FUNDAÇÃO GETULIO VARGAS
ESCOLA BRASILEIRA DE ADMINISTRAÇÃO PÚBLICA E DE EMPRESAS
MESTRADO EM GESTÃO EMPRESARIAL

SUSTAINABLE INITIATIVES IN THE LUXURY INDUSTRY

DISSERTAÇÃO APRESENTADA À ESCOLA BRASILEIRA DE ADMINISTRAÇÃO PÚBLICA E DE EMPRESAS PARA OBTENÇÃO DO GRAU DE MESTRE

CAMILLE FREREBEAU

Rio de Janeiro - 2022

CAMILLE FREREBEAU

SUSTAINABLE INITIATIVES IN THE LUXURY INDUSTRY

Master's thesis presented to Master in Management program, Escola Brasileira de Administração Pública, Fundação Getulio Vargas, as a requirement for obtaining the title of Master in Management.

Advisor: Professor Dr. YAN VIEITES

Rio de Janeiro 2022

Dados Internacionais de Catalogação na Publicação (CIP)
Ficha catalográfica elaborada pelo Sistema de Bibliotecas/FGV

Frerebeau, Camille
Sustainable initiatives in the luxury Industry / Camille Frerebeau. – 2022.

24 f.

Dissertação (mestrado) - Escola Brasileira de Administração Pública e de Empresas, Centro de Formação Acadêmica e Pesquisa.
Orientador: Yan Vieites
Inclui bibliografia.

1. Sustentabilidade. 2. Reaproveitamento (Sobras, refugos, etc.). 3. Comportamento do consumidor. 4. Marca de produtos. I. Vieites, Yan. II. Escola Brasileira de Administração Pública e de Empresas. Centro de Formação Acadêmica e Pesquisa. III. Título.

CDD – 658.827

Elaborada por Maria do Socorro Almeida – CRB-7/4254

FUNDAÇÃO GETULIO VARGAS
MESTRADO PROFISSIONAL EXECUTIVO EM GESTÃO EMPRESARIAL
ESCOLA BRASILEIRA DE ADMINISTRAÇÃO PÚBLICA E DE EMPRESAS

CAMILLE FREREBEAU

"SUSTAINABLE INITIATIVES IN THE LUXURY INDUSTRY".

DISSERTAÇÃO APRESENTADO(A) AO CURSO DE MESTRADO PROFISSIONAL EXECUTIVO EM GESTÃO EMPRESARIAL PARA OBTENÇÃO DO GRAU DE MESTRE(A) EM ADMINISTRAÇÃO.

DATA DA DEFESA: 20/10/2022

ASSINATURA DOS MEMBROS DA BANCA EXAMINADORA

PRESIDENTE DA COMISSÃO EXAMINADORA: PROFº YAN BERNARDES VIEITES CASTRO DOS SANTOS

PROFº YAN BERNARDES VIEITES CASTRO DOS SANTOS
ORIENTADOR(A)

PROFº AUGUSTO CESAR SILVA SALES
MEMBRO INTERNO

PROFº FERNANDO ALCIDES SOBRAL MACHADO
MEMBRO EXTERNO

PROFª VERA HERÉDIA COLAÇO
MEMBRO EXTERNO

RIO DE JANEIRO, 20 DE OUTUBRO DE 2022.

PROFº/ª FLÁVIO CARVALHO DE VASCONCELOS
DIRETOR(A)

PROFº ANTONIO DE ARAUJO FREITAS JUNIOR
PRÓ-REITOR DE ENSINO, PESQUISA E PÓS-GRADUAÇÃO

D4Sign 1e7f0a81-a41f-4fe6-a394-ea9f2d45020c - Para confirmar as assinaturas acesse https://secure.d4sign.com.br/verificar
Documento assinado eletronicamente, conforme MP 2.200-2/01, Art. 10º, §2.

ACKNOWLEDGMENTS

With the completion of my master's degree, I will have completed another significant chapter in both my career and personal development. My acquired knowledge and experiences will affect my future journey and open doors to the future. Access to education and information, as well as my capacity to think critically, were important to my success.

I would like to thank my parents first and foremost.

Furthermore, I'd like to express deepest gratitude to my advisors, Yan Vieites and Larissa Elmor, for their guidance and advice during the dissertation writing process. Thank you sincerely. I appreciate the time and work you put in to help me get to the end of my master's degree.

Table of contents

LIST OF ILLUSTRATIONS **1**

LIST OF SYMBOLS, ABBREVIATIONS AND ACRONYMS **1**

- ABSTRACT - **2**

INTRODUCTION **3**

LITERATURE REVIEW **5**

- **SUSTAINABLE LUXURY: THE DIRECTION OF THE RELATIONSHIP** 5
- **THE ROLE OF TYPE OF INITIATIVE** 6

METHODOLOGY **8**

- **PARTICIPANTS** 8
- **PROCEDURE** 9

DATA ANALYSIS AND RESULTS **13**

- **RANDOMIZATION CHECK** 13
- **THE INFLUENCE OF SUSTAINABLE PRACTICES ON WTP** 14
- **THE RELATIVE EFFECTIVENESS OF CURTAILMENT PRACTICES** 15
- **ANALYSIS OF THE MECHANISMS** 15

DISCUSSION **17**

CONCLUSION AND RECOMMENDATIONS **18**

REFERENCES **20**

List of illustrations

Table 1. Characteristic of respondents

Table 2. Randomization check

Table 3. Means for WTP

Fig 1. Example of the control condition

List of symbols, abbreviations and acronyms

WTP: Willingness to pay

ABSTRACT

Purpose – Prior research on how sustainability initiatives influence attitudes toward luxury companies and products is limited, and evidence is frequently contradictory. The goal of this study is (a) to examine how sustainable initiatives influence perceptions about luxury brands and products and (b) to assess the relative effectiveness of different types of initiatives.

Design / Methodology – To test our predictions, we employed an experimental approach and examined the data using quantitative analysis. The study evaluated if and how customers' willingness to pay for sustainable items varied across different types of sustainable initiatives. After being randomly exposed to one of five scenarios (control, sustainable practices unrelated to production, efficient production, recycling materials from the oceans, and recycling materials from other luxury ateliers) participants indicated their willingness to pay and then filled out a number of questions assessing the potential mechanisms.

Findings – The results of the study suggest that sustainable initiatives vary widely in their effectiveness, with some eliciting greater willingness to pay among consumers than others. Specifically, none of the conditions affected the consumers' willingness to pay, except for the condition involving recycled materials from other luxury ateliers. In this condition, participants indicated a higher willingness to pay for the product in question. A potential explanation for this effect is the perceived luxuriousness of the brand.

Research limitations – This study was based on a hypothetical scenario, so participants were not spending their own money. Further, since the luxury brand chosen in the experiment (Yves Saint Laurent) is well-known and has great market credibility, it may have resulted in a ceiling effect in participants' quality and luxury judgments. Then, while we discovered that curtailment practices involving the use of recycled material from other luxury brands have a good effect on consumers' willingness to pay, we were unable to document why this effect occurs in the first place.

Practical Implications – This study can assist brands more successfully promote sustainable practices in the luxury industry. Furthermore, this work helps to improve knowledge of how people view recycled products and may help to reduce future demand for virgin materials.

Keywords: Sustainable Initiative, Recycling, Sustainable Consumer Behavior, Luxury Brand
Paper Category: Master Dissertation

Introduction

The world is facing major environmental challenges. Climate change, according to future projections, will have a severe impact on natural ecosystems, plants, and animals, accelerating biodiversity loss in the world (Weiskopf et al. 2020, Bellard 2012). Many towns and sectors that rely on natural resources, such as agriculture, fisheries, energy, and water, will be affected by these events (UE Commission 2021). At the center of the climate catastrophe is human action, and particularly, consumer behavior. In fact, not only has the United Nations established "responsible consumption and production" as one of its 17 sustainable development goals, but consumers have also become more aware of how their consumption can influence the environment. People's values, beliefs, and aspirations have shifted dramatically over the world in the last decade, and they are becoming increasingly concerned about the environmental and social impact of the products they purchase (Jayaraman 2011, Nielson 2014, Deloitte 2021). As a result, businesses are investing more and more in initiatives that promote sustainability (Nielsen 2014).

Luxury brands have followed suit with major investments in sustainability practices (Deloitte, 2019; Shim, Shin, & Kwak, 2018; Stewart & Niero, 2018; Testa, Sarti, & Frey, 2019). For example, Chanel launched its "Mission 1 degree 5" programme to reduce greenhouse gas emissions in Chanel's operations by 50% by 2030. Likewise, Kering, a French holding specialized in luxury goods, promises to be carbon neutral by 2050 (Touzard 2021). There are also relevant initiatives like the new platform Nona Source, launched by LVMH employees, which allows fabric to be exchanged between companies and purchased by the young creative talents at competitive prices (LVMH, 2021). Notwithstanding, research on how sustainable initiatives influence attitudes toward luxury brands and products is limited and evidence is often mixed. Research has shown that linking luxury goods to environmental causes in particular (Steinhart et al. 2013) or charitable issues in general (Hagtvedt and Patrick 2016) can improve marketing outcomes. On the other hand, studies have also found that consumers see luxury goods as less appealing when they are classified as sustainable (Torelli et al. 2012, Voyer and Beckham 2014) or made from recycled materials (Achabou and Dekhili 2013). In short, an assessment of the literature could equally lead us to predict a positive or a negative effect of green practices in the luxury industry.

In this research, we investigate how sustainable initiatives shape attitudes towards luxury brands and products. Further, we will also examine what types of sustainable initiatives produce more positive (or less negative) results. When implementing sustainable practices, companies can focus on different types of initiatives. Three relevant alternatives are efficiency practices, curtailment practices, and practices that are not directly related to the production process. Efficiency practices involve the use of new technologies that allow companies to manufacture products with a lower environmental impact with no need of "behavior change" (e.g., LED bulbs, water-saving machinery; Brooks and Wilson 2015; Jansson et al. 2010; Karlin et al. 2014). Unlike efficiency behaviors, which include one-time purchases of efficient equipment, curtailment practices involve the adoption of different inputs or methods of production and produce qualitatively different goods with a lower environmental impact (e.g., use of recycled fabric; Abrahamse et al., 2005; Brooks and Wilson 2015; Jansson et al. 2010; Karlin et al. 2014). Finally, non-production practices can be seen as an extension of company operations with sustainability-related initiatives, industry partnerships geared toward common sustainability goals, or collaborations with entities outside of the retail sector (e.g., governments, NGOs; Carcano, 2013).

We offer several contributions to the literature. First, we inform the ongoing debate on the consequences of sustainable practices in the luxury industry (Achabou and Dekhili 2013; Michaut-Denizeau, 2014; Torelli et al., 2012) by providing evidence for the direction of the effect. Further, we extend this research by investigating whether and how the magnitude of the phenomenon varies across different types of sustainable initiatives (i.e., curtailment practices, efficiency practices, and practices that are not directly related to the production process). Our work also has important practical implications. The findings of this study will have managerial implications in that they can aid in the more effective promotion of sustainable practices among luxury brands.

Literature Review

Sustainable Luxury: The Direction of the Relationship

Since consumers are increasingly concerned about the environment (Jayaraman 2011), companies perceived to be more sustainable should be seen very positively. Along these lines, previous research has shown that consumers hold positive attitudes toward green companies (Nielson 2014) and report a preference for products with a lower environmental impact (Deloitte 2021). However, empirical evidence also revealed that green products are seen as having a lower quality relative to traditional ones (Skard and al. 2020, Luchs and al. 2010). The underlying idea is that consumers assume that there is a tradeoff between sustainability and other functional product attributes such that to achieve greater sustainability companies would have to devote less attention to aspects such as durability and performance. Because concerns about quality are particularly pronounced in the luxury industry (Achabou and Dekhili 2013), one could derive theoretical hypotheses proposing either a positive or a negative effect of sustainability perceptions on product attitudes and intentions.

Indeed, studies have yielded varied results when it comes to communicating sustainability and Corporate Social Responsibility (CSR) initiatives. According to some studies, sustainable luxury goods are viewed as less desirable than non-sustainable luxury goods (Michaut-Denizeau, 2014; Torelli et al., 2012). Achabou and Dekhili (2013) provided labels for premium Hermès-branded shirts to affluent male and female French participants, some of which were described as using recycled material. The presence of recycled fibers was found to have a substantial negative link with the perception of the product. Moreover, in luxury purchasing decisions, a brand's environmental commitment was the least important selection criterion, with quality, price, and brand reputation being the most important considerations (Joy and al, 2012).

On the other hand, studies have also found evidence for a positive effect. Adıgüzel and Donato (2021), for instance, showed that consumers hold favorable attitudes toward upcycled and recycled luxury products compared to non-sustainable ones. According to Ducrot-Lochard and Murat (2011), the luxury industry will progress towards sustainability because luxury clients' high-quality expectations have expanded to encompass social and environmental considerations. In line with this idea sustainable development presents an opportunity to improve brand differentiation and corporate image (Kim, Ko, Xu, and Han, 2012).

In sum, one could expect the effect of sustainability on perceptions about luxury products to be either positive or negative. We thus adopt an inductive approach (Alba 2012; Lynch et al. 2012), with no specific predictions about the direction of the association, to understand the effect of sustainability practices on consumer outcomes in general. Our hypotheses pertain to the relative effectiveness of the different types of sustainable initiatives.

The role of Type of Initiative

Companies can use a variety of strategies to promote sustainability. In this study, we investigate three different strategies: efficiency practices, curtailment practices, and practices that are not directly related to the production process. As described earlier, curtailment practices such as recycling produce a qualitatively different good while having a smaller environmental impact. For example, Yves Saint-Laurent presented the "New vintage" collection in 2009, which was made using recycled fabric from prior seasons. (Brooks and Wilson 2015; Jansson et al. 2010; Karlin et al. 2014, Gardner and Stern, 2002). Efficiency practices albeit also related to the manufacturing process, are based on the purchase of an efficiency-enhancing equipment and provide the same good with a smaller environmental impact (Brooks and Wilson 2015; Jansson et al. 2010; Karlin et al. 2014). Finally, practices that are not directly related to the manufacturing process can be viewed as an extension of the company's operations, including charitable and cause-related initiatives, as well as industry alliances aimed towards common sustainability goals (Carcano, 2013).

Although all these practices represent initiatives targeted at promoting sustainability, they might elicit different perceptions among consumers. Previous research has shown that since curtailment practices involve the reduction in material consumption, it is often viewed as motivated by necessity rather than concern about the state of the environment. In other words, it is unclear whether curtailment practices are adopted by choice or financial need, and this ambiguity results in such behaviors being perceived as lower status (De Nardo et al, 2017). Along similar lines, since curtailment practices involve the production of qualitatively different products, this type of practice might be especially prone to "sustainability liability" effects—that is, concerns about the quality of products emerging from their higher degree of sustainability (Luchs and al. 2010). Indeed, studies have shown that the use of recycled materials in the production process affects consumer preferences negatively (Achabou and Dekhili 2013).

In sharp contrast, efficiency behaviors have been shown to increase status, as they signal a concern about the environment while also demonstrating one's ability to incur financial costs for others' benefit (Griskevicius et al, 2010). Along similar lines, Hagtvedt and Patrick (2015) demonstrated that charity collaboration positively influenced the tendency to purchase a luxury brand using real products and choice behavior. They also found that being associated with charity raised purchase intent for the luxury brand. Thus, both practices emit positive signals to consumers. Critically, since neither efficiency practices nor practices that are not directly related to the production process influence the final good, none of them should raise concerns about the quality of the product to be purchased. Thus, we expect curtailment practices to be perceived more negatively than other practices either because it raises concerns about the underlying motives for sustainability or because it calls the quality of products into question.

H1: Curtailment practices such as using recycled materials from the ocean will elicit a lower willingness to pay than efficiency practices or practices not directly related to the production process.

Our theoretical arguments lie on the premise that consumers hold negative views about recycled goods, as they call the quality of the final product into question. However, the type of material used for recycling can also produce different reactions among consumers. For instance, while some companies use recycled materials from diverse sources (e.g., plastic residuals extracted from the sea) large luxury brands such as Kering and LVMH, use recycled materials from the same brand or group. We predict that using residuals from a luxury brand with attenuate potential concerns about the quality of the product, as doing so implies the use of materials already known for their quality. Formally:

H2: The use of recycled material from a luxury brand or group (vs. other sources such as materials from the ocean) will reduce the negative effect of curtailment practices on the consumers' willingness to pay.

Methodology

We relied on an experimental approach to test our predictions. The study investigated whether and how consumers' willingness to pay for sustainable products varies across the different types of sustainable initiatives. We expected that sustainable curtailment practices such as the use of recycled materials extracted from the ocean to be perceived more negatively than efficiency practices or practices not directly related to the production (H1). On the other hand, we expected sustainable curtailment practices such as the use of recycled material from a luxury brand or group to attenuate the negative view held by consumers about curtailment practices (H2).

We used a quantitative research technique for the research methodology and created an online survey experiment to collect the relevant data. The survey experiment was created using the web application Qualtrics and was distributed online due to its time, cost, and reach advantages. It was also available in two languages: English and French. Participation in this study was completely voluntary and anonymous and there were no monetary or other inducements to participate in the study. The survey was pre-tested numerous times before the final version was sent to ensure internal validity and that all questions were phrased in an understandable manner.

Participants

One hundred and fifty-six participants were recruited online through the researcher's social media and extended personal network. After excluding those who did not answer the willingness to pay measure (our main dependent variable), our final sample was of 149 participants (35% male, Mage = 33.16 years), mostly consisting of France residents (73.05%). See further sociodemographic details in table 1.

Our data suggests that, when choosing a luxury product, these respondents attach the greatest importance to product quality (M = 4.45, on a five-point Likert scale), price (M=3.73) and environmental impact (M = 3.38). Brand (M=3.32) and fashion trend (M=3.15) do not appear to be decisive criteria. Thus, participants in our sample seem to care a great deal about environmental issues when purchasing products.

Table 1. Characteristic of respondents

	N	Mean	Std. Dev.
Sociodemographic Characteristics			
Male	141	0.35	0.48
Age	142	33.16	14.58
Household Income	149	50369	40910
Education	142	4.14	1.25
Social Class	142	2.46	0.79
Consumption & Environmental Characteristics			
Know the brand	143	0.99	0.08
Has purchased a luxury item	143	0.66	0.47
Environmental values	142	3.83	0.86
General attitudes toward the product			
Willingness to pay	149	7.25	5.54
Attitudes towards the product	147	3,49	1.12
Quality	147	4.2	0.8
Perception of the product's luxury	147	4.44	0.75
Perception of the brand's luxury	147	4.78	0.47

Procedure

The survey experiment comprised nineteen questions organized into four sections: Introduction/Consent, Experiment (five experimental conditions), Demographics, and Luxury Consumption & Environmental Aspects (See Appendix for a detailed description of the survey). Following a brief explanation of the study's goal (an assessment of consumers' behavior) and a consent form, participants were exposed to an advertisement for a tuxedo jacket by Yves Saint Laurent, a luxury fashion brand. The advertisement displayed a picture of the product and its description, including the materials (100% wool & silk or recycled materials), country of origin (Italy), color of the cloth (Black) and the brand logo (See Figure 1 for details).

Fig 1. Example of the control condition

To assess whether consumers would demonstrate different preferences according to the type of sustainable initiative adopted by the brand, participants were randomly assigned to one of five possible sustainable practice conditions: no sustainable practice (control), a practice unrelated to the product's production, an efficiency practice, and two different curtailment practices. See below the description displayed in each condition:

(1) Control condition: There is no description about sustainable initiative, only an introductive sentence on the product "Saint Laurent tuxedo jacket madewhool, featuring a peak lapel, flap pockets and welt breast pocket" (displayed in figure 1).

(2) Experimental condition (Unrelated practices):
"Saint Laurent tuxedo jacket madewhool, featuring a peak lapel, flap pockets and welt breast pocket. Yves Saint Laurent is committed to reducing its sustainable impact via the aid of key institutions. Part of the proceeds from your purchase will be donated to environmental NGOs."

(3) Experimental condition (Efficiency practices):
"Saint Laurent tuxedo jacket madewhool, featuring a peak lapel, flap pockets and welt breast pocket. Yves Saint Laurent is committed to reducing its sustainable impact via efficient manufacturing. The technology used to produce this jacket consumes substantially less water and energy"

(4) Experimental condition (Curtailment practice / Materials recycled from the ocean):
"Saint Laurent tuxedo jacket madewhool, featuring a peak lapel, flap pockets and welt breast pocket. Yves Saint Laurent is committed to reducing its sustainable impact via recycling. This jacket was produced using recycled materials extracted from the oceans and rivers"

(5) Experimental condition (Curtailment practice / Materials recycled from other luxury brands):
"Saint Laurent tuxedo jacket madewhool, featuring a peak lapel, flap pockets and welt breast pocket. Yves Saint Laurent is committed to reducing its sustainable impact via recycling. This jacket was produced using recycled materials from our ateliers and other brands of the Kering luxury group."

Willingness to Pay Measure: After being exposed to the advertisement, participants were asked to indicate the maximum amount they would be willing to pay for the product on a 32-point scale ranging from not at all to more than €3,000. The median willingness to pay was 6, which corresponds to the range €401 - €500 in the scale. This measure served as our main dependent variable.

Product-Related Measures. Next, participants answered their attitudes towards the product by indicating the extent that they liked the product (1=not at all, 5=very much). Also, they provided their quality perceptions by indicating how would they evaluate the quality of the product and its material (1=very poor, 5=excellent). Lastly, they indicated how luxurious the brand and product itself were (1=not at all, 5=very much). These questions are to be used as potential mechanisms.

Sociodemographic Questions. Finally, participants were asked about their socio-demographic characteristics. Specifically, they indicated their gender, age, education (1=less than high school, 6=doctorate), household income (1= Less than €10,000, 12 = More than €150,000), and the social class they consider themselves to belong (1 = upper class, 5 = lower class).

Consumption Measures. Respondents were also asked questions about their own consumption habits. First, participants were asked whether they knew the Yves Saint Laurent Brand and if they had ever purchased luxury goods previously (yes vs. no). Furthermore, they were inquired about the crucial factors they usually consider while selecting a luxury item, specifically, they rated on a scale ranging from 1 to 5 how important Price, Quality, Environmental Impact,

Fashion Trends and Brand were to them (1=not at all important, 3=moderately important, 5=extremely important). Finally, to measure environmental concerns, we asked participants how concerned they were about the environment (1=not at all, 5=very much).

Data Analysis and Results

In order to test our hypotheses, all analyses were conducted removing outliers in the willingness to pay measure (i.e., participants who reported a WTP 3.00 deviations above or below the mean) and removing those who indicated that they were not willing to pay at all for the product (i.e., those who answered $0 in the WTP measure). The main results remain largely unaltered if we analyze the full sample without exclusions. Also, although we operationalized the willingness to pay measure using the original 32-point scale format, the results would remain virtually unaltered had we replaced these figures with the bracket midpoints of each point in the scale.

Randomization Check

To claim causality between our independent variable (luxury brand's sustainability measures manipulations) and our dependent variable (consumers' willingness to pay), it is important that the groups assigned to the different experimental conditions are similar in terms of sociodemographic characteristics. To ensure this balance across groups, we used a process of random assignment—that is, participants were randomly displayed one of the five possible experimental conditions. We subsequently conducted a randomization check to verify whether groups were in fact similar across conditions. Specifically, we performed a series of tests (ANOVA and chi square) comparing the groups in terms of their sociodemographic characteristics (i.e, gender, age, household income, education, subjective social class). No significant differences emerged across experimental conditions for any of the sociodemographic variables, suggesting that the randomization process worked (see table 2 for details);

Table 2. Randomization check

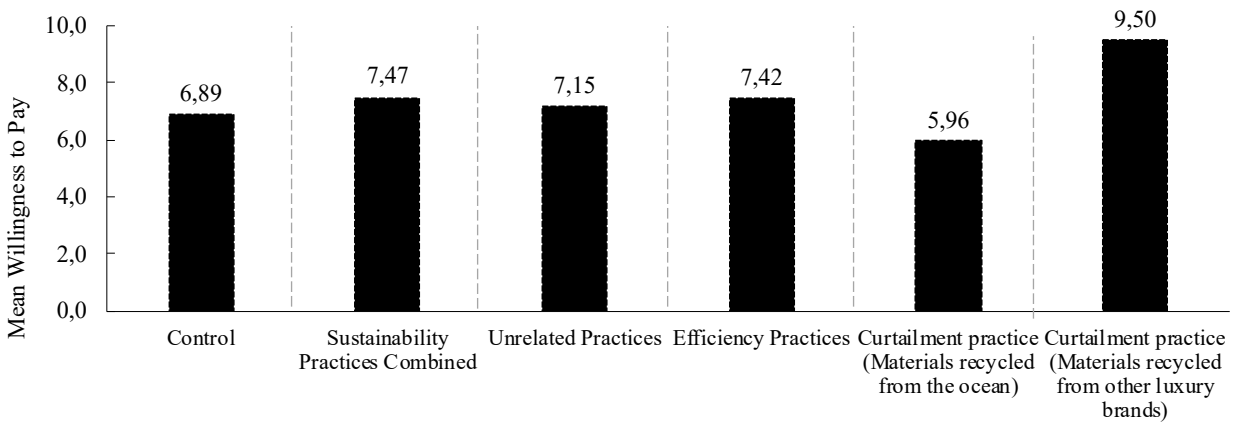
	Unrealated (n=26)	Efficiency (n=28)	Curtailment Ocean (n=26)	Curtailment Luxury (n=24)	Control (n=29)	P-value
Female, No. (%)	15 (60)	21 (80.77)	15 (60)	15 (59)	17 (60.71)	0.42
Age, mean (SD)	36,46 (17.93)	31.96 (11.98)	29.89 (11.96)	30.69 (11.79)	36.53 (17.33)	0.16
Household Income, mean (SD)	46923 (40424)	42678 (42914)	65576 (42692)	56041 (37647)	49827 (40432)	0.29
Education, mean (SD)	4.2 (1.44)	4.26 (1.15)	4.28 (1.1)	4.43 (0.89)	3.8 (1.44)	0.46
Social Class, mean (SD)	2.6 (0.7)	2.53 (0.81)	2.4 (0.64)	2.26 (0.81)	2.39 (0.95)	0.6

Continuous variables were tested using ANOVA and categorical variables with chi-squared.

The Influence of Sustainable Practices on WTP

We first compared the average willingness to pay reported in all sustainable practice conditions combined against the average willingness to pay reported in the control condition using an independent samples t test. As displayed in figure 2, the results were not significant. People were as willing to pay for the jacket in the control condition (M=6.89, SE=.69) as they were in the combined sustainability condition (M=7.47, SE=.43, t(131) = -0.63, p = 0.52). However, important heterogeneities emerged. No significant differences were found between the average willingness to pay in the control condition (M=6.89, SE=.69) and in the efficiency practice condition (M = 7.42, SE = 0.74, t(55) = -.52 , p = 0.60) or the unrelated sustainability practices condition (M = 7.15, SE = 0.93, t(53) = -.22 , p = 0.82). Further, although the average willingness to pay in the curtailment ocean condition (M = 5.96, SE = .54) was relatively lower than in the control condition (M = 6.89, SE=.69), the mean difference across conditions was not significant (t(53) = 1.03, p = 0.30). Finally, when we compare the average willingness to pay in the curtailment luxury condition with the average willingness to pay in the control condition, we can observe a significant difference. Specifically, participants indicated a higher average willingness to pay for a luxury product when it is framed as curtailment luxury (M = 9.5, SE = 1.09) than without any information about sustainability (M = 6.89, SE = .69, t(51) = -2.06, p = 0.04). Taken together these results suggest that although several sustainable practices may not have the desired effect in promoting higher willingness to pay for luxury goods, using recycled materials from luxury brands seem to be a promising initiative.

Figure 2. Mean WTP per experimental condition



The Relative Effectiveness of Curtailment Practices

In our first hypothesis, we predicted that curtailment practices such as using recycled materials extracted from the ocean would elicit a lower willingness to pay than efficiency techniques or practices not directly related to production. Although the mean willingness to pay was indeed lower in the ocean curtailment (M = 5.96, SE=0.54) condition than in the efficiency (M = 7.42, SE = 0.74, t(52) = 1.57 , p = 0.12) or the production unrelated conditions (M = 7.15, SE = 0.93, t(50) = 1.09 , p = 0.27), none of these differences reached significance.

In our second hypothesis, we predicted that curtailment practices such as the use of recycled materials from a luxury brand or group would reduce the negative effect of curtailment practices on the consumers' willingness to pay. To test this hypothesis, we directly assessed whether there was a difference in willingness to pay between our two curtailment conditions. An independent samples t-test showed that, on average, participants presented significantly higher average willingness to pay for a luxury product when it is framed as curtailment luxury (M = 9.5, SE = 1.09) than when it is framed as curtailment ocean (M = 5.96, SE = .54, t(48) = -2.95, p=0.004). Our second hypothesis was therefore supported.

For the sake of completeness, we also compared the effectiveness of using recycled materials form luxury brands against the two other sustainable initiatives. However, although participants in the curtailment luxury condition reported higher willing to pay values for the jacket (M = 9.5, SE = 1.09) than those in in the efficiency (M = 7.42, SE = 0.74, t(50) = -1.60 , p = 0.11), or the production unrelated conditions (M = 7.15, SE = 0.93, t(48) = -1.63 , p = 0.10), the differences were not significant.

Analysis of the Mechanisms

To understand the drivers of the difference in willingness to pay in the curtailment luxury condition relative to the control condition, we conducted a series of t tests contrasting the scores on general attitudes toward the product ($M_{control}$= 3.67, $SE_{control}$=0.18, $M_{curtailment\ luxury}$ = 3.65, $SE_{curtailment\ luxury}$ = 0.26, t(49) = 0.08 , p = 0.93), perceived quality of the product ($M_{control}$= 4.28, $SE_{control}$=0.15, $M_{curtailment\ luxury}$ = 4.17, $SE_{curtailment\ luxury}$ = 0.14, t(49) = 0.51 , p = 0.60), perceived luxuriousness of the product ($M_{control}$=4.35, $SE_{control}$=0.15, $M_{curtailment\ luxury}$ = 4.43, $SE_{curtailment\ luxury}$ = 0.16, t(49) = -0.34 , p = 0.73), and perceived luxuriousness of the brand ($M_{control}$= 4.64, $SE_{control}$=0.11, $M_{curtailment\ luxury}$ = 4.91, $SE_{curtailment\ luxury}$ = 0.06, t(49) = -1.91 , p = 0.06) across these two conditions.

Although none of these results proved to be significant, the difference in perceived luxuriousness of the brand between the control and the curtailment luxury conditions was marginally significant ($p=0.06$). As participants indicated a higher perception of brand luxury when the product was framed as being produced with materials recycled from other luxury brands than when no sustainability information was provided, this possible mechanism should be worthy of further investigation in future studies.

Discussion

Previous research on consumer behavior indicate that consumers usually emphasize quality and price attributes (Achabou & Dekhili, 2013). Descriptive results of our survey experiment seem to support this notion as participants attach the greatest importance to product quality and price as when choosing a luxury product. However, our results also suggest that a brand's environmental commitment seems to be a criterion as essential as the brand itself on the purchase of luxury products.

Along these lines, evidence indicating that consumers struggle to connect notions of sustainability with luxury, which, as a result, lead to fewer choices of sustainable luxury goods (Beckham & Voyer, 2014), were not supported by our findings. In fact, our results suggest that a luxury brand's environmental commitment does not have an adverse impact on consumers' perceptions of the brand. For example, the average perceived quality and consumers' attitudes towards the luxury product were not significantly different across experimental conditions reflecting different sustainable practices.

Our findings did not provide full support to our first hypothesis as curtailment practices involving the use of recycled materials did not appear to negatively impact consumers' willingness to pay for the product compared to efficiency and unrelated sustainable practices or to the adoption of no sustainable practice at all. On the contrary, our findings seem to support hypothesis 2: consumers were willing to pay more for the displayed luxury product when the brand was framed as using recycled materials from the same ateliers or luxury group compared to when the brand was framed as not having a commitment to the environment or to when the brand was framed as using materials recycled from the ocean.

In sum, our findings suggest that curtailment sustainable practices such as the use of recycled materials derived from seas or rivers are not particularly negative or damaging to consumers' attitudes towards a luxury brand. The use of curtailment practices such as recycled materials coming from the same brand's or group's ateliers, however, seems to be a particularly positive strategy to luxury brands as its adoption resulted in a net rise in the price that consumers are willing to pay, which was not the case with efficiency and unrelated sustainable practices.

Conclusion and Recommendations

A big number of luxury businesses have now chosen the pathway of sustainable development in order to meet the expectations of consumers who are becoming more conscious of this issue. Since the items they buy are so costly, they tend to be more demanding than in other areas (Kapferer, 2010). The current study looks at consumers' preferences for sustainable practices in luxury clothing. This is among the most recent studies to look into the subject of sustainable development in the luxury product sector.

On the one hand, the results of the current research indicate that the use of recycled materials do not appear to be negatively rated when compared to efficiency and unrelated sustainable practices, or to the adoption of no sustainable activity at all. On the other hand, when the brand is presented as using recycled materials from the same ateliers or luxury group, buyers are prepared to pay more for the luxury products than when the brand is framed as not having a commitment to the environment or when the brand is framed as using recycled materials coming from oceans and rivers.

Limitations and Future Research. The current research has several limitations. First, given that we relied on a convenience sampling approach, where participants were mostly found in the researcher's extended personal network, both the size and diversity of the sample are severely limited, making the results unrepresentative of the total target population of consumers who engage in luxury purchases. Second, the luxury brand used in the experiment (Yves Saint Laurent) is very well-known and has a high credibility in the market, therefore it may have led to a ceiling effect in participant's quality and luxury perceptions, which had nearly no variation across experimental conditions. Therefore, future research should investigate whether the results found generalize across other samples and luxury brands, especially those that are not as well-known as Yves Saint Laurent. Third, we used a hypothetical measure of willingness to pay as our main dependent variable, which compromises the external validity of our results. To address this issue, studies on this topic exploring consequential product choices should be worthy of further future exploration. Lastly, even though we found a positive effect of curtailment practices involving the use of recycled material from other luxury brands on consumers' willingness to pay, we were not able to document why this effect happens in the first place. Consequently, future research should examine mechanisms alternative to the ones we empirically examined in the current research and, specifically, whether consumers'

perceptions of the brand's luxuriousness would achieve significance as a mechanism in a larger sample.

Theorical implications. First, we inform the ongoing debate on the consequences of sustainable practices in the luxury industry (Achabou and Dekhili 2013; Michaut-Denizeau, 2014; Torelli et al., 2012) by providing evidence for the direction of the effect. To begin with, the use of recycled materials does not appear to have a negative impact on the brand. Furthermore, contrary to previous studies, one of those sustainable initiatives has a positive impact on the brand, it appears that the use of recycled materials from the same brand or group has a positive effect with respondents willing to pay more for this product than for a product with no environmental initiative. We also note that whatever environmental initiative is communicated, it has no significant impact on willingness to pay or general opinions toward the product itself. Further, we extend this research by investigating whether and how the magnitude of the phenomenon varies across different types of sustainable initiatives (i.e., curtailment practices, efficiency practices, and practices that are not directly related to the production process). Indeed, we compared the various types of initiatives to see if the consumer would be more sensitive to one of them. As a result, it appears that there is no significant difference between the initiatives communicated by the brand except between the two conditions using recycled materials. Participants are willing to pay significantly more if the brand indicates that the recycled materials used are from their own factories or those of the luxury group to which they belong.

Managerial implications. Our research has significant practical consequences. The findings of this research can help brands promote sustainable practices more effectively in the luxury industry. Luxury houses have recently begun to speak more about these practices and should continue to communicate more in order to educate consumers as the implementation of sustainable practices increases in the coming years. Our study shows that mentality towards sustainable initiatives seems to have clearly evolved in the space of 10 years and no longer seems to have negative effects on the brand. Moreover, our work contributes to a better understanding of how people perceive recycled products and may assist to reduce future demand for virgin materials. When using recycled materials, luxury businesses, where quality is still the most important criteria for consumers, should pay attention to the origin of the materials by focusing on the materials that are already available in these ateliers or that are accessible to the interior of the group to which they belong if this is the case.

References

Achabou, M. A., & Dekhili, S. (2013). Luxury and sustainable development : Is there a match ? *Journal of Business Research*, *66*(10), 1896-1903. https://doi.org/10.1016/j.jbusres.2013.02.011

Adıgüzel, F., & Donato, C. (2021). Proud to be sustainable : Upcycled versus recycled luxury products. *Journal of Business Research*, *130*, 137-146. https://doi.org/10.1016/j.jbusres.2021.03.033

Alba, Joseph W. (2012), "In Defence of Bumbling," *Journal of Consumer Research*, 38(April),981–87.

Auger, P., Devinney, T. M., Louviere, J. J., & Burke, P. F. (2010). The importance of social product attributes in consumer purchasing decisions : A multi-country comparative study. *International Business Review*, *19*(2), 140-159. https://doi.org/10.1016/j.ibusrev.2009.10.002

Bellard, C., Bertelsmeier, C., Leadley, P., Thuiller, W., & Courchamp, F. (2012). Impacts of climate change on the future of biodiversity. *Ecology Letters*, *15*(4), 365-377. https://doi.org/10.1111/j.1461-0248.2011.01736.x

Cavender, R. (2018). The Marketing of Sustainability and CSR Initiatives by Luxury Brands : Cultural Indicators, Call to Action, and Framework. *Sustainability in Luxury Fashion Business*, 29-49. https://doi.org/10.1007/978-981-10-8878-0_3

Costa Pinto, D., Herter, M. M., Gonçalves, D., & Sayin, E. (2019). Can luxury brands be ethical ? Reducing the sophistication liability of luxury brands. *Journal of Cleaner Production*, *233*, 1366-1376. https://doi.org/10.1016/j.jclepro.2019.06.094

de Nardo, M., Brooks, J. S., Klinsky, S., & Wilson, C. (2017a). Social signals and sustainability : ambiguity about motivations can affect status perceptions of efficiency

and curtailment behaviors. *Environment Systems and Decisions*, *37*(2), 184-197. https://doi.org/10.1007/s10669-017-9624-y

de Nardo, M., Brooks, J. S., Klinsky, S., & Wilson, C. (2017b). Social signals and sustainability : ambiguity about motivations can affect status perceptions of efficiency and curtailment behaviors. *Environment Systems and Decisions*, *37*(2), 184-197. https://doi.org/10.1007/s10669-017-9624-y

de Nardo, M., Brooks, J. S., Klinsky, S., & Wilson, C. (2017c). Social signals and sustainability : ambiguity about motivations can affect status perceptions of efficiency and curtailment behaviors. *Environment Systems and Decisions*, *37*(2), 184-197. https://doi.org/10.1007/s10669-017-9624-y

Griskevicius, V., Tybur, J. M., & van den Bergh, B. (2010). Going green to be seen : Status, reputation, and conspicuous conservation. *Journal of Personality and Social Psychology*, *98*(3), 392-404. https://doi.org/10.1037/a0017346

Hagtvedt, H., & Patrick, V. M. (2016). Gilt and Guilt : Should Luxury and Charity Partner at the Point of Sale ? *Journal of Retailing*, *92*(1), 56-64. https://doi.org/10.1016/j.jretai.2015.07.004

Jansson, J., Marell, A., & Nordlund, A. (2010a). Green consumer behavior : determinants of curtailment and eco-innovation adoption. *Journal of Consumer Marketing*, *27*(4), 358-370. https://doi.org/10.1108/07363761011052396

Jayaraman, V., Singh, R., & Anandnarayan, A. (2012). Impact of sustainable manufacturing practices on consumer perception and revenue growth : an emerging economy perspective. *International Journal of Production Research*, *50*(5), 1395-1410. https://doi.org/10.1080/00207543.2011.571939

Joy, A., Sherry, J. F., Venkatesh, A., Wang, J., & Chan, R. (2012). Fast Fashion, Sustainability, and the Ethical Appeal of Luxury Brands. *Fashion Theory*, *16*(3), 273-295. https://doi.org/10.2752/175174112x13340749707123

Kapferer, J. N., & Michaut-Denizeau, A. (2019). Are millennials really more sensitive to sustainable luxury ? A cross-generational international comparison of sustainability consciousness when buying luxury. *Journal of Brand Management*, *27*(1), 35-47. https://doi.org/10.1057/s41262-019-00165-7

Karlin, B., Davis, N., Sanguinetti, A., Gamble, K., Kirkby, D., & Stokols, D. (2012). Dimensions of Conservation. *Environment and Behavior*, *46*(4), 423-452. https://doi.org/10.1177/0013916512467532

Kim, K. H., Ko, E., Xu, B., & Han, Y. (2012). Increasing customer equity of luxury fashion brands through nurturing consumer attitude. *Journal of Business Research*, *65*(10), 1495-1499. https://doi.org/10.1016/j.jbusres.2011.10.016

Luchs, M. G., Naylor, R. W., Irwin, J. R., & Raghunathan, R. (2010). The Sustainability Liability : Potential Negative Effects of Ethicality on Product Preference. *Journal of Marketing*, *74*(5), 18-31. https://doi.org/10.1509/jmkg.74.5.018

Lynch, John G., Joseph W. Alba, Aradhna Krishna, Vicki G. Morwitz, and Zeynep Gürhan-Canli (2012), "Knowledge Creation in Consumer Research: Multiple Routes, Multiple Criteria," *Journal of Consumer Psychology*, 22(4), 473–85

Newman, G. E., Gorlin, M., & Dhar, R. (2014). When Going Green Backfires: How Firm Intentions Shape the Evaluation of Socially Beneficial Product Enhancements. *Journal of Consumer Research*, *41*(3), 823-839. https://doi.org/10.1086/677841

Shim, D., Shin, J., & Kwak, S. Y. (2018). Modelling the consumer decision-making process to identify key drivers and bottlenecks in the adoption of environmentally friendly

products. *Business Strategy and the Environment*, *27*(8), 1409-1421. https://doi.org/10.1002/bse.2192

Sipilä, J., Alavi, S., Edinger-Schons, L. M., Dörfer, S., & Schmitz, C. (2020). Corporate social responsibility in luxury contexts : potential pitfalls and how to overcome them. *Journal of the Academy of Marketing Science*, *49*(2), 280-303. https://doi.org/10.1007/s11747-020-00755-x

Skard, S., Jørgensen, S., & Pedersen, L. J. T. (2020). When is Sustainability a Liability, and When Is It an Asset ? Quality Inferences for Core and Peripheral Attributes. *Journal of Business Ethics*, *173*(1), 109-132. https://doi.org/10.1007/s10551-019-04415-1

Steg, L., Dreijerink, L., & Abrahamse, W. (2006). Why are Energy Policies Acceptable and Effective ? *Environment and Behavior*, *38*(1), 92-111. https://doi.org/10.1177/0013916505278519

Stewart, R., & Niero, M. (2018). Circular economy in corporate sustainability strategies : A review of corporate sustainability reports in the fast-moving consumer goods sector. *Business Strategy and the Environment*, *27*(7), 1005-1022. https://doi.org/10.1002/bse.2048

Sun, J. J., Bellezza, S., & Paharia, N. (2021). Buy Less, Buy Luxury : Understanding and Overcoming Product Durability Neglect for Sustainable Consumption. *Journal of Marketing*, *85*(3), 28-43. https://doi.org/10.1177/0022242921993172

Testa, F., Sarti, S., & Frey, M. (2018). Are green consumers really green ? Exploring the factors behind the actual consumption of organic food products. *Business Strategy and the Environment*, *28*(2), 327-338. https://doi.org/10.1002/bse.2234

Touzard, P. C. (2021, mars 5). *Le luxe fait la révolution durable*. Les Echos. https://www.lesechos.fr/weekend/mode-beaute/le-luxe-fait-la-revolution-durable-1295596

Torelli, C. J., Monga, A. B., & Kaikati, A. M. (2012). Doing Poorly by Doing Good : Corporate Social Responsibility and Brand Concepts. *Journal of Consumer Research*, *38*(5), 948-963. https://doi.org/10.1086/660851

Umit, R., Poortinga, W., Jokinen, P., & Pohjolainen, P. (2019). The role of income in energy efficiency and curtailment behaviours : Findings from 22 European countries. *Energy Research & Social Science*, *53*, 206-214. https://doi.org/10.1016/j.erss.2019.02.025

Weiskopf, S. R., Rubenstein, M. A., Crozier, L. G., Gaichas, S., Griffis, R., Halofsky, J. E., Hyde, K. J., Morelli, T. L., Morisette, J. T., Muñoz, R. C., Pershing, A. J., Peterson, D. L., Poudel, R., Staudinger, M. D., Sutton-Grier, A. E., Thompson, L., Vose, J., Weltzin, J. F., & Whyte, K. P. (2020). Climate change effects on biodiversity, ecosystems, ecosystem services, and natural resource management in the United States. *Science of The Total Environment*, *733*, 137782. https://doi.org/10.1016/j.scitotenv.2020.137782