of rules.

In the following section, we present our two major studies that explored both the dimensions of RDCs and libertarians. We ranked 44 RDC concepts as good ideas and this formed the basis for our experimental condition in our second study. In the following sections, we discuss the limitations of our research, further research that might inform the topic, the role the auto insurance industry might play in the future to reduce reckless driving, accidents, premiums, and its revenues, and the prioritizing of the introduction of future RDCs by their acceptability as well as their effectiveness.

Methodology:

Both studies employed a similar methodology. First, participants responded to a series of MTurk worker demographic and attention check questions. Participants were then asked a series of questions about their own driving behaviors. Next, the participants were presented with a
series of speed reduction countermeasures (RDCs) and asked to respond whether implementing each countermeasure in their community was a good or a bad idea. Then, they responded to the Libertarianism Scale, general attitudes toward driving control systems, a set of questions to assess how much the respondents care about others, and how much empathy they feel for others. Finally, participants responded to a self-presentation bias scale, demographic questions, and the final attention check items.

Selected results:

We first computed the mean duration of time spent undertaking the survey and eliminated a handful of subjects who took less than three minutes to complete the study. We then addressed our concern over self-presentation bias by computing the correlation of the self-presentation bias measurement scale with our independent and dependent variables. We detected a self-presentation bias in subject’s reporting of whether they ever speed in residential neighborhoods, whether important others consider them safe drivers, whether these important others are safe drivers, and with our Libertarian scale overstating a belief school should discipline kids more and understating their concern over the power of authorities. All these biases were removed by regressing self-presentation bias against these variables and using the residual as the independent variable. The only dependent variable that was subject to a statistically significant self-presentation bias was the over-rating of the set of 10 most highly rated concepts.

Common Method Variance concerns in our data were addressed in two ways. It is visually observed in correlations between all the variables being high and all a similar amount. Extreme variations in our observed correlations from -.37 to .70 were observed suggesting no problem with CMV but in an abundance of caution, we employed the M marker method of
removing any CMV effects (Lindell and Whitney 2001; Malhotra, Kim and Patil 2006). We used Empathy as the Marker variable and it was regressed against all our dependent measures and when it was significant the dependent measure’s residual was used in our analysis. The only significant relationship this marker variable, Empathy had was with the fourth varimax dimension of our Libertarian scale that measured belief that society should accept all religions, opinions, and choices (explained 3.3% of its variation).

In summary, we developed the dimensionality of libertarianism that was confirmed and replicated. We tested the robustness and implied centrality of the attitudes through priming and anchoring manipulations. We discovered a significant effect of the target segment and determined that attitudes towards automated vehicle controls developed by driverless vehicle technology were not significantly different from the other control systems that we studied.
REFERENCES


EXTENDED ABSTRACT

Title:
Comparing meat-eaters and vegetarians using the RRT: the case of health and taste dimensions

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Keywords:
Known group approach, plant-based dieters, meat-based dieters, relational responding task, implicit measures

Description:
Two evaluative dimensions affecting the intention to reduce meat consumption (health and taste concerns) were incorporated into the Relational Responding Task (RRT), a relatively new implicit (attitude) measure, to compare meat-eaters and vegetarians in terms of their implicit attitudes towards plant-based diets and meat-based diets.

Research question:
Can we find an expected implicit attitude in the correct direction (meat eaters positively evaluate meat-based diets and vegetarians positively evaluate plant-based diets) between meat-eaters and vegetarians using a relatively new implicit measure task (the relational responding task) with health and taste dimensions incorporated into the task?

Method and Data
The relational responding task was used to measure implicit attitudes between meat-eaters and vegetarians on plant-based diets and meat based diets. Reaction times were measured in milliseconds and were transformed into D-scores using the improved scoring algorithm. We calculated a D-score for the health dimension and D-score for the taste dimension. The test was designed in such a way that a positive D-score implies a positive evaluation of meat over vegetables. 60 vegetarians and 60 meat-eaters from Prolific website (68% females, Mage= 32.23, SDage= 12.45) took the RRT.

Summary of Findings
Results showed that both groups held positive implicit attitudes towards plant-based diets relative to meat-based diets, both in terms of the health dimension and the taste dimension.

Statement of Key Contributions
We demonstrate for the first time that the RRT allows for the simultaneous measurement of multiple implicit beliefs, thereby circumventing a major shortcoming of the well-known the Implicit Association Task (IAT).
IMPACT OF COVID-19 PANDEMIC ON THE LOCAL ECONOMY

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Keywords:
COVID-19, local economy, small business, pandemic

Description:
This research investigates the impact of COVID-19 on businesses at a micro-level by focusing on firms located in Marin County, California.

EXTENDED ABSTRACT

Research Questions
This research examines how small businesses’ financial performance changed in response to COVID-19. Moreover, this study investigates consumers’ perceptions and corresponding actions and their effects on firm performance. Studying the impact of a negative shock, such as a global pandemic at the micro-level, is essential because small businesses are among key players in the
Thus, this study compares pandemic’s impact on the economy across different levels (i.e., national, state and county) to help public policymakers design more effective economic solutions.

**Method And Data**

This study uses a publicly available database from opportunity Insights (Chetty, Friedman, Hendren, Stepner, et al., 2020) that tracks economic activity at a granular level in real-time using anonymized data from private companies. This dataset reports daily or weekly statistics on consumer spending, business revenues, employment rates, and other key indicators. This dynamic dataset releases each data series at the highest available frequency using an automated pipeline that ingests data from data providers. This study uses national level daily data from February 24, 2020, to October 25, 2020. Based on this secondary data analysis, two survey questionnaires are designed. One was distributed to customers to better understand how this pandemic influenced their perception toward spending, saving, and purchasing behavior. The other was distributed to local small businesses to gain insights on how this pandemic impacted their businesses.

The proposed model was tested by running a Generalized Least Squares Regression, and the Hausman Test (Hausman, 1978) chose the fixed effect model favorable (\(p\) value = .000 for both models).

**Summary of Findings**

The model is statistically significant (\(F_{(7,12437)} = 3479.13\)). High-income customer’s spending does not influence small businesses’ performance at a significant level (\(p = .061\)). On the other hand, middle- and low-income customer groups’ spending positively influence small businesses’
performance ($p = .000$ for middle income; $p = .000$ for low income). The number of COVID-19 cases and deaths negatively influence small businesses’ revenue ($p = .000$ for case count; $p = .000$ for death count). For mobility, both times spent outside of and at residential locations negatively influence small businesses’ revenue.

Even though high-income customers’ spending is not significantly influential, the relationship’s negative direction hints at a loose connection between small businesses and high-income customers. COVID-19 case count and death count accompanied by the safe order (e.g., shelter-in-place) may discourage people from doing in-person visits to local small businesses. While, as customers stay home longer because of their safety concerns or the safety order, small businesses lose their revenue. The amount of time customers spend outside the home is also negatively influential to small businesses’ revenue. It could be because customers make more online delivery orders or online pick-up orders and online purchases than before.

**Statement of Key Contributions**

A common characteristic among existing studies is that they observe the problem at the national and aggregate levels. However, the extant literature lacks research investigating the issue at a micro, e.g., county level. This study tries to address this issue by examining the impact of this pandemic on the local businesses in Marin County, north of the San Francisco Bay Area.

Bartik, Bertrand, Cullen, Glaeser, Luca & Stanton (2020) and Fairlie (2020) focus on small businesses in the U.S. at an aggregate level and present the big picture of the impact of the pandemic on these businesses. However, entrepreneurship’s contribution to economic development can change significantly between countries and regions (Acs, Desai & Hessels, 2008; Westlund and Bolton, 2003). Thus, it is crucial for public policymakers to be acquainted
with local factors and variables specific to different contexts (Acs, Desai & Hessels, 2008).

Geography (Rappaport and Sachs, 2003) and population diversity (Alesina, Harnoss & Rapoport, 2016) play important roles in economic growth and prosperity. Our paper aims to contribute to the literature by presenting evidence from Marin County, north of the San Francisco Bay Area. Marin County is a Pacific coastal county.

**References**

References are available upon request.
SUSTAINABLE DIETS ADOPTION: THE EFFECT OF PHYSICAL ACTIVITY AND BODY IMAGE AMONG THE ITALIAN AND BRAZILIAN POPULATIONS

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Keywords: body image, consumer behavior, food purchase, physical activity, sustainable diets.

Description: The present research has implications for policymakers, academicians and marketers who have an interest in understanding the individuals’ intention and behavior to adopt no meat and sustainable dietary patterns as an emerging consumers’ patterns, since increasing environmental consciousness may influence new behaviors, affecting product management, brands equity and retail practices.

EXTENDED ABSTRACT

Previous studies which have explored the motivations of food purchase behaviors in emerging economies (Basha & Lal, 2019) and developed economies (Tam et al., 2016) did not consider the effects of physical activity and body image concerns and the moderating effect of the perceived benefits on the adoption of sustainable diets. In this sense, the current study extends the previous knowledge applying for the first time a more comprehensive framework to evaluate sustainable dietary patterns.

Furthermore, a relevant possible contribution could be given to the sustainability literature since this study could guide future actions to diminish psychological distance to ecological issues when deciding on dietary changes (Burlingame & Dernini, 2012). In this sense, important
implications for public health, well-being promotion, and education under many points of view could arise. It may be that individuals are not associating their personal choices of dietary changes to the external environmental consequences. This implies that a major focus on the prevention phase should be made by private and public institutions to contribute to the preservation of the environment. Thus, through the alignment of a critical mass of actors (media, NGOs, governments, and private companies) it can be effectively reached a large mass of consumers and underlined the urgency to switch current dietary patterns highlighting the principal benefits of a sustainable diet for producers, consumers, and the environment.

**Research Question**

This explorative study aims at answering the following research question: “What are the effects of physical activity and body image on sustainable diets adoption?” Besides this core objective, this research tries to pursue three secondary objectives:

- Identify the relationship between the perceived benefits of adopting a sustainable diet and the adoption of the sustainable diet.
- Verify if the perceived benefits effectively moderate the relationship between physical activity levels and body image concerns with the adoption of the sustainable diet.
- Highlight key differences among the Italian and Brazilian populations in terms of physical activity, body image, perceived benefits, and sustainable dietary behaviors.

**Method and Data**

An exploratory cross-sectional survey was conducted using Toluna, a web-based consumer panel. An initial pre-test was performed with 10 respondents, 5 Italians and 5 Brazilians, comprised of both academics and nutrition professionals (technicians) to technically improve the questionnaire. In total, 403 individuals participated in the study, 202 from Italy and 201 from Brazil, respectively.
The questionnaire consisted of 40 questions, and it was submitted in both Italian and Portuguese versions. The questionnaire was formulated from a review of the literature (Lea et al., 2006; Hall et al., 2017), and from questionnaires previously composed to examine the level of physical activity (Copeland et al., 2005), the body image perception (Evans & Dolan, 1993), the benefits of switching to a plant-based diet (Fehér et al., 2020) and the behaviors towards more sustainable dietary patterns (Ahmed et al., 2019). A generalized linear model (GLM) was used to assess the data from 403 adults aged more than 18 participated in the study, respectively 202 from Italy and 201 from Brazil.

**Summary of Findings**

Brazilians are more physically active than Italians (t = 2.189, p < 0.050). Considering age, there is an inverse relationship between age and PA levels. Young adults (aged 18-34) are the ones with the highest levels of PA (medium-high PA and high PA) both in Italy (23.18%) and especially in Brazil (37.28%) compared to the others (29.68% of the total respondents have medium-high or high levels of PA).

The perception of the benefits related to sustainable dietary behaviors from the sample of reference was overall high (\(\bar{x} = 5.20; \sigma = 1.20\)) on a 7-point Likert scale, with Brazilians showing a higher perception of benefits than Italians (t = -3.341 at p < 0.050). The “personal” benefits, belonging to the health and well-being and contentment categories, are perceived higher (\(\bar{x} = 5.39; \sigma = 1.18\)) than the “altruistic” benefits, more related to ethical and environmental issues (\(\bar{x} = 5.02; \sigma = 1.41\)). This is the confirmation to the previous literature which affirms that there remains still plenty of opportunities to connect individuals’ behavior in respect of environmental issues related to food consumption.
The level of adoption of sustainable food behaviors from the sample of reference was moderately high ($\bar{x} = 4.65; \sigma = 1.94$) on a 7-point Likert scale, with no relevant differences on average between Italians ($\bar{x} = 4.69; \sigma = 1.89$) and Brazilians ($\bar{x} = 4.62; \sigma = 1.99$). The comparison of a high-income country and an upper-middle-income country confirms the previous body literature about food affordability and accessibility.

**Statement of Key Contributions**

The GLM ($G^2 (6) = 178.927, p < 0.001$) has shed light on several research objectives (Table 1). Being engaged in physical activities has proved to be a factor that positively influences the adoption of sustainable dietary behaviors, confirming that active individuals lead a healthier lifestyle than most of society. In contrast, having a concern with the body image does not reflect in adopting sustainable diets, partially mirroring the debate already shown in the literature and leaving space for reflection. Finally, having a high perception of the benefits of adopting a sustainable diet can increase the adoption of sustainable diets, but the benefits do not moderate the relationships between physical activity and body image and adoption.

This initial assessment has explored a new field and has proved half of the six hypotheses initially stated. However, there is still a lot of space for future investigation, with particular attention to the relationship between physical activity, the body image concern, and the adoption of sustainable diets. In this sense, the authors are working on a new research including four other European countries (France, Spain, United Kingdom and Germany) that could add further insights on a complex phenomenon with a lot of social, economic, and cultural facets.

References are available upon request.
Tackling climate change causes with sustainable behaviors: to relate to environmental problems or to health risks?

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Keywords: consumer, health, environment, gain, risk, pro-environmental behavior

Description: we investigate the conditions in which communicating health risks versus environmental risks related to the fossil fuel-based car use can increase consumers’ intention to adopt sustainable transportation.

Research Question

Unsustainable consumption (such as excessive fossil fuels use) have not only caused environmental problems, but they are also responsible for the majority of health problems in humans (i.e. increased risks for respiratory diseases). Health risks, unlike environmental risks, put one’s self in danger and thus are more likely to receive the individual’s actions to eliminate or lessen the risk and its causes (White et al., 2019). Our research question is: are health risks communications more effective in promoting sustainable behaviors compared to environmental risks communications? When and under which conditions?

We hypothesize that messages including health risks related to the fossil fuel-based cars are more effective in improving consumers’ intentions for sustainable transport when compared to messages including environmental risks. Moreover, lowering the health risks is associated with self-benefit and achievement. We expect that higher intention for the sustainable transport, when it is paired with lower health risks, will increase the feeling of pride in individuals (Peter & Honea, 2012). We thus hypothesize that the feeling of pride mediates the relationship between health-related messages and intention for sustainable transport.

Method and Data

337 individuals from the US participated in this study on Amazon Mechanical Turk. We asked participants to read an excerpt from a magazine report and to answer some questions afterwards. See Appendix for the three conditions: control, health and environment.

Next, using the Likert scale (1(extremely unlikely), 7(extremely likely)) participants indicated how likely they were to use car sharing, if the price was acceptable, and in order to decrease carbon emission. Afterwards, participants indicated using the Likert scale (1(extremely unlikely), 7(extremely likely)) how likely it was for them to experience pride if they contribute to lowering carbon emission. Next, they answered an attention check question on the percentage of electric...
cars, evaluated the magazine excerpt in terms of being realistic and answered two questions for manipulation check, i.e. how much they agreed that climate change causes rise of sea levels and how much they agreed that climate change causes higher risk of respiratory infections. Finally, participants indicated how well-functioning is the infrastructure in their cities for car sharing and answered some demographics questions.

**Summary of Findings**

We did not find a significant difference between the likelihood of using car sharing between the participants in the control and the environment conditions (M\_Control =3.25, M\_Env.=3.50, t(279)=.85, p=.39). However, this difference was marginally significant between the control and the health conditions (M\_Control =3.25, M\_Health=3.77, t (279) =1.71, p=.08). This result supports our hypothesis on the higher level of effectiveness of highlighting health consequences versus environmental consequences in improving the sustainable behaviors of individuals.

We found a significant difference between the likelihood of feeling proud between the participants in the control and the health conditions (M\_Control =4.95, M\_Health=5.47, t(279)=2.25, p=.02) but only marginally significant between the participants in the control and the environment condition (M\_Control =4.95, M\_Env.=5.33, t(279)=1.66, p=.09).

Our findings highlight the higher effectiveness of communicating the health consequences compared to the environmental consequences of unsustainable transport on increasing the intention of individuals to adopt sustainable transport (car sharing). Our participants felt prouder when they intended to adopt sustainable transport and when we paired it with lower health consequences (versus environmental consequences).

**Key Contribution:**

While previous research has shown that consumers perceive the food products with social and environmental responsibility attributes as healthier (Schuldt and Schwarz, 2010; Peloza et al., 2015), the association of other categories of sustainable products and pro-environmental behaviors with health consequences has not been investigated (White et al., 2019). This is particularly important to understand as communicating health consequences for motivating sustainable behaviors/consumption could be a more fruitful strategy in magnifying the gain from sustainable consumption when compared to communicating the monetary gains. Predominantly, high-cost sustainable consumption is argued to be more accessible for people if the monetary incentives are in place (Rezvani et al., 2018). However, focusing only on the monetary gains (e.g. tax reduction for green alternatives) ultimately results in sustainable consumption only if the monetary gains exist (Steg et al., 2014).

We contribute to the marketing and sustainability literature by investigating the conditions in which communicating health risks versus environmental risks related to the fossil fuel-based car use can increase consumers’ intention to adopt sustainable transportation. Our findings have implications for policymakers, environmental organizations and businesses when drafting their communication strategies related to environmental policies and sustainable personal transport.
Extended Abstract

THE IMPACT OF THE HEALFULNESS AND FRONT-OF-PACKAGE (FOP) INFORMATION ON BRAND PERFORMANCE: THE CASE OF FOOD INDUSTRY IN SOUTH KOREA

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Keywords: Well-being, Food Healthfulness, Front-of-Packege (FOP), Nutrition Facts Label, Brand Sales

Description: This paper seeks the effects of overall food healthfulness and Front-of-Package on brand sales.

EXTENDED ABSTRACT

Research Question

This research offers insight by addressing two important research questions:

(1) Does overall healthfulness of food products affect firm’s brand sales?

(2) What are the effects of FOP information on firm’s brand sales?
Method and Data

To empirically test our research questions, the authors used a diverse secondary database to understand how overall healthfulness and FOP information (e.g., nutrition and health claims) affect brand performance. This study employs brand sales data over 9-year periods (2011-2019) provided by Nielsen Korea. The authors collected 35 Korean food companies and their 216 brands’ nutritional contents from Korean Food and Drug Administration (KFDA). For the FOP nutrition labeling data, they collected package images from company’s official website. Finally, the total sample size is 5,173.

First, the authors conducted a pre-test to verify the first research question. They divided brands into two groups (High healthfulness group vs Low healthfulness group) and conducted a $t$-test to check the difference in brand sales. Second, they empirically examined the impact of overall healthfulness and FOP information on brand sales by using panel models. Among panel models, our final model is a random effect model with a lagged dependent variable (i.e., Hausman-Taylor estimator). This is effective in controlling individual heterogeneity, heteroskedasticity, and unobserved heterogeneity problems.

Summary of Findings

Our study showed that healthy foods positively impact firm performance. The result shows that the difference between two groups (High healthfulness group vs Low healthfulness group) is statistically significant, where the $t$ value is -9.95. Furthermore, panel models reveal that healthier foods can increase brand sales. Finally, FOP information (i.e., summary indicator) has a positive impact on brand sales. The results are consistent across the alternative model specifications.
Statement of Key Contributions

Our contributions to the literature include following: 1) Improved a way of measuring the overall healthfulness; 2) First empirical study exploring the relationship between health and brand sales; 3) Effects of FOP information on brand sales. Our finding would offer guidance to brand managers regarding how overall healthfulness and FOP information may influence brand sales in the food industry. The authors offer how to formulate product nutrients and package design when developing a new product. The results of current study can be used for diverse health-related policy making. Finally, the authors believe that the results of this study would ultimately contribute to improve the overall health indicators.
Extended Abstract

The Incidental Effect of Changes in Nutritional Labelling Regulations on Consumers' Preference for Healthy Options – An Attention Based Explanation

In a laboratory study using a between-subjects design, the authors study the effects of original and new nutrition label and consumer involvement on choice. Consumer involvement and label type is shown to interact with each other to influence their choice. The authors demonstrate that only a small proportion of consumers choose a healthier brand under low involvement conditions when they saw the snack bar with the new nutrition label, while a bigger proportion of participants chose a healthier brand when they saw the snack bar with the old nutrition label under the same conditions.

Statement of Key Contributions

The FDA announcement of the new 'nutrition facts label' for packaged foods requiring firms to display calorie information on a larger font type is anticipated to help consumers make an informed decision (FDA, 2019). However, what if the bigger font pulls consumer’s entire attention to only the calories and cause the consumer to ignore the quality of the other nutrients. For instance, sugar is one of the major causes of cardiovascular disease, obesity (Johnson et al., 2007), which leads to death in the US (Adult Obesity Facts, 2020; Heart Disease Facts, 2020; Masters et al., 2013). The estimated annual cost of health care services, medicines, and lost productivity due to death as a result of cardiovascular disease is $219 billion (in 2015) (Heart Disease Facts, 2020), and obesity is $147 billion (in 2008) (Adult Obesity Facts, 2020). Although the amount of sugar present in food items is important to be considered, our study shows that consumers pay reduced attention to sugar while assessing food products with the new nutrition labels. Consumers integrate prior knowledge and experience with information from a stimulus during the evaluation of a product (Payne, Bettman, & Johnson, 1993; Petty & Cacioppo, 1986). As calories are known to be one of the important factors to be considered while evaluating food products, does influence choice? This research investigates the effect of the new nutrition label on buying decisions. And conditions under which the new label lead consumers to choose healthier options compared to the old labels? The work, which integrates nutrition and consumer research to address a consumer-relevant problem, is expected to inform policymakers’ understanding of the impact of new nutrition labels and guide consumers to be mindful of the bias that can cause them to choose unhealthy options.

Conceptual Framework

Calorie information displayed prominently as in the new nutrition labels remind consumers to consider nutrition attributes during their product evaluation (Enax, Krajbich, & Weber, 2016; Goswami & Urminsly, 2015) and promote more information usage (Russo, Staelin, Nolan, Russell, & Metcalf, 1986). However, if the prominent font pulls consumer attention only to the calorie values, it could come at the cost of ignoring the quality of the other nutrients such as sugar. Sugar is one of the major causes of cardiovascular disease and obesity (Johnson et al., 2007), and these two diseases are major causes of death in the US (Adult Obesity Facts, 2020; Heart Disease Facts, 2020; Masters et al., 2013). The estimated annual cost of health care services, medicines, and lost productivity due to death as a result of cardiovascular disease
is $219 billion (in 2015) (Heart Disease Facts, 2020), and obesity is $147 billion (in 2008) (Adult Obesity Facts, 2020). Although the quantity of sugar present in food items is important to be considered while evaluating nutrients, our initial experiment using a survey methodology found consumers make choices consistent with the idea that they pay reduced attention to sugar while assessing food product with new nutrition labels.

The elaboration likelihood model provides a theoretical foundation for information processing under different consumer involvement levels. Highly involved consumers search and process information in greater detail through the central route (Petty, Cacioppo, & Schumann, 1983), compared to low involvement consumers who look for product information superficially and process information through peripheral route (Petty et al., 1983). Depending on their involvement level, consumers differ in their search for information and decision processes (Laurent & Kapferer, 1985).

The salience of calorie value can influence product evaluation depending upon the consumer's involvement with the purchase decision. When the purchase decision involves high involvement, equal attention is given to all the nutrients as a result of top-down processing, but if the purchase decision is low involvement, the focus will be drawn to the salient attribute of the product (Bordalo, Gennaioli, & Shleifer, 2013). The hypotheses are as follows:

**H1a. Consumers less involved in processing the nutrition information are likely to choose a healthier snack brand with the original (old) nutrition label than with the new nutrition label.**

**H1b. Consumers highly involved in processing the nutrition information are likely to choose a healthier snack brand with the new nutrition label than with the old nutrition label.**

**Description of the method, Data, Results, and Conclusions**

We began the study in 2019 when most products on the retail store shelves still had old labels. Two hundred and eighty-six student participants from the University of South Florida took part in the study in exchange for credit. The study had a 2 (label type: old vs. new) x 3 (involvement: high vs. low vs. control) between-subject factorial experiment design with the choice as the dependent variable.

The participants were asked to select one of the two snack brands	extsuperscript{1}. The brands had the same snack image, but they were different in their nutrition compositions; one was healthy and the other unhealthy. The snack bar with 160 calories and 0 gms of sugars is more nutritious than the snack bar, which had 110 calories and 4 gms of sugars	extsuperscript{2}. The brand names and the order in which the snack bars were shown to the participants was counterbalanced. Data shows that the label and involvement type influenced the snack brand people chose (see Figure 1).

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\textsuperscript{1} Brand names were pretested for familiarity and likability.

\textsuperscript{2} A nutrition expert (Professor of nutrition) assessed one bar as healthy and the other as less healthy.
The results show that a higher proportion of consumers choose a healthier brand under high involvement conditions when they saw the snack bar with the new nutrition label than when they saw the same bar in the old nutrition label. However, a higher proportion of participants chose a healthier brand under low involvement conditions when they saw the snack bar with the old nutrition label than when they saw the same bar in the new nutrition label. The tendency for consumers to choose the unhealthy option under low involvement with new nutrition label has implications because consumers are known to spend little time and effort when they make decisions about everyday products (Alden, Hoyer, & Wechasara, 1989; Dickson & Sawyer, 1990; Hoyer, 1984; Macdonald & Sharp, 2000).

This study examined the combined effect of nutrition label type and the type of consumer involvement during product evaluation on the type of food they choose, and it was significant (Wald $\chi^2 (2) = 7.17, p<.05$). The snack brand chosen depended on the amount of consumer involvement in the decision making and the label type the consumer saw ($b=.17$, Wald $\chi^2 (1) = 3.51, p=.06$) and ($b=.18$, Wald $\chi^2 (1) = 6.82, p<.05$). In the low involvement condition, while only 35% of participants who chose from the new label selected the healthier brand, 51% who chose from the old label selected the healthier brand. However, in the high involvement condition, while 45% of participants who chose from the new label selected the healthier brand, only 24% who chose from the old label selected the healthier brand.
References


THE ROBOTS ARE COMING: HOW WILL CONSUMERS REACT?

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Key Words: Robot, Robot Future, Consumer Emotions, Consumer Reactions

Description: A text mining study to identify consumers’ perceptions of and emotions toward the robot future.

EXTENDED ABSTRACT

Research Questions

1. How will consumers react to the coming wave of robots?

2. What factors will cause consumers to embrace the robot future versus resist it?

3. Will emotions play a role in consumers’ reactions?

Method and Data

Through a national online survey (n =501), we collected quantitative data on when consumers think the robot future will take place (near future, distant future) and how they think it will affect society (bad, good). This data helped to form and validate a typology grounded in AI.
research (Tegmark, 2017): Scaredy Cats (near future, bad), Open-Minded Realists (near future, good), Ostriches (distant future, bad) and Not on my Radars (distant future, good).

Moreover, we used automated sentiment text analysis (Humphreys and Wang, 2017) to measure consumers’ emotions in their open-ended responses to eight possible policy scenarios (e.g., job threats, potential malfunctions, impact on privacy, etc.). Drawing upon construal level theory (Trope and Liberman 2010) and appraisal theory of emotions (Moors et al. 2013), we developed and tested the following hypotheses:

H1: “Scaredy Cats” and “Open Minded Realists” will exhibit more emotional intensity than the other segments.

H2a: “Scaredy Cats” will exhibit more anger than other segments.

H2b: “Ostriches” will exhibit more fear and anxiety than other segments.

H2c: “Open-Minded Realists” will exhibit more excitement and joy than other segments.

H2d: “Not on my Radar” will exhibit more hope than other segments.

Summary of Findings

In summary, we propose and validate a typology that classifies consumers’ views of the robot future based on when they think it will occur and how they think it will impact society. Moreover, drawing upon construal level theory and appraisal theory of emotions, we make predictions about how these consumer segments will react to the robot future. Results from our text mining analysis show that consumers who think the robot future will take place in the near future (“Scaredy Cats” and “Open-Minded Realists”) are more emotional than those who believe it will occur in the distant future (“Ostriches” and “Not on my Radars”) (H1). We also find that “Scaredy Cats” (near future, bad) used more angry terms than other segments (H2a), that “Open-
Minded Realists” (near future, good) exhibited more joy and excitement (H2c) and that “Not on my Radars (distant future, good) were more hopeful when discussing robots (H2d).

**Key Contributions**

Robots are becoming increasingly prevalent in customer-facing roles, yet very little research has been conducted on how consumers will react to this. We contribute to understanding of consumer behavior and technological change by proposing and validating a typology that classifies consumers based on when they think robots will surpass humans and whether they think that will be bad for society. Furthermore, drawing upon construal level theory and appraisal theory of emotions, we predict how each consumer group in the typology would react to a multitude of potential developments in an upcoming robot era. Through empirically examining those reactions using text mining, we investigate whether there are significant differences in emotional reactions between these consumer segments. This link between emotions and the future acceptance of new technologies contributes to the new product acceptance literature by introducing the important role of emotion in new product acceptance. Our findings can help companies better predict reactions of their target consumer segments when introducing robot-related products/services to market. Finally, consumers’ emotional reactions to the eight issues included in our study can help policy makers implement more robust policies to assure consumer wellbeing in a robot future.

**References**

References are available upon request.
TWITCH STREAMERS AND THEIR RELATIONSHIPS WITH VIEWERS”

MARKETER PARADISE OR THREAT TO CONSUMER PRIVACY?

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Key Words: Gaming, Parasocial Interaction, Privacy, Self-Disclosure, Engagement

Description: In this extended abstract, we examine the perceptions of Twitch streamers regarding their perceptions of their relationships with their viewers and the potential privacy concerns therein.

EXTENDED ABSTRACT

Research Question

Academic research in Twitch has focused on descriptions of technology (e.g. Payne et al. 2017), descriptions of the communities (Wohn & Freeman 2020), and reasons why people watch or engage (Lybrand 2019). Minimal research exists on Twitch streamers and their relationship with their viewers. However, the social aspect of the platform via the comment section may result in the development of a parasocial relationship (Horton and Wohl, 1956 p. 215) in which viewers have the “illusion of a face-to-face relationship with the performer” and may “develop a sense of intimacy, perceived friendship, and identification with the celebrity” (Chung & Cho 2017, p. 482).

As the streamer plays, s/he engages with the audience and often self-discloses personal information. The streamer’s self-disclosure may encourage reciprocal viewer disclosure as the
streamer’s actions can convey liking and trusting of the viewers (e.g. Gould and Brounstein 1981), furthering the parasocial relationship. Viewer self-disclosure may provide desirable information to marketers that the streamers and audience members may not divulge in traditional marketer requests. This study provides an exploratory examination of how Twitch streamers perceive their relationships with viewers and marketers, how self-disclosure of personal information prompts others to self-disclose and thoughts regarding privacy on the platform.

Method and Data

Using Ground Theory (Chamaz and Belgrave 2012), we are conducting semi-structured interviews with individuals who have streamed video games on Twitch in the past 30 days. The interview covers three main areas: 1) Content - motivations for being on the platform, how they built their community, what their stream looks like and any rules for content and engagement, collaboration with other streamers, their viewers’ role in content creation; 2) Privacy – perceptions of privacy on Twitch, their privacy management rules and the value of privacy within their community; and 3) Monetization - how monetary benefits and advertising play a role in their content creation and community management. The audio-recorded interviews are conducted by the lead author and range from 45 to 60 minutes. After each interview is transcribed, the authors will discuss emerging issues to address in further interviews, compare each successive interview with the others and analyze the transcripts using open coding (Chamaz and Belgrave 2012).

We intend to interview ten streamers and have completed eight. The eight streamers interviewed, aged 18 to 37, ranged from having 30 to over 700 followers, one casual and seven affiliate streamers.

Summary of Findings
Current insights indicate that streamers see themselves as entertainers and performers, who like actors in a show, create a character that is crafted to entertain their audience, this is especially important for the affiliate streamers who make money off of the platform. Streamers indicated that engaging their audience by talking to them casually was key to success on the platform. Most streamers indicated that many of their viewers, even those they don’t know in real life, were their friends.

This engagement created and facilitated an environment prompting parasocial interactions and some self-disclosure. While some streamers take steps to create distance between their persona and real life personalities, there is some crossover, with some streamers indicating that they see their persona or in some cases their virtual avatars as extensions of themselves. While there are positive outcomes from the relationships and disclosures, there are also negative experiences, especially for female and female-presenting streamers.

Streamers interviewed so far utilize some techniques to protect their own privacy, and that of their loved ones, but take a laissez-faire approach with their viewers. Many relied on their moderators to provide a safety net for their viewers, and a potential bulwark for themselves.

**Key Contributions**

The Twitch community has expanded rapidly with the onset of the COVID-19 pandemic with its average number of concurrent viewers increasing from 1.21 million to more than 2.36 million in the first two quarters of 2020 (Statista, 2020) becoming a key platform to reach consumers.

Although Twitch has received limited regulatory attention, MediaPost notes that under a Biden administration “advertising executives should expect a steady focus on regulation” including privacy on social media platforms (Sullivan 2020). Because of the likely engagement
between the streamer and viewer, and among viewers, in the chat, personal information will be available and likely garner regulatory attention. This research provides initial insight into those dynamics.

Of special consideration is the potential of smaller streamers as important micro-influencers within their communities. Future researchers may want to examine the unique two-way parasocial interactions in which the individual behind the streamer persona is engaging in a relationship with their viewers. Regulators and researchers may want to examine the unique issues female and female-presenting streamers face on the platform, and how that shapes their experiences. Finally, researchers and Twitch may want to examine the potential for moderators as a form of self-regulation, providing protection for streamers and viewers alike.

References available upon request.
Using Descriptive Norms to Motivate Indebted Consumers to Repay their Debts
Statement of Key Contributions

Consumer indebtedness is a serious problem in the United States and other parts of the world. Researchers and public policymakers have designed various policies and financial education initiatives to motivate consumers to repay their debts. For example, the Credit Card Accountability Responsibility and Disclosure Act of (2009) mandates credit card holders to include a table in consumers’ statement explaining various payment options. In this table, consumers can read information explaining how long it will take for them to pay their balance if they only make the minimum payment amount each month, and how much they should pay on their credit card each month to make sure they will pay off their balance in three years. Consumers can also read how much they can save on interest if they pay the three-year amount vs. only the minimum payment. Theoretically, this table must motivate consumers to pay more of their debt. However, research has repeatedly shown that the Credit Card Act table is not effective in increasing debt repayment (e.g., Navarro-Martinez et al. 2011; Salisbury 2014). Public policy makers are still looking for new ways to motivate debt repayment.

The current research introduces descriptive social norms as a new tool that can be used to nudge consumers into repaying their debts. I show that consumers’ credit card debt repayment decisions are influenced by their perceptions of what similar others do in the same situation. Our findings indicate that using descriptive normative messages on loan or credit card statements can have an effective impact on debt repayment intentions. Public policy makers can mandate credit card holders to add a simple normative message to consumers credit card statements or web account to ensure debt repayment.
Consumer debt is rising in the United States. Researchers and public policymakers have designed various policies and interventions to motivate consumers to repay their debts. For example, the Credit Card Accountability Responsibility and Disclosure Act of 2009 mandates credit card holders to include a table in consumers’ statement. In this table, consumers can read information explaining how long it will take to pay their balance if they only make the minimum payment amount, and how much they should pay on their credit card each month to make sure they will pay off their balance in three years. Theoretically, this table must motivate consumers to pay more of their debt. However, research shows this table is not effective in increasing debt repayment (e.g., Navarro-Martinez et al. 2011; Salisbury 2014). Financial education interventions aimed to increase debt repayment do not influence repayment either (e.g., Fernandes, Lynch, and Netemeyer 2014; Salisbury 2014). The current research introduces descriptive social norms as a new tool to motivate debt repayment.

Social norms are “rules and standards of behavior” (Cialdini and Trost 1998, p. 152). There are two types of norms: injunctive and descriptive (Cialdini and Goldstein 2004). Descriptive norms relate to what is common and injunctive norms relate to what is socially acceptable among the society members. I only focus on descriptive norms.

Extant research showed that descriptive norms can be used to change consumers behavior in various contexts (e.g., Burger and Shelton 2011; Otto et al. 2019). However, research on how social norms influence consumers’ debt repayment is lacking. The aim of this study is to explore the effect of descriptive norms on consumers’ repayment of their credit card debts.

I propose that descriptive normative messages that communicate the prevalence of debt repayment withing a group or society can have a significant influence on consumers’ debt repayment behavior. Individuals often use perceived norms as guides to their behavior (Cialdini
When consumers perceive a behavior as acceptable among their social group, they try to align their behavior with that norm (Otto et al. 2019). In this research, I propose and test if consumers who are told that 80% of other people pay their credit card debts in full are more likely to repay their debts in full. Our results provide support for our proposition that descriptive normative messages can be used as an effective tool to motivate debt repayment. In the following section, I explain our methodology.

Methodology

To test our framework, I ran an experiment. To compare the effect of our normative message with the current Credit Card Act table, I included two other conditions in our study. I added a condition where participants saw the table mandated by Card Act of 2009 (Card Act condition) and another condition without any nudges (no disclosure). I expected our normative message communicating high norms to be more effective in motivating consumers to repay their debts compared to the other three conditions.

The study had four conditions (No disclosure, Credit Card Act mandated disclosure, high descriptive norms, low descriptive norms). One hundred and seventy-three respondents were recruited from Amazon Mechanical Turk to participate in a survey. Eight participants were excluded due to failing attention checks, leaving 167 participants (59% female, 40% male, 1% non-binary gender (Mage = 36.2, Mincome= $43,434).

Participants were randomly assigned to one of the four experimental conditions. Participants were told to imagine they just received their credit card statement. They were asked to read the credit card statement. The statement included information about account balance ($2,256), minimum payment due ($45.12), interest rate charged (12%) and the payment due date.
Participants in the no disclosure condition only read the aforementioned information. Participants in the credit card act condition were shown the table mandated by the Credit Card Act of 2009. Participants in the high norms condition read: “80% of American credit card holders who are similar to you in terms of their financial status pay their account balance in full each month”. Participant in the low norms condition read: “20% of American credit card holders who are similar to you in terms of their financial status pay their account balance in full each month”. After reading this information, participants were asked to define how much money in dollars they wanted to pay towards this credit card statement in an open-ended question. Participants then answered several questions, were then thanked and paid.

**Manipulation checks**

Participants were asked three multiple choice manipulation check questions where they had to choose 1) the correct credit card balance, 2) the correct interest rate, and 3) the message shown in the credit card statement from multiple choice options with an ‘I don’t remember’ option. Respectively, 83% and 95% of participants correctly determined the balance and the interest charged. On average, 82% correctly identified the message they read in the statement.

**Control Variables**

I measured and controlled for financial literacy with items adopted from Lusardi and Tufano (2011). Two questions were added to these items to measure participants’ understanding of time value of money and compound interests (Cook and Sadeghein 2018). The number of correct answers given was calculated to form a financial literacy scale.

I measured and controlled for similarity to the reference group with one item (“How similar do you consider yourself to be to other American consumers?”) on a 7-point Likert-type
scale. Finally, I measured and controlled for how easy it was for the participant to come up with an extra $1,000 in a month on a 7-point Likert-type scale.

**Results**

I first calculated the percentage of debts that each participant decided to pay—payment percentage hereafter. I ran an ANOVA with payment percentage as the dependent variable, the four conditions as independent variables, and financial knowledge, similarity and ability to come up with $1,000 in a month as control variables. As predicted, participant indicated higher repayments in the high norms condition to the other three conditions. Figure 1 shows payment percentage for the four conditions. Participants in the high norms conditions paid significantly more amounts on their card than other conditions (F(3, 158) = 2.65, p< .05, Adjusted R^2= .25; M_{High-norms}= 50.72%, M_{Low-norms}= 29.63%, M_{Card ACT}= 33.14%, M_{No disclosure}= 34.01%). There was no significant difference between repayment in low norms, no disclosure and card act conditions. In total, participants who read the high norms manipulation paid $396.5 more towards the debt compared to other participants.

**Discussion and Conclusion**

In this study, I tried to understand whether communicating descriptive normative messages would influence consumers’ debt repayment. Although debt repayment decisions must only be a function of the cost of holding a debt (e.g., interest rate and fees), I found out that communicating normative messages explaining what other similar customers do increases debt repayment. On average, participants who read that 80% of other customers with similar financial situation pay their account balances in full, paid $396.5 more towards the same credit card bill than participants who read the information presented in the table mandated by Credit Card Act of
2009. Repayment was 376.94 more when participants read the normative message compared to having no disclosure in the card statements.

Our findings have significant implications for marketing and public policy makers. Our results showed that normative messages communicating descriptive norms are more effective in motivating consumers to pay their credit card balances compared to the current mandates by the Credit Card Act of 2009. Public policy makers can increase consumers repayment of their credit cards by almost 18% if they replace the current payment options table included on credit card statements with normative messages.
References


Figure 1- Percentage of debt paid in each condition

<table>
<thead>
<tr>
<th>Payment Percentage</th>
<th>Credit Card ACT of 2009 disclosure</th>
<th>No Disclosure</th>
<th>Low normative message</th>
<th>High normative message</th>
</tr>
</thead>
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<td>34.01</td>
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WHAT IS IN CONSUMER MIND IN THINKING OF NATURAL AND MAN-MADE FOOD: A SOCIAL MEDIA ANALYTICS

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Keywords: Natural, Food, Social Media, Consumers’ Attitude

Description: We intend to study consumers’ attitude towards natural food by analyzing their tweets.

EXTENDED ABSTRACT

Research Question. In this paper, we intend to understand how consumers think about natural (versus man-made) food products by analyzing their social media entries, i.e., tweets. This paper reports on natural language processing (NLP) analysis of a large-scale social media corpus extracted from the twitter platform. User-generated tweets are extracted as per seed keywords to reflect what is in people mind for natural vs man-made food.

One of the major platforms that has been studied extensively in marketing literature as a powerful channel for understanding consumer behavior is text mining of the user generated content on social media (Berger et al., 2020). The marketing studies have harnessed the power of social media data in several domains (Tang and Guo, 2015; Ordenes et al., 2019; Nam et al., 2017). Despite the importance of understanding how consumers think about natural foods, the existing research failed to take the advantage of the rich data that social media provides on analyzing consumers perceptions. Our paper intends to fill this gap.

Method and Data. We collected 2.3 million tweets using the keywords related to naturalness such as earth, organic, no processing, handmade or recycling. We also used keywords such as industrial, technological, synthetic, processed or GMO to capture any tweets that underlined man-made developments with opposition to nature. Next, we cleaned the tweets by removing any noise data. We trained coders to manually code a portion of the data, which was used as a training set to train a multi-level text classifier. To distinguish food data from non-food data, we applied a layer of keywords related to various food groups to the original 2.3 million tweets and end up with 190,000 pieces of twitter data.

Next, we applied three domain specific keyword lists that could help us capture the consumer opinion related to the topic of naturalness in food: The dietary, value and food industry keyword lists. The dietary keyword list describes the dimensions of food groups and subgroups. The value keyword list captures consumers’ values, motives, traits, and trends such as human values, personality traits and consumer food preferences. The food industry keyword list captures
the opinions of consumers about the applications of food innovations, sustainability and related market trends in food industry.

**Summary of Findings.** We compared the ratio of natural versus man-made tweets. In dietary categories, we found the highest ratio of natural versus man-made tweets in proteins, seasoning and snacks (77%, 76% and 74% of the tweets included naturalness keywords). We found the lowest ratio of natural tweets in fruits, vegetables and grains (66%, 66% and 71% of the tweets included naturalness keywords). Amongst the value categories, we found the highest ratio of natural versus man-made tweets in personality traits, e.g., openness to experience, neuroticism and conscientiousness (75% of the tweets included naturalness keywords). We found the lowest ratio of natural tweets in emotions, social constructs and time (67% of the tweets included naturalness keywords). In the categories of food industry, we found the highest ratio of natural versus man-made tweets in food innovation, i.e., enhanced nutrition profiles, food additives, replacement ingredients and functional foods (86% of the tweets included naturalness keywords), and the lowest ratio of natural tweets in market trends, i.e., sustainability (recycle), assurance standards (certified, licensed), traceability (testing, analysis, origin) (75% of the tweets included naturalness keywords).

**Key Contributions.** Our findings provided evidence on the popularity and importance of naturalness in the domain of food. Our analysis revealed that consumers significantly more frequently think and talk about the topics related to naturalness compared to the topics related to man-made technologies and advancements. We found this trend in almost all categories of food products. Our results showed that the tweets on naturalness related topics were significantly less frequent in the food categories that naturalness is an integral part of these categories, e.g., fruits and vegetables, compared to the food categories in which technologies, processing and man-made advancements have a highlighted role, e.g., proteins, seasonings and snacks. Moreover, we found the highest ratio of natural to man-made in the tweets that were related to food innovation. This finding also highlights consumers’ higher level of concern for the naturalness in the topics that are more related to technologies and man-made advancements. Our findings can inform marketers and public policy makers in emerging trends in consumers mindset, which would help to create effective interventions, programs, and regulations that truly caters to the people’s needs. Our paper is an example of how to use new social media innovations to understand customers’ concerns and needs.

References are available upon request.
‘Salvaging Residual Brand-value from Retro Place-Names’ - An unexploited bonanza from De-colonization. An Initial, Exploratory Study.

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2

Extended Abstract

It is a well-known fact in the field of marketing that there are many products and brands, whose names are tied, implicitly or explicitly, to the names of places. A few product examples include, Burmah teak, Cashmere silk, Ceylon tea, Colombian coffee, Darjeeling tea, India rubber, Jamaican ‘Blue Mountain’ coffee, Jamaican rum, Madras cotton fabrics, Malabar teak and Persian carpets, among others. A few brand examples include the Bombay Dyeing Co., Burmah Shave, The East India Co., Mysore Sandalwood soap and Nilgiri’s tea, among others.

Such name recognition bestows upon these places a type of brand value. For names with a high degree of recognition and acceptance, the financial value of the place-brand can be substantial, as for example is the case with Jamaican ‘Blue Mountain Coffee’, which can signify a distinctly different, highly prized and much sought after type of coffee, that cannot be found anywhere else in the world.

We readily acknowledge that none of the above is “terribly novel” or new to the field of marketing. What we wish to point out however is that behind this ‘facade’ of old and familiar place-linked products and brands, a new and evolving phenomenon is quietly turning the ‘old and familiar’ into ‘discarded’ detritus, that is then cleverly rejuvenated (by smart and astute marketers) and re-purposed, as a new ‘brand you knew’. We explain this evolving modus operandi, next.

The centuries-old practice by the colonial masters of yesteryear was to systematically ‘Anglicize’ and ‘Westernize’ millennia-old native place-names, from the minute they landed on foreign shores and ‘gained control over the locals’. Out went Millennia-old names like ‘Denali’ and in came new, anglicized and westernized names like ‘McKinley’ (Hetter 2015) that did all of
the following: (1) it honored and glorified the newly-triumphant colonizers and their heroes, (2) it sent a new signal of superiority to the just-conquered locals (in case they had any lingering doubts about who was now ‘in charge’, (3) it rolled off their western tongues much more easily (than a native name such as, say, ‘Thiruvananthapuram’, known formerly by its anglicized name of ‘Trivandrum’, see Chakravorty (2018)) and, (4) it was also easier on the western ear. Talk of killing four birds with one stone!

Now, let’s fast forward three to four centuries (depending on the place), until we are in the era right after WWII, when many of these places underwent ownership transfer (a.k.a. gained ‘independence’). Suddenly, citizens of many of these places found that they faced tremendous social and political pressure to change the names of their places of abode, to shed all remaining vestiges of their colonial past and display new-found national pride and self-worth, by adopting new, indigenous names, many of which were the names they had pre-colonization. A few such examples include ‘Myanmar’ (formerly ‘Burma’), ‘Sri Lanka’ (formerly ‘Ceylon’) and ‘Mumbai’ (formerly ‘Bombay’, see Exhibit 1).

All of this name-changing resulted in a vast ethereal graveyard of colonial-era place names freed-up from any ownership (legal or otherwise) and discarded by the new post-colonial masters, many of them with hatred and loathing for their colonial past. These discarded and now ‘free’ former colonial place names are often etymological gold-mines, with much vestigial cultural, historical and commercial value, waiting to be ‘discovered’ by shrewd and astute marketers.

One such prime example is the name, *The East India Company*, “the world’s first multinational company”, which “began as a trading monopoly under Queen Elizabeth I in 1600 to ship commodities to the West from India, China and the Spice Islands, countering the clout of the Dutch, Spanish and Portuguese. At various times, the company controlled the trade in indigo dye, cotton, silk, opium and tea” (Boulden 2010).
With the passage of time, “the British crown slowly took control of the company's routes, ports, currency and military, becoming the symbol of the British empire” (Boulden 2010).

Finally, “in 1874, the company ceased trading, prompting an obituary in The Times newspaper now inscribed in a marble table at the new store: ‘It accomplished a work such as in the whole history of the human race no other company ever attempted, or is ever to attempt in the years to come’” (Boulden 2010).

The company was almost universally loathed by the colonized and almost universally gloated over by the colonizers. According to (Boulden 2010), “the company's name may … remind some of the illegal opium trade from China, and oppression and wars in India”.

But, in 2010, a London-based, but “Indian-born importer and entrepreneur”, named Sanjiv Mehta “bought the intellectual property rights to the company in 2005, after they had lain dormant for a century. His goal was to create a global luxury brand”. Mr. Mehta’s dream is now “realized in a new store off London's high-end Regent Street, where the new East India Co. now sells gourmet tea, chocolate, coffee and gifts (Boulden 2010).

Mr. Mehta “invested around $20 million in the company so far. He hopes to open more stores and launch leather goods, jewelry and home interiors, plans that will take an additional $100 million, he said” (Boulden 2010).

There are many other examples like the East India Company, we just discussed, but in the interest of brevity (and word count), we cannot list or discuss them here.

Suffice it to say, that we are just in the exploratory phase of our programmatic research endeavor. Hence, we do not have an approved methodology, we have not gathered any data yet
and therefore, most obviously, we do not have any ‘results’ or ‘conclusions’ to show yet. All that we have right now, is a lot of questions (such as those we listed earlier), in answer to which, we are in the midst of a search in the popular press, the trade press and the academic literature for anecdotes and evidence for and against each of the research questions/propositions, we listed earlier. More is yet to come.

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