

2023

Marketing sustainability within the jewelry industry

Lauren Machado

Saheli Goswami

Follow this and additional works at: https://digitalcommons.uri.edu/tmd_facpubs

**The University of Rhode Island Faculty have made this article openly available.
Please let us know how Open Access to this research benefits you.**

This is a pre-publication author manuscript of the final, published article.

Terms of Use

This article is made available under the terms and conditions applicable towards Open Access Policy Articles, as set forth in our [Terms of Use](#).

This is a pre-print authors' personal copy of the manuscript.

To cite this article: Machado, L., & Goswami, S. (2023). Marketing sustainability within the jewelry industry. *Journal of Marketing Communications*, 1-16.

To access this article: <https://doi.org/10.1080/13527266.2023.2166566>

Marketing Sustainability within the Jewelry Industry

Lauren Machado^{1*} and Saheli Goswami²

¹ Department of Textiles, Fashion Merchandising and Design, University of Rhode Island, Kingston, United States

*Correspondence: laurenmachado@uri.edu
+5521986976215

² Department of Textiles, Fashion Merchandising and Design, College of Business, University of Rhode Island, 55 Lower College Road, Kingston, RI 02881, USA
<https://orcid.org/0000-0002-3927-9358>

Marketing Sustainability within the Jewelry Industry

Abstract

This study investigated how brands' sustainability-related marketing messages impact consumers' word of mouth and brand loyalty within the jewelry industry, using a Brazilian context. It also investigated the mediating roles of sustainability awareness of consequences, ascribed responsibility of sustainability, and personal norms, in the relationships using the norm activation model. Implementing an experimental design, data were collected from 300 Brazilian consumers. The results showed that the presence of sustainability information in marketing messages significantly but indirectly impacts consumers' behaviors. Sustainability marketing messages appealed to consumers' underlying sustainability-oriented awareness, responsibility, and obligations to predict their behavioral responses. This study is the first to respond to the scholarly need of jewelry brands effectively market their sustainability initiatives to improve their consumers' reactions. These findings add knowledge to the literature on sustainable luxury marketing and guide jewelry brands' marketing communications.

Keywords: Brazilian jewelry industry; sustainability; sustainability-related marketing messages; word of mouth, brand loyalty; Norm activation model.

Funding details: None to report

Disclosure Statement: None to report

Introduction

The jewelry industry is globally criticized for its unsustainability (Turner, 2022). This industry's some of the top global players, such as Brazil and Botswana, struggle with unfair working conditions (Zaynab, 2022), women trafficking, and issues of child labor (Moraes et al., 2017). From an environmental perspective, this industry is similarly criticized. Brazil's jewelry industry is responsible for 37% of mercury emissions (Kütter and Pci, 2017). This poisonous metal pollutes the Amazon Forest region's aquatic systems, as the *Business of Fashion* noted on June 14, 2021. It affects surrounding wildlife and poisons the local communities with toxic mercury inhalation and ingestion. As unsustainability challenges the global jewelry industry's sustenance, jewelry brands are adapting their businesses to implement more sustainability (Lerma et al., 2017). For example, several jewelry brands have launched dedicated sustainable collections to cater to consumer needs (Walker, 2022).

However, despite the increasing importance of sustainability and jewelry brands' initiatives in this direction, currently, limited research investigates how these commitments can be shared with consumers. This industry's sustainability is often perceived to be vague due to a lack of transparent supply chain and production information. Moreover, compared to other industry sectors, this industry's complex supply chain makes addressing sustainability a fundamental challenge, as *The CEO Magazine* noted on August 13, 2021. In this light, if consumers are unsure of this industry's ability to be sustainable, jewelry brands might wonder how to inform their sustainability initiatives to consumers effectively. However, a current lack of scholarly focus in this direction makes it difficult for jewelry brands to answer this question and represents the first research gap.

Second, limited jewelry-marketing research makes it difficult to explain if and how marketing sustainability would influence consumers. Prior literature underscores the importance

of marketing sustainability to improve brands' image (Kang and Sung, 2022). However, such might not apply to the unique jewelry industry and its consumers. As a type of luxury industry (Kumar, Paul, and Unnithan, 2020), sustainability within the jewelry industry presents an idiosyncratic domain of norms and ethics. On the one hand, luxury is associated with wastefulness and moral transgression (Moraes et al., 2017). Contrastingly, sustainability is associated with altruism and ethics (Panigyrakis, Panopoulos, and Koronaki, 2020). Such a conflicting notion makes it difficult for one to intuitively predict how consumers would respond to jewelry brands' sustainability marketing messages.

The third research gap relates to past luxury marketing research's lack of explanation on the underlying mechanism of consumers' behavioral responses. Prior studies on sustainable luxury marketing report the importance of message structures, organizational characteristics, and even consumers' emotions as intermediate factors controlling consumers' behaviors (Kyrousi, Koronaki, and Zotou, 2022). While these studies remain germane, they fail to account for the role of morals and norms -- concepts embedded within sustainability. Consumers' sustainability-oriented accountability, awareness, and obligations can play vital roles in their reactions to jewelry brands' sustainability marketing, and thus a notion of underlying norms needs to be acknowledged.

Therefore, this study investigates the importance of sustainability-related marketing messages (SRMM's) for jewelry brands and their influence on consumers' word of mouth (WOM) and brand loyalty (BL). It further examines the underlying mechanism of these influences. It proposes that consumers' behavioral intentions would be mediated via their sustainability-oriented awareness, responsibility, and norms, drawing from the norm activation model (Schwartz, 1977). This research contextualized the Brazilian market. Brazil is one of the world's most important gem suppliers as of December 2012, as the *National Jewelers* reported. It represents 86% of the revenue of fine jewelry in Latin America (Euromonitor, 2020). As of June 19, 2019, the Nielsen Company noted Brazilian consumers as being increasingly aware of sustainability. Considering its relevance in the global jewelry industry as a supplier and a consumer, a specific Brazilian context in this research was deemed necessary.

Literature Review

Sustainability-Related Marketing Messages (SRMM)

SRMM refers to brands' marketing communications shedding insights into their sustainability-specific efforts (Taufique, 2020). As businesses' sustainability commitments keep gaining traction among consumers, marketing practitioners are increasingly considering SRMM to promote sustainability to their advantage (Kang and Sung, 2022). Hence, SRMM has received growing attention within the context of ethical marketing to understand how it can reinforce favorable consumer behaviors, as noted by *Forbes* on April 13, 2021. Prior studies clearly indicate the relevance of SRMM for businesses. For example, scholars underscore the advantage of SRMM in shaping consumer attitudes, trust, and perceptions to improve their decision-making and purchase intentions in favor of brands (Kumar et al., 2021). However, the majority of the SRMM literature focuses on mass-market products, such as apparel, cosmetics, and electronics. Limited research examines the role of SRMM within the jewelry industry, a luxury market segment (Kyrousi, Koronaki, and Zotou, 2022).

SRMM and Jewelry Industry

With the growing popularity of sustainability, consumers are inclining more toward responsibly made jewelry (Moraes et al., 2017). As one of few industries to maintain economic prominence during the pandemic (Harris and Thiel, 2021), the jewelry industry potentially provides a strong platform for brands to use SRMM to influence consumers' behaviors favorably. However, despite multiple scholarly calls (Athwal et al., 2019), research has yet to investigate the need and relevance of SRMM within the jewelry industry. Furthermore, conflicting opinions on how jewelry compares to other luxury items make it challenging for jewelry brands to identify how SRMM would influence their consumers. For example, Panigyrakis, Panopoulos, and Koronaki (2020) noted jewelry to be similar to other types of luxury products, while Sanguanpiyapan and Jasper (2010) noted jewelry to be different from other luxury products, given the exclusivity and uniqueness of its raw materials. This discrepancy in the literature limits intellectual speculations about consumers' potential responses to jewelry brands' SRMM. Accordingly, this study investigated the need for and importance of SRMM within the jewelry industry based on their influence on consumers' word of mouth and brand loyalty.

Word of Mouth (WOM)

Word of mouth (WOM) is one's intention to share information about a brand or product with friends and acquaintances. WOM is an essential component of marketing strategies, considering that consumers tend to trust prior consumers' views more than brands' marketing efforts (Brown et al., 2005). Extant literature has iteratively indicated the important role of marketing efforts in predicting WOM. For example, Chang and Wang (2019) found that the right marketing messages motivate consumers to speak highly of those brands, and those messages expand within consumers' networks. In this light, it can be expected that SRMMs, with their specific focus on brands' sustainability initiatives, will similarly influence consumers. As consumers increasingly demand brands to act responsibly (Harris and Thiel, 2021), jewelry brands' sustainability marketing might boost consumers' likeliness to speak positively about them among their friends and acquaintances. Specifically, since the jewelry industry often has less traceable and transparent information available for its consumers, such SRMMs can shed that lacking insight into brands' sustainability efforts to increase consumers' WOM intentions. Thus:

H1: SRMM would positively influence consumers' WOM in the jewelry industry.

Brand Loyalty (BL)

BL refers to consumers' emotional attachments developed for a brand and is vital to their commitment to repeat purchases of brands' products without intending to switch to others (Petzer et al., 2014). Consumers are loyal to a brand because they believe such brands offer better service and higher quality than others. BL can be encouraged through promotional activities and previous experiences with a brand, as *Investopedia* notes as of December 2, 2022. Extensive literature indicates that SRMM helps brands build and strengthen consumers' loyalty (Santoro et al., 2019). However, to date, no prior literature sheds any empirical insight on the relationship between SRMM and BL applied to the jewelry industry. As jewelry brands increasingly commit to sustainable practices, Pankiw, Phillips, and Williams (2020) referred to the lack of SRMM as their missed opportunity for improving their relationships. Given that the jewelry industry is complex, with less sustainability information available and accessible to consumers, we expect to

see an increased BL among consumers when jewelry brands proactively share such information through their marketing communications and a lack of SRMM to reduce this loyalty. Thus:

H2: SRMM would positively influence consumers' brand loyalty in the jewelry industry.

Theoretical Framework of Norm Activation Model

This research uses Schwartz's (1977) norm activation mediation model to explain the underlying mechanism of SRMM's influence on consumers' WOM and BL. According to the model, one's altruistic behavior is predicted by personal norms, awareness of consequences, and ascribed responsibility. Personal norms are peoples' feelings of moral obligations to perform specific actions. Awareness of consequences refers to people being cognitive about how their actions might impact someone. Finally, ascribed responsibilities refer to people taking ownership of their actions toward those consequences (Schwartz, 1977). So, the model suggests that awareness of consequences influences ascribed responsibilities, which then affect personal norms to predict behaviors.

This theory is frequently applied in research to understand one's pro-sustainability behaviors. Wang et al. (2018) used it to study the relationships between brands' sustainability publicity efforts and consumers' behavioral intentions related to e-waste recycling. Kim, Malek, and Roberts (2019) used it to investigate green marketing and its mechanics in influencing individuals' attitudes and pro-environment intentions within the convention industry. Researchers in the energy field used this theory to promote energy-saving behaviors among individuals in response to sustainable advertising (Si et al., 2022). These existing studies indicate how the norm activation mediation model provides the foundation for explaining SRMM and its impacts but simultaneously showcases the insufficient attention this theory has received within the jewelry industry.

Sustainability Awareness of Consequences (SAC)

Applied to this study, Schwartz's (1977) awareness of consequences is comparable to whether one is cognitive of the consequences of their sustainable actions and is referred to as sustainability awareness of consequences (SAC). Consumers' SAC plays an important role in controlling responsible behavioral responses, including fostering selfless concern for others and elevating one's altruistic behaviors (Groot and Steg, 2009). Gifford and Nilson (2014) suggest that businesses should prioritize raising consumers' SAC before focusing on the other constructs of the theoretical model to promote positive consumer behaviors. Given SAC's importance, scholars have underscored the need to identify factors that evoke strong awareness.

Prior research found that when consumers are exposed to brand communications sharing insights about sustainability issues, their SAC, in general, increases (Alamsyah, Othman, and Indriana, 2021). If consumers are exposed to marketing efforts that help them see how their sustainable consumption can make a difference, their SAC gets stimulated (Si et al., 2022). Accordingly, this research argues that when one sees a marketing message that advocates sustainability, their levels of awareness increase regarding the importance of their sustainable actions and the harmful results of their unsustainable behavior. Specifically, in the jewelry industry, as its consumption is associated with wastefulness and moral transgression (Moraes et al., 2017), SRMM can be argued to make a bigger difference and evoke a stronger SAC than marketing messages without any sustainability insights. Thus:

H3: SRMM would positively influence consumers' SAC.

Ascribed Responsibility of Sustainability (ARS)

Applied to this study, Schwartz's (1977) ascribed responsibilities can be described as whether an individual should consider themselves responsible for contributing to sustainability and can be referred to as ascribed responsibility of sustainability (ARS). Ascribed responsibility has been investigated to understand and explain consumers' sustainable behaviors (Alamsyah, Othman, and Indriana, 2021). It plays an important intermediate role in consumers' minds, as different conditions activate their normative notions. According to the theory, one's SAC predicts ARS. Since it is difficult to feel responsible for acting pro-sustainably or to think about the effectiveness of possible actions without knowing whether or not such actions cause problems, SAC plays an important role in evoking ARS (Gifford and Nilsson, 2014). Generally, the stronger one's awareness of the results of a specific situation, the higher the sense of responsibility toward the corresponding situation (Groot and Steg, 2009). In this light, it can be argued that when one is exposed to SRMM, depending on their SAC, one's feelings of responsibility towards those can be triggered. A high level of SAC can be expected to amplify how consumers react to marketing messages with sustainability-related information. Alternatively, when one is exposed to a marketing message that lacks a sustainability commitment, one's resulting lower level of awareness might lead to little or no sense of responsibility. Thus:

H4: Consumers' SAC evoked of SRMM would positively influence their ARS in the jewelry industry.

Personal Norms (PN)

Applied to this study, one's PN refers to their moral obligation to practice sustainable consumption and support brands' sustainable initiatives. PN is one of the fundamental variables of the norm activation mediation model and is frequently studied in marketing research since consumers incline to act consistently to their PN (Groot and Steg, 2009). According to the theory, ARS resulting from SAC affects one's PN, eventually affecting their intentions and behaviors (Wang et al., 2018). Therefore, a strong ARS (i.e., heightened responsibility to contribute to sustainability) based on one's high levels of SAC in response to marketing messages showing the presence of sustainability content can be expected to increase one's PN. Similarly, when one feels less responsible for contributing to sustainability (i.e., low ARS) due to their lower level of awareness, a lack of commitment to sustainability in marketing messages might trigger little or no PN in consumers. Likewise:

H5: Consumers' ARS would positively influence their PN in the jewelry industry.

Furthermore, according to the theory, consumers' PN plays an intrinsic role in controlling consumers' behavioral intentions. When consumers are exposed to marketing messages with similar values and commitment to sustainability, their triggered SAC and ARS control their internal values and feeling of obligation (PN) to predict behavioral responses (Wang et al., 2018). In fact, scholars have already noted that PN influences consumers to spread positive words and messages (Kolyesnikova, Dodd, and Callison, 2015). In this light, this study proposed that consumers' PN would play a similar underlying role in predicting their behavioral intentions within the jewelry industry, namely WOM and BL. When jewelry brands' SRMM increase consumers' awareness and responsibility to contribute to sustainability, their resulting high levels of PN towards sustainable consumption can be expected to increase their WOM and BL intentions. When consumers are exposed to a marketing message that lacks a similar commitment to sustainability, their resulting PN derived from SAC and ARS might not be

bolstered enough. Likewise, their PN might not increase BL or WOM intentions towards that jewelry brand in consumers. Thus:

H6: Consumers' PN would positively influence their WOM in the jewelry industry.

H7: Consumers' PN would positively influence their BL in the jewelry industry.

Thus, based on the above, this study argued a mediating role of the norm activation model in SRMM-consumers behavior relationships. When consumers are exposed to SRMM, their SAC, along with their ARS and PN, towards supporting sustainability would be expected to be reinforced, increasing consumers' intentions to speak positively about those jewelry brands and develop a strong loyalty. So, while consumers' WOM and BL intentions could be strengthened directly by brands' SRMM, a simultaneous mediated effect through SAC, ARS, and PN was also plausible. Therefore,

H8: Consumers' SAC, ARS, and PN would positively influence mediate the relationship between their WOM in the jewelry industry.

H9: Consumers' SAC, ARS, and PN would positively influence mediate the relationship between their BL in the jewelry industry.

Brazilian Jewelry Industry

This study focused on the Brazilian market since some Brazilian jewelry brands are already undertaking initiatives to challenge the unsustainability surrounding the industry (Zaynab, 2022). Consumers in Brazil are also increasingly concerned about sustainability. Brazilians often choose the path of sustainability instead of overconsumption. Seven out of ten Brazilians have been reported to buy sustainable alternatives over regular products, as the *One Planet Network* stated on December 17, 2018. Brazilian consumers are less sensitive to price when it comes to luxury consumerism, and they highly value information and transparency in marketing strategies, as *The Guardian* stated on May 29, 2015. Therefore, in a country where sustainability is gaining traction among both jewelry businesses and their consumers, marketers need to understand if and how SRMM can help improve their impression among consumers. Likewise, the Brazilian context was deemed relevant to the current research.

Method

Research Design

A single factor (sustainability: present/absent) between-subject experimental design was implemented to investigate the relationships. SRMM was manipulated in this study. Participants were randomly exposed to one of the two manipulations, following which they completed a survey answering questions about SAC, ARS, PN, WOM, and BL. It is important to note that the stimuli and survey of this study were developed in English, despite it is not Brazil's first language. This was because most Brazilian jewelry brands (Fernando Jorge, Vivara, H.Stern, etc.) use English in their marketing to cater to domestic and global consumers. Furthermore, the Brazilian jewelry consumer market is mostly represented by the intellectual elites (Diniz, 2014), a demography studied to prefer English over their first language (Menezes, 1999). Thus, keeping with the Brazilian jewelry industry's global orientation and its consumers' frequent exposure to English marketing messages, this research was designed in English to best capture the reality. Nevertheless, language proficiency was checked through a screening question, "can you read and understand basic English" and participants indicating otherwise were deemed ineligible and screened out.

Stimuli Development

Stimuli messages were designed as brands' webpages to show the presence/absence of SRMM. For SRMM present, the manipulated webpage described the brand engaging in social and environmental sustainability endeavors, such as fair-trade, safe working environment, usage of recycled/upcycled materials, conscious consumption of water, etc. (Turner, 2022). For SRMM absent, the brand webpage manipulation showed no sustainability information and described promotions, product designs, and packaging-related information. All other aspects of the stimuli, including the overall visual appearance of messages, generic information, and text volume, were kept consistent in both manipulations to reduce any confounding effects (Thorson et al., 2012).

A manipulation check was conducted using 45 adult participants recruited from Amazon's MTurk based in Brazil and the USA to determine stimuli appropriateness. Participants from the USA were added to the mix to ensure that all participants similarly interpreted the English stimuli. Mean comparisons indicated that participants with these two nationalities did not have any significant difference in how they responded to manipulation check questions (p ranging from .07-1). This helped confirm that the language aspect of the manipulation correctly represented the global English that could be similarly understood/noticed by all consumers irrespective of their nationality. This also helped to affirm that Brazilian consumers' English proficiency was similar to that of any global consumer. Accordingly, both samples were combined and treated as one large sample. Participants correctly identified whether or not the stimuli messages included sustainability-related information (Chi-Sq = 39-19.27; $p < 0.001$). See the Appendix for study stimuli.

Measures

Consumers' SAC (four items), ARS (four items), and PN (six items) were measured using scales adapted from Wang et al. (2018; Cronbach alpha: 0.93, 0.96, and 0.90, respectively). WOM was measured using six items adapted from Brown et al. (2005; Cronbach alpha: 0.95). BL was measured using four items adapted from Petzer et al. (2014; Cronbach alpha: 0.914). All the variables were measured on a 5-point Likert scale (1: strongly disagree, 5: strongly agree). Refer to Table 1 for study measures.

[Insert Table 1 about here]

Sampling, procedure, and data analyses

After IRB approval, adult Brazilian participants ($n = 300$) were recruited using Amazon MTurk. All participants were required to be able to read and understand English and reside in Brazil during the time of the survey. After exposure to a randomly assigned stimulus, participants indicated their SAC, ARS, PN, WOM, BL, and shared their demographic information.

Participants also answered two validity-check questions (i.e., "*Data quality is very important to us. To show that you are paying attention, please select 'Strongly Agree'*" and "*For this question, please click 'Strongly Agree'*") during the survey to confirm their attention level. Failure to correctly answer both questions was deemed unacceptable and such responses were excluded. Accordingly, approximately 63% of the 475 eligible participants' population (i.e., 300) correctly answered both questions, were considered acceptable, and constituted the sample for this research. All participants were compensated (US\$ 0.50) for their participation.

Exploratory factor analysis (eigenvalue >1) further tested the validity of the 25 items representing the five constructs of this research. Results revealed five components accounting for

73.48% of the total variance. Cronbach's α was computed to determine the scales' reliability, and all scales had acceptable reliability coefficients ($> .70$; Cronbach, 1951; see Table 1). Data were analyzed using SPSS software. Hayes' (2018) PROCESS macro (Model 6) was utilized to test this research's direct and mediation effects.

Results

Sample Characteristics

The sample represented a majority of males (60.5%), aged between 26 and 35 years (49.3%), with 53.3% finished a bachelor's degree. About 22.9% had a monthly income between US\$1,400 and 1,700.

Hypotheses Tests

PROCESS results showed that the data fit the model well [$F(4,298) = 39.26, p < 0.001, R^2 = 0.35$]. Results indicated that SRMM did not significantly impact participants' WOM (unstandardized $b = 0.13, p = 0.17, CI_{95} = -0.05, 0.32$), rejecting H1. Similarly, SRMM did not significantly impact BL ($b = 0.02, p = 0.82, CI_{95} = -0.17, 0.22$), rejecting H2. That is, results indicated no significant direct effects of SRMM. For H3, SRMM influenced participants' SAC significantly and positively ($b = 0.68, p < 0.001, CI_{95} = 0.44, 0.92$). Therefore, H3 was supported. SAC, in turn, significantly and positively influenced participants' ARS ($b = 0.71, p < 0.001, CI_{95} = 0.62, 0.80$), thereby supporting H4. This ARS, in turn, significantly and positively impacted PN ($b = 0.51, p < 0.001, CI_{95} = 0.43, 0.60$), supporting H5. Next, participants' PN positively affected participants' WOM ($b = 0.33, p < 0.001, CI_{95} = 0.17, 0.47$) and their BL ($b = 0.40, p < 0.001, CI_{95} = 0.24, 0.56$), supporting H6 and H7. Although not hypothesized, participants' PN was observed to be directly and significantly affected by SRMM ($b = 0.18, p = 0.01, CI_{95} = 0.04, 0.33$) and SAC ($b = 0.21, p < 0.001, CI_{95} = 0.13, 0.31$).

The total indirect effect of SRMM on WOM was significant at $b = 0.41$ ($SE = 0.07, CI_{95} = 0.28, 0.56$), supporting H8. Since the direct effect of SRMM on WOM was much smaller and non-significant than the total indirect effect, results indicated that the model's mediated path was a better predictor of their WOM than just the SRMM. Similarly, the total indirect effect of SRMM on BL was significant at $b = 0.40$ ($SE = 0.07, CI_{95} = 0.26, 0.56$), supporting H9. Since the direct effect of SRMM on BL was much smaller and non-significant than the total indirect effect, results indicated that the model's mediated path was a better predictor of their BL than just the SRMM. Refer to Table 2 for a summary of the direct and indirect effects of SRMM on WOM and BL.

[Insert Figure 1 about here]

[Insert Table 2 about here]

Discussions

This study delved into the effect of jewelry brands' SRMM on consumers' behavioral responses. The mediating roles of SAC, ARS, and PN were investigated to understand the underlying mechanism of consumers' responses. First, results showed that jewelry brands' SRMM significantly, although indirectly, impacted participants' WOM and BL. That means the presence of sustainability information in jewelry brands' marketing messages indirectly made participants more inclined to speak positively about the brand and be loyal to them, compared to when such a

sustainability focus was absent. Such results agree with Brazilian consumers' general appreciation of sustainability, as noted by the Nielsen Company on June 19, 2019. However, they contrast with the prevailing notion that consumers' sustainability appreciation is paradoxical to luxury consumption (Kapferer and Michaut-Denizeau 2014), assuming jewelry is a luxury product. We indicate that, indeed, consumers appreciate the presence of sustainability commitments in jewelry brands' marketing and respond positively to such initiatives.

Furthermore, the indirect effects of SRMM on consumers' behavioral intentions were observed to exist via consumers' awareness, responsibilities, and norms. That means after participants were exposed to sustainability-focused messages of a jewelry brand, they were more conscious of how their jewelry transactions can make a difference, compared to when they saw marketing messages with no reference to sustainability. Affirming similar relationships from prior literature (Alamsyah, Othman, and Indriana, 2021), our results explain that SRMM elevated participants' sense of awareness towards sustainable jewelry. Likewise, a high level of SAC resulting from SRMM increased participants' sense of responsibility. That means their feelings of responsibility to engage in such sustainable consumption increased in the presence of sustainability (vs. absence) in marketing messages and are consistent with Schwartz's (1977) norm activation mediation model. This responsibility, in turn, triggered their internal obligations to support sustainability. That means when participants saw jewelry brands' marketing messages sharing insights about their sustainability commitments, their moral obligations to support sustainability and the brand were strengthened, thus supporting prior literature (Wang et al., 2018). However, contrary to prior studies indicating direct relationships between SRMM and consumer behavioral intentions (Chang and Wang, 2019; Santoro et al., 2019), this study reported that SRMM does not directly affect consumers. For jewelry brands, SRMM makes consumers react favorably preliminarily as a factor of their awareness, responsibilities, and norms.

Additionally, the results presented some significant direct and mediated relationships beyond those hypothesized. First, SRMM and SAC positively and directly impacted PN. Such relationships are contrary to Schwartz's (1977) norm activation model and open future research potentials to investigate why SRMM directly triggered consumers' sustainability-oriented moral obligations despite accounting for their related sense of responsibility. Second, consumers' PN mediated the relationships between SRMM and consumer responses individually and with SAC. This mediation was observed for both WOM and BL. Thus, participants' moral obligations played an active role more than predicted. These results might be attributed to data collection amidst COVID-19 and its aftermath. For example, as employees were being furloughed or terminated during the pandemic, participants might have perceived it as their moral obligation to support brands that were being responsible towards their workers. Specifically, since nearly eight million Brazilians lost employment due to the pandemic, as *CNN* reported on June 30, 2020, the SRMM perhaps have strongly appealed to their sense of personal obligations towards supporting brands that behave responsibly. However, these contradict the norm activation model and call for further exploration.

Theoretical Contributions

At a time when the jewelry industry is criticized for its unsustainability despite its fragmented sustainability engagements (Pankiw, Phillips, and Williams, 2020), this study shows how jewelry brands could effectively communicate their sustainability commitments to improve consumers' reactions. Theoretically, first, this study fills a gap in the literature by addressing the

need for SRMM in the jewelry industry. While prior studies reported the importance of sustainability in marketing (Lerma et al., 2017), a specific focus on the jewelry industry was missing. Accordingly, this paper responds to the experts' calls advocating the need for jewelry brands to market their sustainability initiatives.

Second, this research offers deeper insights regarding whether consumers respond to jewelry brands' SRMM and how. Since the literature suggested sustainability within the jewelry industry as an idiosyncratic concept, a major research gap existed regarding consumers' responses to jewelry brands' SRMM. By comparing the presence and absence of sustainability information in their marketing, this research provides empirical explanations for their relevance. With higher intentions of WOM and BL among consumers exposed to SRMM, we clarify the ambiguity in luxury research and provide a clear perspective to researchers.

Third, adopting the norm activation model, this research explains the underlying mechanism of why consumers react affirmatively to jewelry brands' SRMM. We provide a deeper comprehension and empirical evidence for how consumers' SAC, ARS, and PN play important roles in explaining their WOM and BL intentions. Thus, this research is one of the few to account for the role of consumers' morals and norms -- concepts embedded within sustainability, in explaining consumers' responses to jewelry brands' SRMM. It also adds emerging evidence to the norm activation model (Schwartz, 1977), expanding its application to the luxury marketing literature. Fourth, this research brought a Brazilian context within the sustainable jewelry segment, thus making a unique contribution to the literature. It not only highlighted the Brazilian jewelry industry's need to invest in sustainability in the current times but also underscored how marketing that sustainability indeed helps brands to foster favorable consumer responses.

Managerial Contributions

The study contributes to the jewelry industry by allowing brands to understand and elevate their consumers' behavioral intentions using sustainability marketing. Through our findings, jewelry brands can better comprehend SRMM's effects on consumers. Thus, no matter how small or big sustainability efforts, Brazilian jewelry marketers, need to ensure their sustainability initiatives are included in their marketing messages. Results indicated that including sustainability information in marketing indirectly increased consumers' intentions to communicate positively about the brand and feel loyal to it. Considering that this industry's supply chain and production are often hard to trace, this study urges Brazilian jewelry marketers to become more vocal and apparent about their sustainability engagements. Both words of mouth and brand loyalty are crucial to brands' success. Thus, if jewelry brands' SRMM elevates these, marketers must carefully consider them. In addition, consumers' sustainability-oriented awareness, responsibilities, and norms were important in predicting their behavioral intentions in response to SRMM. Thus, while communicating sustainability is important, it might be specifically beneficial for jewelry brands to adapt their communications to appeal to consumers' values and norms toward sustainability.

Limitations and Future Studies

The study is not free of limitations and paves the path for future research. First, we only focused on Brazilian consumers. While the relevance of Brazil was justified, future studies could replicate this research to investigate consumer behaviors in other nations. Second, data were collected during the aftereffects of COVID when businesses were still criticized for not being

responsible towards consumers and society. This might have influenced participants' perceptions to appreciate a brand that showcased sustainable behaviors. Thus, future studies may investigate the investigated relationships in another timeframe.

References

- Alamsyah, D P, N A Othman, and Indriana. 2021. "Consumer Awareness towards Eco-Friendly Product through Green Advertising." Paper presented at the 6th International Conference on Climate Change, IOP Publishing, May 25. <https://doi.org/10.1088/1755-1315/824/1/012043>.
- Athwal, Navdeep, Victoria K. Wells, Marylyn Carrigan, and Claudia E. Henninger. 2019. "Sustainable luxury marketing." *International Journal of Management Reviews* 21 (4): 405-426.
- Brown, Tom J., Thomas E. Barry, Peter A. Dacin, and Richard F. Gunst. 2005. "Spreading the Word." *Journal of the Academy of Marketing Science* 33 (2): 123–38. <https://doi.org/10.1177/0092070304268417>.
- Chang, Jung-Hua, and Shan-Huei Wang. 2019. "Different Levels of Destination Expectation." *Telematics and Informatics* 36: 27–38. <https://doi.org/10.1016/j.tele.2018.11.004>.
- Diniz, Claudio. 2014. "Who Are the Luxury Consumers in Brazil?." Chap. 4 in *The Luxury Market in Brazil*. London: Palgrave Macmillan.
- Euromonitor. 2020. "Jewellery in Brazil." Euromonitor. Accessed July 16, 2021. <https://www.euromonitor.com/jewellery-in-brazil/report>
- Gifford, Robert, and Andreas Nilsson. 2014. "Personal and social factors that influence pro-environmental concern and behaviour." *International journal of psychology* 49 (3): 141-157.
- de Groot, Judith I. M., and Linda Steg. 2009. "Morality and Prosocial Behavior." *The Journal of Social Psychology* 149 (4): 425–49. <https://doi.org/10.3200/socp.149.4.425-449>.
- Harris, Tyler, and Alexander Thiel. 2021. "In fine jewelry and watches, sustainability shines through" *McKinsey & Company*, December 8. <https://www.mckinsey.com/industries/retail/our-insights/in-fine-jewelry-and-watches-sustainability-shines-through>.
- Hayes, Andrew. F. 2018. *Introduction to mediation, moderation, and conditional process analysis*. Guilford publications.
- Kang, Eun Yeon, and Yoon Hi Sung. 2022. "Luxury and Sustainability." *Journal of Marketing Communications* 28 (3): 1–22. <https://doi.org/10.1080/13527266.2021.1874482>.
- Kapferer, Jean-Noël, and Anne Michaut-Denizeau. 2013. "Is Luxury Compatible with Sustainability?." *Journal of Brand Management* 21 (1): 1–22. <https://doi.org/10.1057/bm.2013.19>.
- Kim, Woo-Hyuk, Kristin Malek, and Kevin R. Roberts. 2019. "The effectiveness of green advertising in the convention industry." *Journal of Hospitality and Tourism Management* 39: 185-192.
- Kolyesnikova, Natalia, Sara L. Sullivan Dodd, and Coy Callison. 2015. "Consumer Affective Responses to Direct Mail Messages." *Journal of Marketing Communications* 17 (5): 337–53. <https://doi.org/10.1080/13527266.2010.481142>.
- Kumar, Ajay, Justin Paul, and Anandakuttan B. Unnithan. 2020. "'Masstige' marketing: A review, synthesis and research agenda." *Journal of Business Research* 113: 384-398.

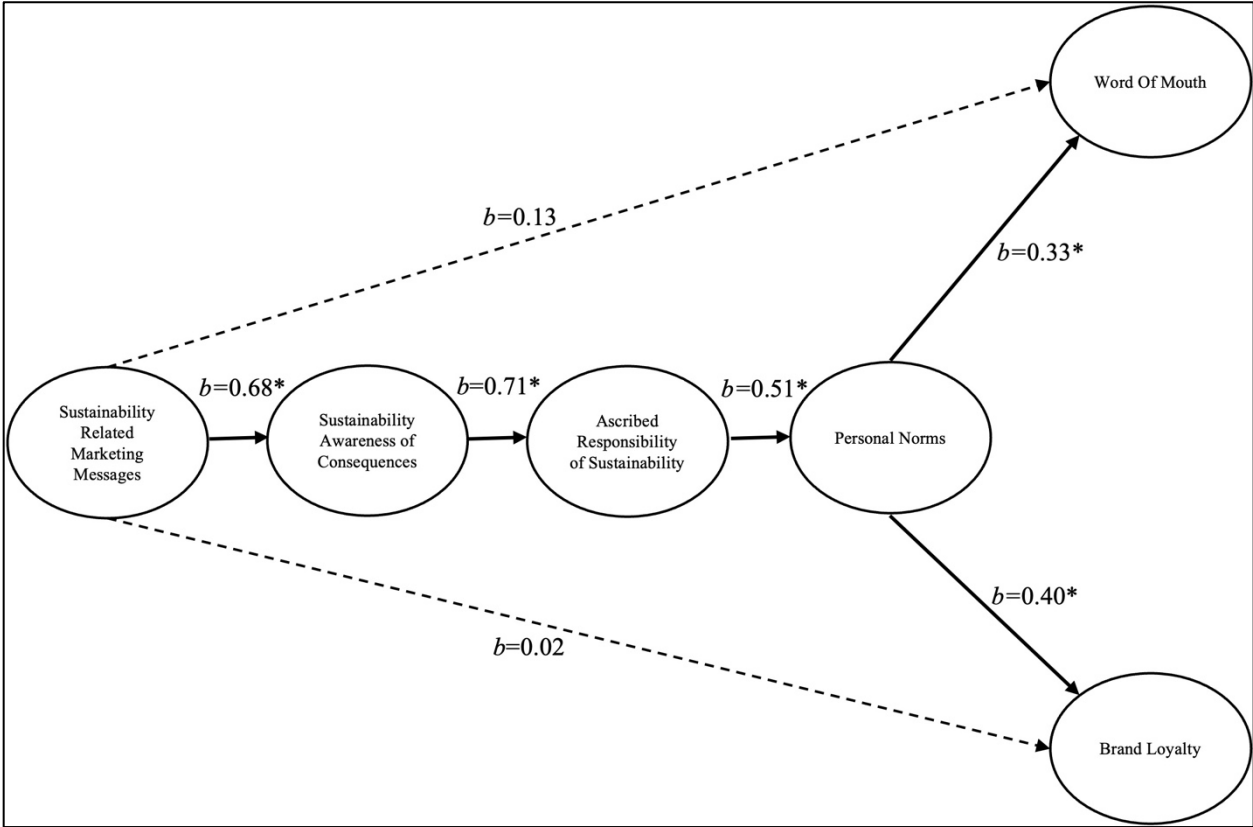
- Kumar, Prashant, Michael Polonsky, Yogesh K. Dwivedi, and Arpan Kar. 2021. "Green information quality and green brand evaluation." *European Journal of Marketing* 55 (7): 2037-2071. <https://doi.org/10.1108/EJM-10-2019-0808>.
- Kütter, Vinicius Tavares, and Zuleica Castilhos. 2017. "Inventário Do Uso E Emissões de Mercúrio Em Mineração de Pequena Escala de Ouro No Brasil." Paper presented at Jornada do Programa de Capacitação Institucional, September 21, 2017. <http://mineralis.cetem.gov.br>.
- Kyrousi, Antigone G., Eirini Koronaki, and Athina Y. Zotou. 2022. "Marketing communication in luxury research." *Journal of Marketing Communications* 28 (5): 560-589.
- Landon, Adam C., Kyle M. Woosnam, and B. Bynum Boley. 2018. "Modeling the Psychological Antecedents to Tourists' Pro-Sustainable Behaviors." *Journal of Sustainable Tourism* 26 (6): 957-72. <https://doi.org/10.1080/09669582.2017.1423320>.
- Lerma, Beatrice, Dorian Dal Palù, Marco Actis Grande, and Claudia De Giorgi. 2017. "Could Black Be the New Gold?" *Sustainability* 10 (2): 2. <https://doi.org/10.3390/su10010002>.
- Menezes, Vera Lúcia de Oliveira e Paiva. 1999. "Social implications of English in Brazil." *Encontro Nacional de Professores Universitários UFMG*: 326-331. <https://www.veramenezes.com/implications.htm>.
- Moraes, Caroline, Marylyn Carrigan, Carmela Bosangit, Carlos Ferreira, and Michelle McGrath. 2017. "Understanding ethical luxury consumption through practice theories." *Journal of Business Ethics* 145 (3): 525-543.
- Panigyrakis, George, Anastasios Panopoulos, and Eirini Koronaki. 2020. "Looking for luxury CSR practices that make more sense." *Journal of Marketing Communications* 26 (6): 666-684.
- Pankiw, Stephanie A., Barbara J. Phillips, and David E. Williams. 2020. "Luxury Brands' Use of CSR and Femvertising." *Qualitative Market Research*. Advance online publication. <https://doi.org/10.1108/qmr-05-2020-0061>.
- Petzer, Danie, Pierre Mostert, Liezl-Marie Kruger, and Stefanie Kuhn. 2014. "The Dimensions of Brand Romance as Predictors of Brand Loyalty among Cell Phone Users." *South African Journal of Economic and Management Sciences* 17 (4): 457-70.
- Sanguanpiyapan, Thitiporn, and Cynthia Jasper. 2010. "Consumer Insights into Luxury Goods." *Journal of Retailing and Consumer Services* 17 (2): 152-60. <https://doi.org/10.1016/j.jretconser.2009.12.001>
- Santoro, Gabriele, Stefano Bresciani, Bernardo Bertoldi, and Yipeng Liu. 2019. "Cause-Related Marketing, Brand Loyalty and Corporate Social Responsibility." *International Marketing Review* 37 (4): 773-791. <https://doi.org/10.1108/imr-11-2018-0310>.
- Schwartz, Shalom H. 1977. "Normative Influences on Altruism." *Advances in Experimental Social Psychology* 10: 221-79. [https://doi.org/10.1016/s0065-2601\(08\)60358-5](https://doi.org/10.1016/s0065-2601(08)60358-5).
- Septianto, Felix, Yuri Seo, and Amy Christine Errmann. 2021. "Distinct effects of pride and gratitude appeals on sustainable luxury brands." *Journal of Business Ethics* 169 (2): 211-224.
- Si, Hongyun, Ze Yu, Qi Jiang, Yimeng Shu, Wenwen Hua, and Xiaoyan Lv. 2022. "Better future with better us: Exploring young people's energy-saving behavior based on norm activation theory." *Frontiers in Public Health* 10. doi: [10.3389/fpubh.2022.1042325](https://doi.org/10.3389/fpubh.2022.1042325)
- Taufique, Khan Md Raziuddin. 2020. "Integrating Environmental Values and Emotion in Green Marketing Communications Inducing Sustainable Consumer Behaviour." *Journal of*

- Marketing Communications* 28 (3), 272-290.
<https://doi.org/10.1080/13527266.2020.1866645>.
- Thorson, Esther, Rob Wicks, and Glenn Leshner. 2012. "Experimental methodology in journalism and mass communication research." *Journalism & Mass Communication Quarterly* 89 (1): 112-124.
- Turner, Harry. 2022. "Jewellery and the Environment: An Overview & 3 Solid Facts." *Unsustainable Magazine*, March 29. <https://www.unsustainablemagazine.com/jewellery-and-the-environment/>.
- Walker, Lauren. 2022. "Employees of International Jewellery Store to Strike over Pay Row." *The Brussel Times*, June 30.
<https://www.brusselstimes.com/employment/246977/employees-of-international-jewellery-store-to-strike-over-pay-row>.
- Wang, Zhaohua, Dongxue Guo, Xiaomeng Wang, Bin Zhang, and Bo Wang. 2018. "How Does Information Publicity Influence Residents' Behaviour Intentions around E-Waste Recycling?" *Resources, Conservation and Recycling* 133: 1-9.
<https://doi.org/10.1016/j.resconrec.2018.01.014>.
- Zaynab. 2022. "Slow Fashion and Slow Jewellery, Sustainability and Social Responsibility - ZD ArtJewellery." ZD ArtJewellery, March 6. <https://zd-artjewellery.com/slow-fashion-and-slow-jewellery-sustainability-and-social-responsibility/>.

Table 1
Summary of Scales' Reliability (Cronbach's Alpha)

Variable	Cronbach's alpha
<p>SAC adapted from Wang et al. (2020)</p> <p>I feel aware that my jewelry consumption can reduce child labor in jewelry production</p> <p>I feel aware that my jewelry consumption can reduce the exploitation of environmental resources.</p> <p>I feel aware that my jewelry consumption can lead to worker safety</p> <p>I feel aware that my jewelry consumption can reduce negative environmental impacts.</p>	0.928
<p>ARS adapted from Wang et al. (2018)</p> <p>I feel responsible to reduce child labor with my own jewelry consumption</p> <p>I feel responsible to reduce the exploitation of environmental resources with my own jewelry consumption.</p> <p>I feel responsible to support worker safety with my own jewelry consumption</p> <p>I feel responsible to reduce negative environmental impacts with my own jewelry</p>	0.928
<p>PN adapted from Wang et al. (2018)</p> <p>I feel personal obligation to protect the society.</p> <p>I feel personal obligation to have a sense of social responsibility.</p> <p>I feel personal obligation to improving the society with my own jewelry consumption.</p> <p>I feel personal obligation to protect the environment.</p> <p>I feel personal obligation to have a sense of environmental responsibility.</p> <p>I feel personal obligation to improving the environment with my own jewelry</p>	0.908
<p>WOM adapted from Brown et al. (2005)</p> <p>Make sure that others know that I do business with UNI.</p> <p>Speak positively about UNI to others.</p> <p>Recommend UNI to family members.</p> <p>Speak positively of UNI to others.</p> <p>Recommend UNI to acquaintances.</p> <p>Recommend UNI to close personal friends.</p>	0.940
<p>BL adapted from Petzer et al. (2014)</p> <p>I would buy from UNI whenever I can.</p> <p>I would buy as much of UNI as I can.</p> <p>I feel UNI is the only brand of jewelry I need.</p> <p>UNI is the one brand I would prefer to buy or use.</p> <p>If this UNI was unavailable, it would be difficult if I had to use another brand.</p> <p>I would go out of my way to buy from UNI</p>	0.901

Figure 1. Conceptual model showing hypotheses and results



Note: N= 300. b represents unstandardized coefficients; *represents $p < 0.001$; --- represents $p > 0.001$.

Table 2
Summary of Results

Dependent Variable	Relationship tested	Unstandardized <i>b</i>	SE	LCI	UCI	Hypotheses results
	SRMM→WOM	0.13	0.09	-0.05	0.32	H1 <i>not</i> supported
	SRMM→BL	0.02	0.10	-0.17	0.22	H2 <i>not</i> supported
	SRMM→SAC**	0.68**	0.12	0.44	0.92	H3 supported
	SAC→ARS**	0.71**	0.04	0.62	0.80	H4 supported
	ARS→PN**	0.51**	0.04	0.43	0.60	H5 supported
	PN→WOM**	0.33**	0.08	0.17	0.47	H6 supported
	PN→BL**	0.40**	0.08	0.24	0.56	H7 supported
WOM	Indirect effects					
	SRMM→SAC→ARS→PN→WOM*	0.08*	0.03	0.03	0.14	H8 supported
	SRMM→ARS→PN→WOM	0.02	0.02	-0.01	0.05	
	SRMM→SAC→PN→WOM*	0.05*	0.02	0.01	0.10	
	SRMM→SAC→ARS→WOM	0.02	0.04	-0.06	0.10	
	SRMM→PN→WOM*	0.06*	0.03	0.01	0.12	
	SRMM→ARS→WOM	0.01	0.01	-0.01	0.04	
	SRMM→SAC→WOM*	0.17*	0.05	0.07	0.29	
BL	Indirect effects					
	SRMM→SAC→ARS→PN→BL*	0.10*	0.02	0.05	0.16	H9 supported
	SRMM→ARS→PN→BL	0.02	0.02	-0.01	0.07	
	SRMM→SAC→PN→BL*	0.05*	0.02	0.02	0.11	
	SRMM→SAC→ARS→BL	0.03	0.03	-0.04	0.11	
	SRMM→PN→BL*	0.07*	0.02	0.01	0.14	
	SRMM→ARS→BL	0.01	0.01	-0.01	0.05	
	SRMM→SAC→BL*	0.10*	0.04	0.02	0.21	

Note: ** represents significant at $p < 0.001$; * represents significant at $p < 0.05$. SRMM = sustainability-related marketing messages; WOM = Word of mouth; BL = Brand Loyalty; SAC = Sustainability Awareness of Consequences; ARS = Ascribed Responsibility of Sustainability; PN = Personal Norms; LCI = Lower Confidence Interval; UCI = Upper Confidence Interval.