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Are sustainability initiatives a waste of money?

A study on the effectiveness of sustainability initiatives in the beer industry

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Abstract

Title: Are sustainability initiatives a waste of money? A study on the effectiveness of sustainability initiatives in the beer industry
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The following thesis will investigate the impact of sustainability initiatives on consumers' purchase intention in the beer industry. Awareness of sustainability topics has been increasing, and its measurable effect has been questioned. Especially in the context of the beer industry, current literature has been lacking to fill in gaps on the effect of purchase intention, mediated by brand image and willingness to pay. Additionally, consumers' sustainability consciousness has been tested as a moderator in the context. This paper aims to clarify if sustainability initiatives are a waste of resources or an effective marketing strategy. In addition to literature research, quantitative research in the form of an online survey has been conducted. Results show that the implementation of sustainability initiatives increases purchase intention and that environmental initiatives are the most effective. Brand Image and Willingness to Pay were found to be partial mediators individually. However, no interaction between them was found. Moreover, sustainability consciousness was not found to be an appropriate moderator. Findings attempt to close the research gap on the interaction of the variables of sustainability initiatives and purchase intention and the mediators Brand Image and Willingness to pay. Managerial recommendations based on the results are the implementation of sustainability initiatives to increase purchase intention. The focus should lie mostly on environmental and social initiatives to maximize effectiveness.

Keywords: Sustainability Initiatives, Purchase Intention, Willingness to Pay, Brand Image, Beer industry

Sumário

Título: As iniciativas de sustentabilidade são um desperdício de dinheiro? Um estudo sobre a eficácia das iniciativas de sustentabilidade na indústria da cerveja
Autor: Annika Krug

A tese que se segue investigará o impacto das iniciativas de sustentabilidade na intenção de compra dos consumidores no sector da cerveja. A consciencialização para os temas da sustentabilidade tem vindo a aumentar e o seu efeito mensurável tem sido questionado. Especialmente no contexto da indústria da cerveja, a literatura atual tem faltado para preencher as lacunas sobre o efeito na intenção de compra, mediado pela imagem da marca e pela disponibilidade para pagar. Para além disso, a consciência de sustentabilidade dos consumidores foi testada como um moderador no contexto. Este artigo tem como objetivo esclarecer se as iniciativas de sustentabilidade são um desperdício de recursos. Para além da pesquisa bibliográfica, foi realizada uma pesquisa quantitativa sob a forma de um inquérito em linha. Os resultados mostram que a implementação de iniciativas de sustentabilidade aumenta a intenção de compra e que as iniciativas ambientais são as mais eficazes. A imagem da marca e a disponibilidade para pagar foram considerados mediadores parciais individualmente, mas não foi encontrada qualquer interação entre eles. Além disso, a consciência da sustentabilidade não foi considerada um moderador adequado. Os resultados tentam colmatar a lacuna de investigação sobre a interação das variáveis iniciativas de sustentabilidade e intenção de compra, e os mediadores Imagem da Marca e Disponibilidade para Pagar. As recomendações de gestão baseadas nos resultados são a implementação de iniciativas de sustentabilidade para aumentar a intenção de compra. A tónica deve ser colocada sobretudo nas iniciativas ambientais e sociais para maximizar a eficácia.

Palavras-chave: Iniciativas de Sustentabilidade, Intenção de Compra, Disposição a Pagar, Imagem de Marca, Indústria da Cerveja

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Table of Acronyms

BI	Brand Image
CRC	Composite Reliability Coefficient
CRM	Cause-Related Marketing
CS	Customer Satisfaction
CSR	Corporate Social Responsibility
DV	Dependent Variable
e.g.	For example
GPB	Green Purchase Behavior
GPI	Green Purchase Intention
IV	Independent Variable
NGO	Non-Governmental Organization
PBC	Perceived Behavioral Control
PI	Purchase Intention
RQ	Research Question
WTP	Willingness to pay

Chapter 1: Introduction

1.1 Background

Sustainability has been a trending topic for several years and is expected to become increasingly important. A lot of firms invest in sustainability initiatives, but the question arises if it is a must-have or just a nice-to-have. Especially for fast-moving products, the question arises if consumers put much mental effort into the purchase since these 'investments' are more habits than conscious thoughts.

Furthermore, a topic in this research will be the impact of brand image (BI) on purchase intention (PI). Do sustainability initiatives just have a positive impact on BI but no effect on PI? Is it then worth spending so much money on these initiatives? The resources could potentially be better invested in other, more effective areas.

There has been a lot of research up until now which investigates the factors that are important for the consumer when making green purchases (McDonald & Oates, 2006; Zimmer et al., 1994) and also if environmental concerns actually lead to green behavior (Minton & Rose, 1997; Vining & Ebreo, 1992). However, there are no conclusive studies on the effect of sustainability mediation between BI and PI in the beer industry.

On the topic of purchase intention, also in the context of sustainability, there has been quite a bit of research (ElHaffar et al., 2020; Joshi & Rahman, 2015; Morwitz et al., 2007; Wijekoon & Sabri, 2021). This thesis aims to combine these overall topics and investigate the (purchase) behavior of consumers in the beer industry in relation to sustainability efforts.

The beer industry is an interesting field of study for several reasons. Firstly, huge investments are at stake, and the effective use of resources for marketing in this industry is extremely relevant. Competition is high, and therefore it is essential for brands to differentiate themselves through their marketing (Shaked & Sutton, 1982).

Furthermore, beer is a fast-moving product which has its own implications as consumers tend to spend less conscious thought on the purchase (Stankevich, 2017). The question arises if expensive campaigns pay off for firms in the end or if resources are just wasted. As less conscious effort is used by consumers for the purchase of fast-moving products, it could be the case that consumers are indifferent to sustainability initiatives. Beer is perceived as a fun, hedonic product (Vecchio & Annunziata, 2015) therefore, consumers might act less responsibly and consequently don't care about their impact on the environment.

Moreover, many beer brands evoke strong feelings and opinions in consumers, as many people seem to be very opinionated about their favorite beer. Consequently, it is important to investigate if sustainability initiatives even impact PI or if consumers care more about other factors being promoted.

1.2 Problem Statement

After extensive literature research, it became obvious that even though Brand Image, Purchase Intention, and Willingness to Pay have been the focus of many academic papers and research, there is little knowledge about the interaction of these variables and even fewer in the beer industry. As previously mentioned, the beer industry is very distinct due to its nature and is, therefore, an interesting field of study.

Especially the combination of beer and sustainability has not been sufficiently investigated and poses the interesting question if these initiatives actually have a measurable impact or are just a waste of resources, which could be better invested in other initiatives.

The following research questions have been developed and will be answered in the following thesis.

RQ1: *How effective are sustainability initiatives compared to non-sustainability initiatives on consumers' purchase intentions in the beer industry?*

RQ2: *How do BI and WTP impact the relationship between sustainability initiatives and PI?*

RQ3: *How does the consumers' sustainability consciousness affect brand image and willingness to pay in the beer industry?*

1.3 Relevance of Topic

Managers might be tempted to jump on the trend of sustainability solely out of the reasons that 'everyone is doing it' and because they think it will *always* pay off. However, it is essential to first measure the actual effect to see if the investment pays off or if it's a lost investment. By investigating this, managers can focus the sustainability efforts on those initiatives that are the most impactful and effective. Consequently, there is potential for cost savings and improved BI, a possibly higher WTP, and PI.

Furthermore, this research provides a better understanding of the impact of sustainability on PI in general, as there is unclear literature on the impact of BI and WTP on PI and no studies on the beer industry and sustainability initiatives.

1.4 Research Methods

To answer the research questions, primary data was collected. Before anything else, a literature review was conducted on all variables, namely sustainability initiatives, BI, WTP, PI, sustainability consciousness, and their interrelation with each other. Moreover, an online survey, a way of gathering quantitative data, was developed, and distributed. This will be described in detail in the methodology chapter as well as the advantages and disadvantages of this method of data collection. Subsequently, statistical analyses using IBM's SPSS were conducted. Firstly, the data was cleaned, and with the valid responses, several analyses were carried out, including descriptive analysis, ANOVA, and linear regression (including the use of PROCESS). Based on those results, several conclusions could be drawn, and the research questions will be answered.

1.5 Dissertation Outline

Before all else, the current status quo of relevant literature is described. It is followed by a detailed description of the methodology, where data collection is presented, and the measurement for the variables in the conducted survey is explained. The next chapter provides an overview of the results and gives a discussion of their meaning. In Chapter 5, the results are analyzed, main conclusions are drawn, and potential limitations are discussed. Furthermore, managerial, and academic implications are described. In the appendix, the survey structure, data analysis results, and further background information can be found.

Chapter 2: Literature Review and Conceptual Framework

2.1 Introduction

This chapter covers the most relevant existing literature on the variables and their effect on each other. The goal is to provide an extensive understanding of the topic before conducting further research.

2.2 Sustainability Initiatives

2.2.1 Sustainability in the Corporate World

The topic of sustainability has been researched for several decades. In this thesis, the term 'sustainability' will be used synonymously with 'sustainable development'. A common definition of sustainable development, which is also used by the United Nations (United Nations, 1987), has been formulated: "*meeting the needs of the present without compromising the ability of future generations to meet their own needs"* (Kumar Verma, 2019, p. 1). The majority of research agrees that the three most important dimensions of sustainability are: environmental, social, and economic sustainability. This is based on extensive literature review which shows a consensus of these three dimensions (other dimensions are sporadically used by one or the other initiative, but the three named dimensions were used in all of them) (Delai & Takahashi, 2011; Kumar Verma, 2019). This 'triangle' is also represented in the triple bottom line model (Księżak & Fischbach, 2018). The three dimensions are profit, people, and planet, which stand for economic, social, and environmental sustainability, respectively. In the following thesis, these dimensions will be called economic, social, and environmental sustainability, however, they will refer to a similar construct.

The study of McDonald & Oates (2006) investigates the effect of sustainability initiatives on PI regarding low and high effort. A problem that was detected in this study is that consumers perceive the respective effort and impact very differently, and therefore an overall marketing strategy can be quite difficult. If one is aware of the initiative's perceived effort vs. impact, one can use communication to increase the impact of the initiative (McDonald & Oates, 2006, pp. 164-167).

The market for sustainability-branded products has been growing substantially in consumer-packaged goods. Products that were marketed as sustainable have moved from niche products (>5% dollar share market) to products that target a bigger percentage of consumers. Especially

around edible products (i.e., food and drinks), this trend has been prevalent. In the food category, these sustainably branded products drove 72% of the growth from 2013-2018 (Kronthal-Sacco et al., 2019, p. 11). The message that proved to be most effective was found to be the term "organic", followed by "non-GMO". According to the researchers, even simple claims were effective, as more complex claims are usually quite inappropriate due to lack of space on the packaging (Kronthal-Sacco et al., 2019).

Green consumerism is a result of an individual with positive values and attitudes toward the environment, which leads to socially responsible behavior (Anderson & Cunningham, 1972). As stated by Rahman & Reynolds (2017), climate change, overuse of natural resources, and other environmental trends have created the need for humans to counteract thus, green consumerism is on the rise. Consumers are becoming increasingly concerned with environmental topics. According to a study by The McKinsey Quarterly (2008) including more than 7,000 participants, it was shown that nearly 87% are worried about the impact of their purchases on the environment and society.

Especially, Generation X increasingly wants to shop for sustainable brands (raised by 25% compared to 2020). Three-quarters of participants stated that sustainability was somewhat or very important to them (Forbes, 2022).

According to a study, most participants generally expressed environmental concerns but only a weak correlation to their attitude towards specific environmental initiatives was found (e.g., recycling). Furthermore, the respondent's perceived responsibility for producing waste was more impacted by their own previous experiences rather than their broad environmental beliefs and concerns. Similarly, concern for resource scarcity did not cause the own reduction in resource consumption (Vining & Ebreo, 1992).

This is supported by Minton & Rose (1997) who found that an attitude of environmental concern does predict the intentions to behave more sustainably however, the strongest factor in acting this way was "personal moral obligation (Minton & Rose, 1997, p. 44).

These studies could lead to a potential hypothesis:

H_1: The implementation of sustainability initiatives leads to an increased purchase intention.

2.2.2 Effect of Sustainability on Brand Image

Research suggests that there is a (significant) positive relationship between advertisements regarding sustainability on brand awareness and the satisfaction of consumers (Tariq & Feroz, 2014).

This is supported by Zhu (2012) who additionally demonstrated that if marketing and advertising strategy are aligned with the true claims, (potential) consumers are more likely to purchase. Therefore, brands should focus on advertising only true claims that fit the context and culture of the consumers and set the price in accordance with the purchasing power of the respective consumers. If serious attempts at sustainability are undertaken, environmental advantages can be achieved as well as an increased market share of the respective company. Consumers who demonstrate environmental concerns are willing to pay more for green-marketed products (Zhu, 2012).

In contrast, Wu & Lin (2016) argue that these initiatives don't impact performance directly but rather affect product quality and improve the corporate image with an effect on performance.

Similarly, it was found that sustainability initiatives positively influence corporate image and business performance. The authors recommend implementing sustainability initiatives to achieve (and keep) a competitive advantage (Mukonza & Swarts, 2020). A coinciding result is found by both, Chen (2008) and Polonsky (2011), who show in their research that sustainability programs have a strong, positive effect on the corporate image.

Mukonza & Swarts (2020) show an increase in sales due to increased demand from consumers for products that are environmentally beneficial.

It can be seen as relatively proven that sustainability initiatives have a positive impact on BI in general. As a hypothesis, one can transfer this to the beer industry.

H_2 Sustainability initiatives have a positive impact on PI mediated by BI

2.2.3 Effect of Sustainability on Purchase Intention

Zhang et al. (2020) found that cause-related marketing (CRM) has greater effectiveness than regular marketing promotions (e.g., discounts). CRM is defined as an initiative where a firm donates a certain amount to an NGO or a social initiative (Rajan Varadarajan & Menon, 1988).

Zhang et al. (2020) reviewed several studies and concluded that CRM practices were effective and PI for the product was increased. Most studies showed a positive outcome, but the effects were partly mixed. Thus, firms must tread carefully and align their campaigns to specific target groups' characteristics.

In the context of the fashion industry, Rausch & Kopplin (2021) found consumers' concern about greenwashing has an influence on PI. This is moderated through the relationship between consumers' attitude and their PI. Consequently, firms need to take action to minimize greenwashing concerns and deliver high transparency in order not to reduce PI. Even though this research was conducted in a different industry, it can potentially be applied to the beer industry.

Lee et al. (2020) showed that the highest PI could be reached if both a sustainable label and information that can be traced are provided. Consequently, PI can be enhanced by providing more transparency and diverse environmental cues and by enhancing the consumers' knowledge regarding labels (more information on this research can be found in the appendix).

Zhu (2012) discovered in his research that customers' attitudes toward green products and advertising had an influence on their respective PI of those products. This is in accordance with Ajzen (1991) who stated that a higher positive attitude leads to a stronger PI. This can also be applied to 'green' products.

2.2.4 Effect of Sustainability on Willingness to Pay

Boronat-Navarro & Pérez-Aranda (2020) conducted a study in the hotel context. Higher WTP for consumers who were more experienced (i.e., stayed in sustainable hotels before, who see certifications as important, and who have a higher level of awareness for sustainability) was found.

This is supported by another study where consumers expressing environmental concerns were shown to have a higher WTP for green-marketed products (Zhu, 2012). Environmental concerns refer in this context to sustainability consciousness.

The research found that several socio-demographic factors can be used to predict a consumer's WTP for sustainable chocolate. Results show that overall age, gender, and household income played a role; namely, older, female individuals with higher household incomes demonstrated a higher WTP (Vecchio & Annunziata, 2015). As beer is a hedonic product, similar to chocolate

(Coelho & Duarte, 2013; Voss et al., 2003), these findings could also be relevant to the beer industry.

Likewise, Grunert et al. (2014) found that females and consumers from a higher social class care more about sustainability (labels). Another factor that played a major role was the level of trust in the sustainability labels.

Nonetheless, consumers tend to show a gap between their attitude and their actual buying behavior, especially when it comes to sustainability (Vermeir & Verbeke, 2006).

Overall, a big group of consumers indicates a higher WTP for more sustainable products (or fair trade) compared to non-sustainability products (Arnot et al., 2006; Bougherara & Combris, 2009; Loureiro & Lotade, 2005).

According to Rahman & Reynolds (2017), some consumers are willing to pay more for organic beverages (which are seen as more environmentally friendly). In the case of organic wines, the difference between organic and non-organic is 25-30% more. In a study by Forbes et al. (2009) almost three quarters (73%) stated a higher WTP for sustainable wine.

2.3 Purchase Intention

2.3.1 Purchase Intention in General

Purchase Intention (PI) „is an individual's conscious plan to make an effort to purchase a brand" (Spears & Singh, 2004, p. 56). This concept is used in many advertising areas and a well-studied area in the field of marketing (many studies conducted by the top marketing journals).

Crosno et al., (2009) state that PI is the likelihood of a consumer purchasing the respective brand when buying something from this category of products. As an extension, Yoo et al., (2000) describe PI as a measure of a consumer buying a brand without switching to another brand.

Ajzen (1991) states that intentions can be measured relatively accurately and based on these (with the consideration of some variations) can predict behavior reliably.

According to theory (Fishbein & Ajzen, 1975), intentions are the best measure to predict behavior (if the measurement is correct). On this basis, PI is an appropriate measure to investigate the effect of sustainability initiatives on consumers.

PI has a stronger correlation with actual sales in the following circumstances:

For already existing products (as opposed to new products), for longer-lasting products, when consumers have to indicate an actual brand (instead of just product category), when trial rates are measured (not total market sales), for a short time (rather long time period) and when the data about the intentions is collected in a comparative way (not monadically) (Morwitz et al., 2007, p. 361).

2.3.2 Green Purchase Behavior

The most important aspects causing an impact on green purchase intention (GPI) and green purchase behavior (GPB) were "attitudes, environmental concerns, environmental knowledge, PBC [perceived behavioral control], subjective norms, perceived consumer effectiveness, and awareness" (Wijekoon & Sabri, 2021, p. 20).

All of these aspects showed a positive effect on GPB and GPI. Consumers being health conscious, having green trust and the price were all factors with a positive impact on GPI, whereas for a positive effect on GPB were the intention, involvement in the topic of environment, and consumer's norms. Barriers on both aspects were if consumers showed skepticism towards green advertising, they did not care about environmental concerns or demonstrated egoistic values (Wijekoon & Sabri, 2021).

Similar results were found in other studies where, "Environmental concerns, product attributes, environmental knowledge, and subjective norms emerged as major drivers whereas high price, low availability and lack of consumer trust in green products emerged as major barriers towards the purchase of green products" (Joshi & Rahman, 2015, p. 140).

Similarly, "personal norms, self-efficacy and willingness to pay" (ElHaffar et al., 2020, p. 14) have the biggest impact on green buying behavior.

2.4 Brand Image

2.4.1 Brand Image in General

BI plays an important role in a brand's reputation and trustworthiness which consequently has an impact on consumers' buying behavior. The BI consists of the following points: brand identity, brand personality, brand association, brand attitude/behavior, and brand benefit/competence (Wijaya, 2013, pp. 62–63). The author's model is based (among others) on previous research (Aaker, 1991; Aaker, 1997; Brexendorf & Kernstock, 2007; Keller, 1993).

According to Wijaya (2013), BI is based on several personal factors which stem from either the consumer himself or external, environmental factors.

Moreover, consumers who are users of a certain product tend to have the most favorable attitude towards it, compared to previous users and never-users (who have the lowest favorability) (Bird et al., 1970).

Even though it is a widely used concept, there have been ambiguities and misleading definitions of BI in the previous literature. The biggest problem was the lack of considering BI as a mix of cognition, affection, and evaluation of the brand, as they were investigated separately. A clear definition of the concept leads to higher effectiveness among researchers and less confusion about the term (Lee et al., 2014). The new proposed definition of BI is: "The sum of a customer's perceptions about a brand generated by the interaction of the cognitive, affective, and evaluative processes in a customer's mind." (Lee et al., 2014, p. 8).

There is a consensus among researchers that BI is an essential part of brand equity (Aaker & Biel, 1993; Lee et al., 2014).

As the end goal of marketing is to achieve high brand equity, a favorable BI is essential. This leads to positive attitudes toward a brand which consequently increases the chance of high brand equity (Lee et al., 2014).

2.4.2 Brand Image's Effect on Purchase Intention

Research shows that brands with higher advertising spend have a significantly higher level of brand equity, which then leads to higher preference and PI among consumers (Cobb-Walgren et al., 1995).

As previously stated, "brand image is a critical component of brand equity" (Lee et al., 2014, p. 2).

Corporate social responsibility (CSR) on the corporate level has a direct and positive effect on consumers' PI. Furthermore, it positively affects the corporate image and therefore the BI. The CSR activities on the brand level do not show a direct effect on PI but affect the corporate image and, consequently PI. Generally, it was found that the effect of CSR on the corporate level was higher than on the brand level (Lee & Lee, 2018). This supports the establishment of H_2.

2.4.3 Brand Image's Effect on Willingness to Pay

The factor that shows the highest impact on consumers' WTP was the perceived uniqueness of the brand, followed by its social image and CSR. In contrast, awareness of the brand and its perceived quality and the country of the participants had a comparatively lower impact on WTP (Commer et al., 2017).

Bondesson (2012) investigated in his study how it affects brand loyalty and the consumers' WTP. The factors that mostly affect brand loyalty (which is part of BI) are brand reputation, perception of the brand's service relationship, and product solution. Brand loyalty is related to the consumer's PI and recommendation. On the other hand, WTP is more affected by impressions of the firms' community (how much they feel connected to the brand).

The following hypothesis is developed:

H_5 Increased BI leads to higher PI, mediated by WTP

2.5 Willingness to Pay

Literature defines WTP as the maximum price a consumer accepts to acquire a certain good (Kalish et al., 1991; Le Gall-Ely, 2009; Wertenbroch & Skiera, 2002).

Kalish et al. (1991) add that WTP is similar to a reservation price, which is the highest price a consumer is willing to pay and is sure he/she will purchase the product.

Homburg et al. (2005) investigate which factors are relevant to consumers' WTP, including the relationship between customer satisfaction (CS) and WTP. CS seems to have a positive impact on WTP. The impact is the highest on the extreme ends of the satisfaction scale of consumers. In accordance, a higher WTP stems from loyal consumers who perceive the brand to have a superior quality, compared to non-loyal customers (Naeini et al., 2015, p. 618).

2.5.1 Willingness to Pay's Effect on Purchase Intention

WTP seems to have a significant effect on PI, in the sense that an increased WTP can predict a higher PI. This was studied in the context of organic food, which could potentially be applied to sustainability in the beer industry (Ghorai et al., 2021).

Research indicates that consumers show a higher WTP when there is high involvement with the product and they are loyal to the brand (Goldsmith et al., 2010; Ramirez & Goldsmith, 2009). In this sense, it was found that if a product has a symbolic value to the consumer, the WTP increases, and consequently so does the PI (Rucker & Galinsky, 2008). This is supported by De

Toni et al. (2017) who state that there is a generally higher WTP for products associated with symbolic value.
Another study in the field of wine by De Toni et al. (2022) demonstrates that high involvement leads to a higher WTP, and this consequently leads to a higher PI.
These studies suggest the following:

H_4 Implemented sustainability initiatives lead to higher PI, mediated by consumers' WTP

2.6 Marketing in the Beer Industry

Between 1975-2003 the shipments of beer increased by 5.8%, the real price (adjusted to economic measures) increased by 5.3% whereas the ad spending increased by 26.4% (Nelson, 2005). This demonstrates that even though the beer industry is growing, the ad spend in the industry is doing so over proportionately. This shows the need to identify effective marketing strategies to keep up with the increasing competition in the sector.
Craft beer firms have implemented more sustainable initiatives in their production, for example by trying to reduce the use of water and energy and use more organic or local ingredients. Furthermore, it was detected that more firms adopted a sustainability-promoting culture (Hoalst-Pullen et al., 2014). This shows that firms adapt to the trend of sustainability and the goal of this thesis is to find out if promoting sustainability has a positive effect on consumers' PI.
Furthermore, an increase in the purchase of organic wine was detected, which is seen by consumers as more environmentally friendly, compared to non-organic wine (Rahman & Reynolds, 2017). As both, beer and wine, are alcoholic beverages, it seems obvious that the same is valid for beer.

2.7 Sustainability Consciousness

According to Stern (2000), an individual's green behavior is among others influenced by their biospheric values. This is defined by de Groot & Steg (2008) as a consumer's worry for the environment of the biosphere (hence the term "biospheric value").
A study by Brugarolas Mollá-Bauzá et al. (2005) found that consumers who intend to live a healthy lifestyle have a higher WTP for organic wine than consumers who demonstrate a high sustainability consciousness but do not explicitly want to live a healthy lifestyle.

On the other hand, several studies found environmental consciousness to be a major factor in purchasing organic food and beverages (Grunert & Juhl, 1995; Hutchins & Greenhalgh, 1997). This leads to the conclusion, that consumers demonstrating biospheric values buy an organic product because they are sustainable.
According to Rahman & Reynolds (2017), participants who demonstrated higher biospheric attitudes had a higher WTP and PI for organic wines. This is supported by other research, which found a higher WTP of 20-25% for organic products (Brugarolas Mollá-Bauzá et al., 2005; Remaud et al., 2008).
As wine and beer are both alcoholic beverages, this could lead to the following hypothesis:

H_3: If consumers demonstrate a high level of sustainability consciousness, their WTP is higher

As this previous research focuses on biospheric values, which could be mostly transferred to environmental sustainability, it could be hypothesized that this area leads to the highest WTP.
According to research by Izzat Alhalalmeh et al. (2020), PI is in some cases moderated by 'environmental concern' (which is similar to sustainability consciousness) in the context of purchasing green products. Hence, the following hypothesis can be developed:

H_6: Sustainability Consciousness moderates the relationship between Sustainability initiatives and PI

Similarly, sustainability consciousness was found the be a moderating factor between the 'green practices' of a company and the consumer's attachment and loyalty to the store or brand. Consumers demonstrating higher sustainability consciousness showed greater loyalty than those with lower sustainability consciousness (Jang et al., 2015). Thus, the following hypothesis will be tested in this research:

H_7: Sustainability Consciousness moderates the relationship between Sustainability initiatives and BI

2.8 Conceptual Framework

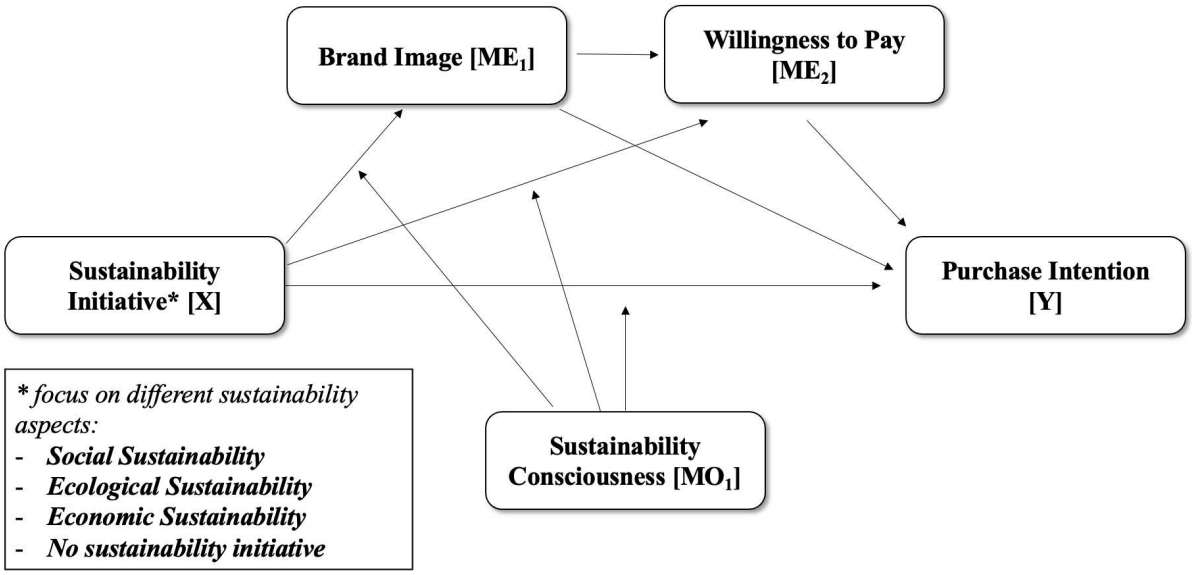


Figure 1: Conceptual Framework

Chapter 3: Methodology

3.1 Introduction

In the following chapters, the methodology and the chosen research approach will be explained. First, the research approach and data collection are explained in detail. Subsequently, the research design, including the stimuli development and measurements of the variables, is presented.

3.2 Research Questions and Hypotheses

RQ	Description
RQ1	How effective are sustainability initiatives compared to non-sustainability initiatives on consumers' purchase intentions in the beer industry
RQ2	How do BI and WTP impact the relationship between sustainability initiatives and PI?
RQ3	How does the consumers' sustainability consciousness affect brand image and willingness to pay in the beer industry?

Figure 2: Research Question Overview

Hypothesis	Description
H1	the implementation of sustainability initiatives leads to an increased purchase intention.
H2	Sustainability initiatives have a positive impact on PI through/mediated by improving BI
H3	if consumers demonstrate a high level of sustainability consciousness, their WTP is higher
H4	implemented sustainability initiatives lead to higher PI, mediated by consumers' WTP
H5	Increased BI leads to higher PI, mediated by WTP
H6	Sustainability Consciousness moderates the relationship between Sustainability initiatives and PI
H7	Sustainability Consciousness moderates the relationship between Sustainability initiatives and BI

Figure 3: Hypothesis Overview

3.3. Research Approach

To answer the research questions exploratory and confirmatory approaches will be used (Saunders et al., 2009). By using existing literature, a general understanding of the topic and gaining insights will be achieved (exploratory approach). To understand the causal relationship and be able to explain it, statistical analysis to understand the cause-effect relationship will be conducted (confirmatory approach).

A mix of qualitative and quantitative research is applied, with a focus on the quantitative aspect. Existing research and literature review is used to develop a general understanding and develop hypotheses. To test these hypotheses, the quantitative approach is applied as it aims at testing the hypothesis by investigating the relationship between certain variables (Creswell, 2009, pp. 22–23).

A postpositivist worldview is employed which states that causes are likely to produce some sort of effect. It also expresses the idea that reality can be reduced to smaller parts to be able to test them. Quantifying these ideas and results is part of Postpositivism. As stated by this theory, the process of starting with an existing theory, collecting data that either supports or disproves the theory, and then making adjustments before testing it again will be applied in this thesis (Creswell, 2009, p. 25).

This idea is also supported by Saunders et al. (2009) according to whom (post)positivism is concerned with observable occurrences and its focus on the respective cause and effect. Ideas are reduced as much as possible to be able to investigate them.

3.4 Primary Data

For this thesis, primary data will be conducted. The process will be described in the following sub-chapters. Primary data is defined as "data that are collected for the specific research problem at hand, using procedures that fit the research problem best" (Hox & Boeije, 2005, p. 593).

3.5 Data Collection

The data that will be described and analyzed in the following chapters were conducted via an online survey, gathering a non-random convenience sample.

(Online) Surveys represent a deductive research approach, where a theory (in this case, a research question) is developed and tested through data collection.

The advantage of using standardized data is low cost and ease of use. It can be analyzed statistically by using descriptive and inferential statistical analysis to try to find causes for the relationship of variables (Saunders et al., 2009).

As stated by Acharya et al. (2013) there are several advantages and disadvantages of non-random convenience sampling. It is the most used technique where the sample consists of people who were conveniently available for research. It is less costly than other methods and one does not need to crosscheck every element of the population. However, one cannot

counteract possibly existing variability or biases. The collected data cannot simply be generalized for the whole population (Acharya et al., 2013, p. 332).

This is supported by Duffy et al. (2005) who highlights the advantages of an online survey as being much faster and much cheaper than alternative sampling methods. Furthermore, it is noted that interview biases can be avoided (because no physical presence is needed). However, sampling problems might arise as there is controversial research on the effect of an online survey on the use of scales. Some research suggests an increased use of the middle option (indicating indifference). Other studies found a tendency to choose more extreme answers. This is confirmed by Evans & Mathur (2005) who add potential weaknesses which can include privacy concerns, potentially misunderstood instructions, and the technical versatility of respondents.

Nonetheless, due to the two major advantages (speed and ease of use), an online survey will be conducted. The disadvantages and potential threats (mainly sample bias) will be considered and will be minimized as much as possible.

The online tool to conduct the survey will be Qualtrics. The goal is to be able to analyze the data with at least 30 participants per stimulus to apply the Central Limit Theorem (Kwak & Kim, 2017).

3.6 Research Design

The research design is of between-subject nature, as all participants were only exposed to one of the four stimuli. Furthermore, the widely scientifically accepted significance level of 5% was adapted to determine statistical significance (Curran-Everett, 2009).

3.6.1 Stimuli Development

Table 1: Stimuli Overview

Stimuli	Participants
No-Initiative (control group)	At least 50 participants
Ecological Sustainability Initiative	At least 50 participants
Social Sustainability Initiative	At least 50 participants
Economic Sustainability Initiative	At least 50 participants

The term ‘sustainability’ comes from the verb ‘to sustain’ which means “to keep up, maintain, continue” (Thesaurus, 2023).
In this context, it refers to ‘sustainable development’, as a human society cannot be kept the same over a long period of time (Delai & Takahashi, 2011).
As previously mentioned, sustainable development has the aim “to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987, p. 15). This thesis will measure the different impacts of the three most agreed-upon dimensions of sustainability (environmental, social, and economic sustainability) (Choi & Ng, 2011; Delai & Takahashi, 2011). The following model is based on the combination of eight different initiatives for the development of a comprehensive model (Delai & Takahashi, 2011, pp. 440–441).

The environmental dimension is concerned with the well-being of the ecosystem. Though it is controversial in the existing literature which topics should be included, most agree on the following topics: water, air, land, energy, and materials (Delai & Takahashi, 2011).
The social dimension is concerned with human equality and quality of life, regarding the companies’ stakeholders. Stakeholders are groups affected by a firm's activities (Bourne et al., 2002; Neely et al., 2002). It has been defined as dealing with “the well-being of people and communities as a non-economic form of wealth” (Choi & Ng, 2011, p. 270).
A problem that arises in literature is the clear separation of social vs. economic issues. The following is suggested: “social dimension was defined to evaluate the direct impact of the relationship company-stakeholders (employees, customers, suppliers, governments, society and NGO’s) while the economic to concentrate on the connection company-shareholders.” (Delai & Takahashi, 2011, p. 456).
The economic dimension deals with the short and long-term value of an organization and the relationship between the company and its shareholders. The issue that most initiatives agreed on was corporate governance where transparency is the overall goal. Corporate governance deals with how an organization handles the relationship with investors and shareholders (Delai & Takahashi, 2011). Furthermore, economic sustainability can be described as “protecting and preserving favorable economic environments” (Choi & Ng, 2011, p. 269). It has been argued that after the economic crisis in 2008, firms and society have become more sensitive to this dimension to avoid mass layoffs, general insecurity, and increased financial risk (Choi & Ng, 2011).

There are advantages and disadvantages to presenting the stimuli verbally or graphically and it oftentimes depends on the personal preference and characteristics of the participant (Sojka & Giese, 2006). In this thesis, a combined approach of the graphic and verbal presentation will be used as it minimizes the risk of biasing the participants through unwanted stimulation through graphic design aspects such as color, font, design, etc. but also addresses participants who respond better to graphic cues. The goal is to present the stimuli in the clearest way possible.

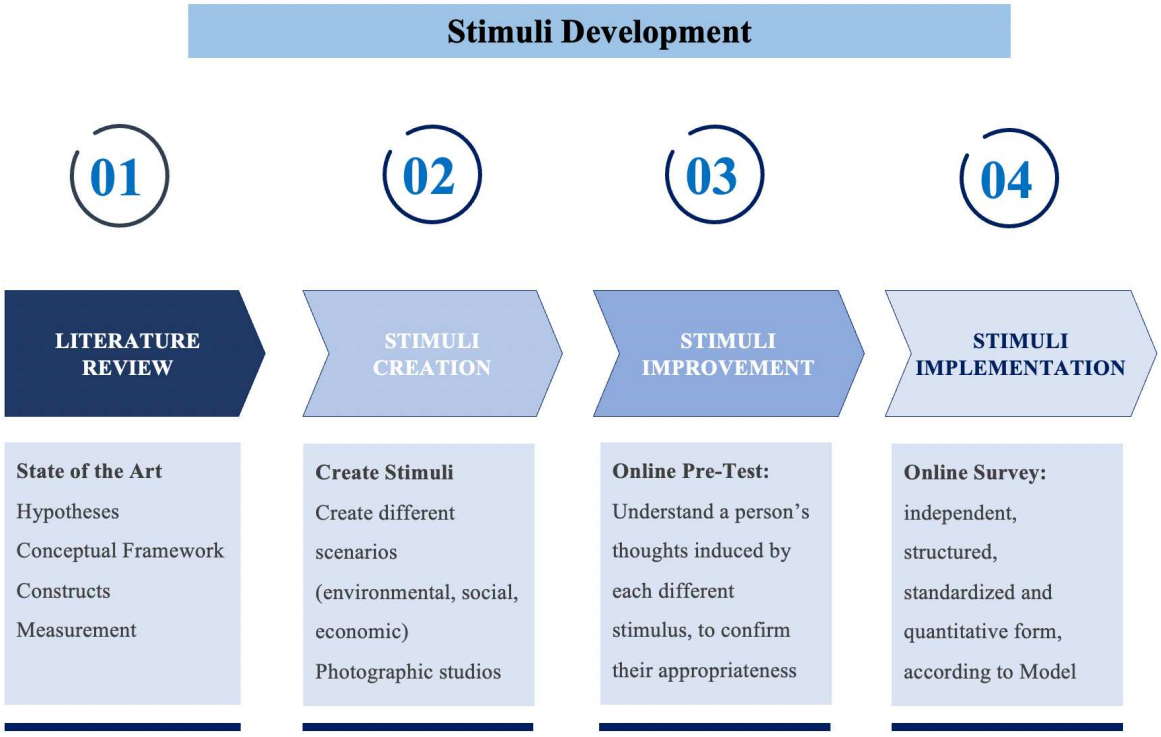


Figure 4: Stimuli Development Process

To develop the stimuli, literature research was conducted where existing constructs were compared and the most appropriate one was chosen. Based on this research, the stimuli were created and then tested by conducting several 1on1 interviews, where the effectiveness and comprehensibility were checked. After adapting accordingly, the stimuli were finalized and implemented in the survey.

3.6.2 Measurements

Table 2: Operational Model

Framework	Measure		Items	Scale	Reference	Reliability coefficient
IV	Sustainability Initiative		Stimuli	7-point Likert Scale	-	N/A
Mediator	Brand Image	Functional	2	7-point Likert Scale	(Martínez et al., 2009)	CRC = 0.78
		Affective	3			CRC = 0.76
		reputation	2			CRC = 0.81
Mediator	WTP		1	Open	(Miller et al., 2011)	*(Cannot be measured for one item)*
Moderator	Sustainability Consciousness / Attitudes		9	7-point Likert Scale*	(Gericke et al., 2019)	$\alpha = 0.78$
DV	Purchase Intention		4	7-point Likert Scale	(De Toni et al., 2022)	$\alpha = 0.73$

*No clear definition of 5 or 7-point, but results suggest the use of a 5-point Likert scale. For the purpose of this study, the scale is adapted to a 7-point Likert scale.

The exact items can be found in the appendix (Structure Questionnaire).

3.6.3 Measurement of Brand Image

Plumeyer et al. (2019) reviewed several methods to measure BI and it was concluded that the Likert Scale was the most used in recent years. In this scale, there are statements where the participants indicate their (dis)agreement on a five- or seven-point scale. The answers are converted into respective numbers to allow statistical analysis.

According to Aaker (1996), BI consists of three dimensions: functional image (related to a brand's benefit and tangible aspects), affective image (intangible aspects), and reputation (global attitude towards a certain brand).

Martínez et al. (2009) developed the statements used to measure BI.

The items deliver a satisfactory level of reliability, as the composite reliability coefficient (CRC) is at 0.78 (for the functional dimension), at 0.76 (for the affective dimension) and 0.81 (for reputation) (coefficients should be above 0.5, according to Jöreskog & Sörbom (1998).

3.6.4 Measurement WTP

There are different methods of measuring WTP. They will be further described in the appendix. Considering the scope of this research and the goal behind measuring WTP, a direct approach (where the participant is directly asked to indicate their WTP) will be used. Even though this approach has been criticized for various reasons (Brown et al., 1996; Nagle & Holden, 2002; Nessim & Dodge, 1995), it still produces useful outcomes (Miller et al., 2011). This measure was found to produce a similar demand curve and price decisions, as other approaches (like indirect surveys and experiments). Statistically, the pricing decisions that are based on the calculated WTP are similar to other tests.
Furthermore, in this thesis, the focus is rather on comparing different WTPs than defining the exact WTP. Therefore, a direct approach is appropriate.

3.6.5 Measurement Sustainability Consciousness

In this research, a scale based on research by Gericke et al. (2019) will be used. Due to the scope and purpose of this thesis, the proposed questionnaire will be shortened and only sustainability attitudes will be measured. Cronbach alpha lies at 0.78, therefore being an appropriate construct (Tavakol & Dennick, 2011).

3.6.6 Measurement Purchase Intention

To measure PI, the construct will be used which was previously utilized by De Toni et al. (2022). The construct is based on previous research (Mittal et al., 1998; L. Y. Wu et al., 2014).
Cronbach's alpha is above 0.7 ($\boldsymbol{\alpha} = 0.73$) therefore the construct is useful (Tavakol & Dennick, 2011).

3.6.7 Screening and Manipulation Questions

To ensure that the participants were legible for the survey two screening questions were asked at the beginning of the survey. The goal was to ensure that the minimum age of 18 years was reached and that participants had consumed any type of alcoholic beverage in the last 6 months.

Furthermore, the survey included two manipulation questions to check if participants remembered and understood the stimuli manipulation. One of the questions controlled if the participants knew the brand. As a fictional brand was used for the survey, participants should indicate no knowledge of the brand. However, if the participants indicated that they did know the brand they might be confusing the fictional brand with an existing one, and therefore results could be biased. The second manipulation question was aimed at whether the participants remembered and understood which stimuli had been presented to them (focus on taste, environmental, economic, or social sustainability).

3.7 Data Analysis

For the data analysis, IBM's SPSS Version 28.0.0.0 will be used. For further analysis, the SPSS add-on tool PROCESS is used to analyze the mediator and moderation effect of certain variables.

Chapter 4: Results and Discussion

4.1 Results

4.1.1 Preparing the Data

4.1.1.1 Missing Data and Outliers Analysis

After closing the survey, 283 participants were registered via Qualtrics. The following participants were excluded from the analysis: participants with duplicated IP addresses (6 participants), participants who did not finish the survey (38 participants), candidates who didn't answer screening questions correctly (21 participants), and anyone who did not answer the manipulation questions correctly (82 participants). The following analysis was conducted with 136 participants.

An outlier analysis using the Mahalanobis Distance test was conducted, using the IP address as the dependent variable and the variables BI, WTP, PI, sustainability consciousness, income, age, gender, marital status, highest education level, current diet and habits of alcohol consumption as independent variables. No value was below .001 so therefore no outlier had to be removed ("Statistics Solutions," 2023).

4.1.1.2 Measure Reliability

To confirm the reliability of the survey scales, Cronbach's alpha was used. Even though the survey was constructed based on existing constructs with satisfactory values, it is still necessary to confirm those values in the survey. All Cronbach alpha values were in a satisfactory range between 0.7 and 0.9 (Terwee et al., 2007).

Table 3: Cronbach's alpha test

Scale type	No. of items (initial scale)	Cronbach's alpha (initial)	No. of items (new scale)	Cronbach's alpha (new)
Stimuli taste				
Brand Image	7	CRC = 0.78 CRC = 0.76 CRC = 0.81	7	**α** = 0.857
Purchase Intention	4	**α** = 0.73	4	**α** = 0.861
Stimuli environment				
Brand Image	7	CRC = 0.78 CRC = 0.76 CRC = 0.81	7	**α** = 0.964
Purchase Intention	4	**α** = 0.73	4	**α** = 0.966
Stimuli social				
Brand Image	7	CRC = 0.78 CRC = 0.76 CRC = 0.81	7	**α** = 0.847
Purchase Intention	4	**α** = 0.73	4	**α** = 0.877
Stimuli economic				
Brand Image	7	CRC = 0.78 CRC = 0.76 CRC = 0.81	7	**α** = 0.853
Purchase Intention	4	**α** = 0.73	4	**α** = 0.877
All participants				
Sustainability Consciousness	9	**α** = 0.78	9	**α** = 0.877

For the stimuli taste, Cronbach's alpha for BI was .857. This value could only be increased by removing the item "consolidated brand in the market" to .880. For PI, the alpha is .861. If the item "I will buy larger quantities of this brand in the coming months" is deleted, this value could be increased to .917.

For the stimuli environmental sustainability, the scale for BI demonstrated a Cronbach's alpha of .964 and could not be increased by deleting an item. For PI, the alpha was .966 and could also not be increased by deleting an item.

For social sustainability, the BI had a value of .847 and could not be increased by deleting an item. For PI, the alpha was .877 and cannot be increased.

For the last stimuli, economic sustainability, BI had a value of .853 and could be slightly increased to .855 by removing the item “the brand has a personality that distinguishes itself from competitors’ brands”. For PI, the alpha was .877 and could not be increased.
Sustainability Consciousness has a Cronbach’s alpha of .843 and could only be increased to .884 by removing the first item.
As all values have a very good scale reliability, no items were removed even if the alpha could have been increased slightly.

In the following analysis the constructs, consisting of several items, were summarized into a single item per construct by taking the mean of all statements. The stimuli groups were separated in two different ways to allow for comparison. In the first variable, only two groups are coded where 1 signifies the no-initiative scenario (focus on taste; control group) and 2 signifies any type of initiative (environmental, social, or economic sustainability). In the second variable, each initiative was recorded separately, where 1 still stands for the no-initiative scenario, 2 for environmental sustainability, 3 for social sustainability, and 4 for economic sustainability.

4.1.1.3 Manipulation Check

As there are more than two stimuli groups, either an ANOVA or a Kruskal-Wallis test can be used to confirm if the manipulation of stimuli was successful. An ANOVA would be used if the data is parametric and the Kruskal-Wallis test if it is not parametric. Parametric data must meet the following criteria: Normal distribution of data, the linearity of residuals, independence of observations, normal distribution of residuals, and lastly, homoscedasticity of residuals.
The independence of observations is ensured as data was collected only once through an online survey. The Shapiro-Wilk test investigates if the data were normally distributed. As the p-value is below 0.05, the requirements for parametric data are not met and therefore will be treated as non-parametric data.
The Kruskal-Wallis test was used to determine if the difference between the different stimuli (independent variable) is statistically significant. This can be confirmed as all p-values are below .05. This means that the difference between the stimuli has statistical significance and can be used to draw conclusions.

4.1.2 Descriptive Statistics

4.1.2.1 Sample Characterization

The sample that was used for the data analysis consisted of 136 participants. For the stimuli taste and environmental sustainability, 36 participants respectively are valid and for the remaining stimuli, social and economic sustainability 32 respectively could be included. Almost 45% of the participants are working (paid employees) and 47.8% are students. 60% were female and 40% were male.

Most participants (52.2%) were 25-34 years old, followed by the age group ranging from 18-24 years (24.3%). 34.6% earned more than 2,500 Euros per month, followed by participants who earned less than 500 Euros (27.9%). The majority is in a partnership (47.8%), followed by single participants (33.8%). Most participants indicated having a bachelor's degree as the highest education level (53.7%), followed by a master's degree (25%). 34.6% currently are vegetarian, 23.5% do not have any restrictions and 14% are flexitarian. 44.1% consume alcoholic beverages once a week and 22.8% two to three times a week. The vast majority of participants indicated Germany as their country of origin (69.9%) followed by 'Other' (26.5%).

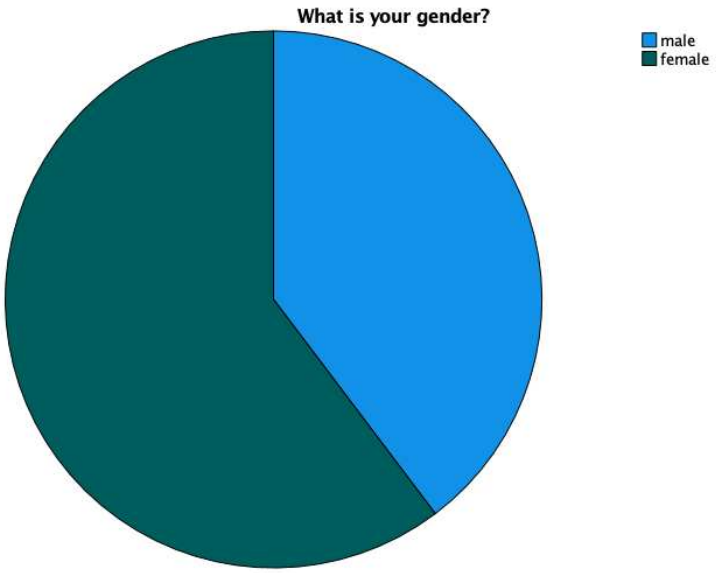


Figure 5: Gender

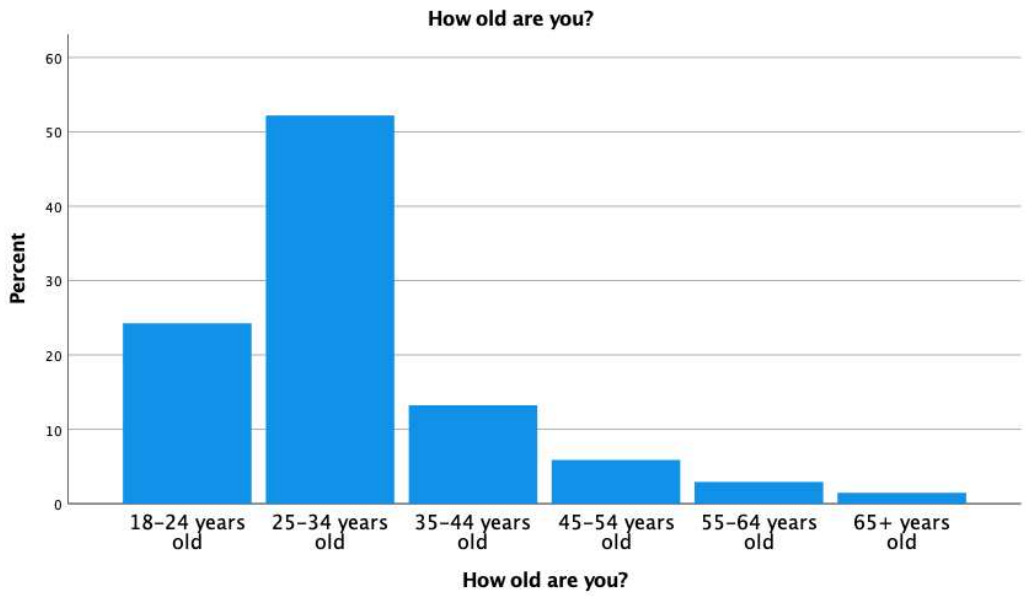


Figure 6: Age

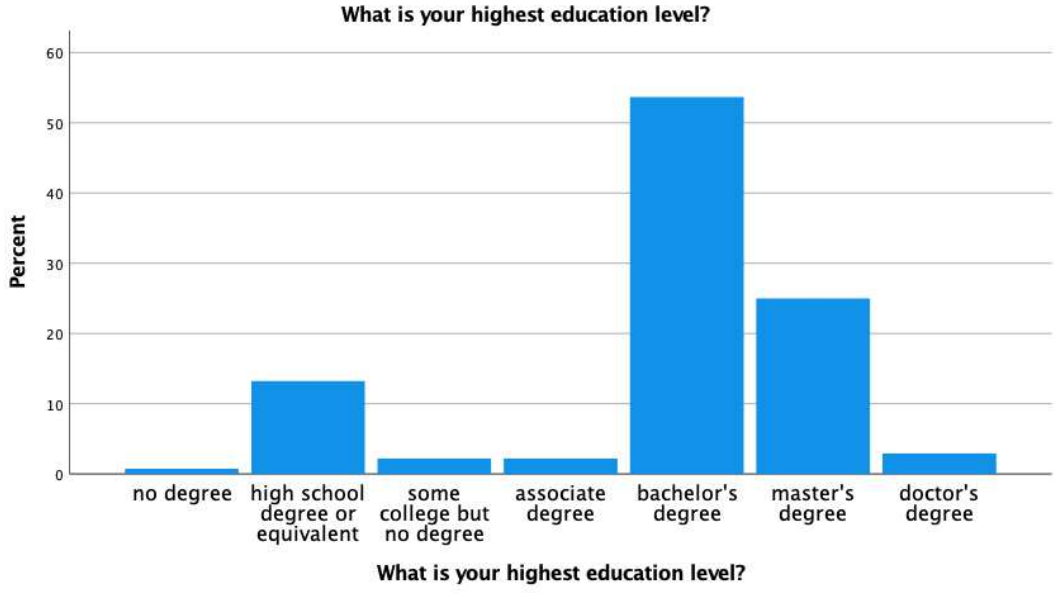


Figure 7: Educational Level

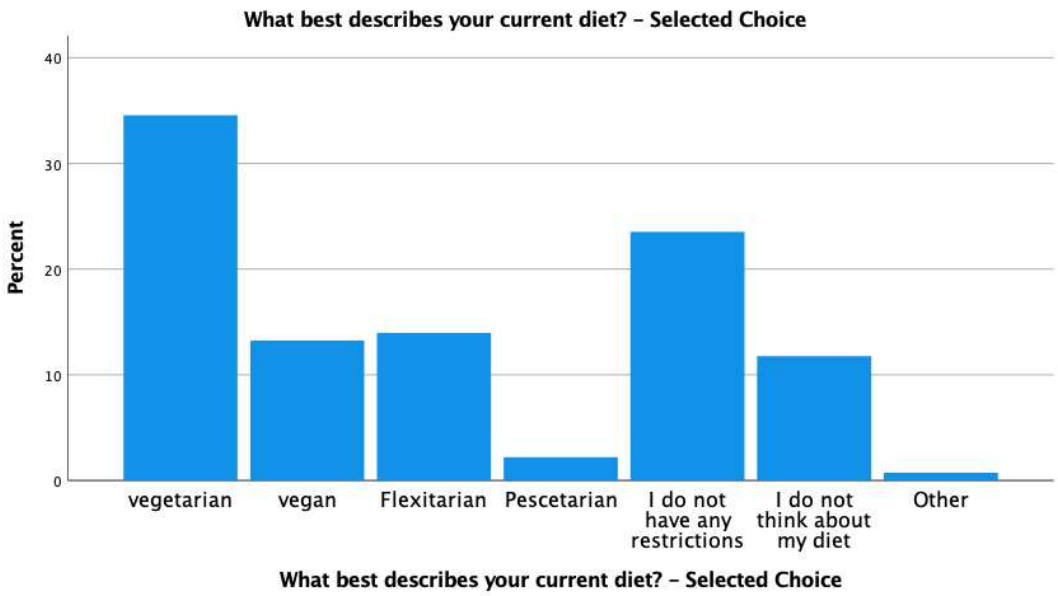


Figure 8: Current Diet

4.1.2.2 Key Variables

In this chapter, the key descriptive statistics will be briefly summarized. The exact values can be seen in the appendix. All items were measured using a 7-point Likert scale (with 1 indicating 'strongly disagree' and 7 'strongly agree). Starting with the first stimulus (control group i.e. the no-sustainability initiative), participants showed moderate disagreement with the statements on BI, with the means ranging between 2.97 and 3.58. The overall mean for BI was 3.22. WTP was indicated at 1.69 Euros per bottle. Accordingly, the PI was also relatively low, with a mean ranging from 2.42 to 3.03. The overall mean was 2.69.

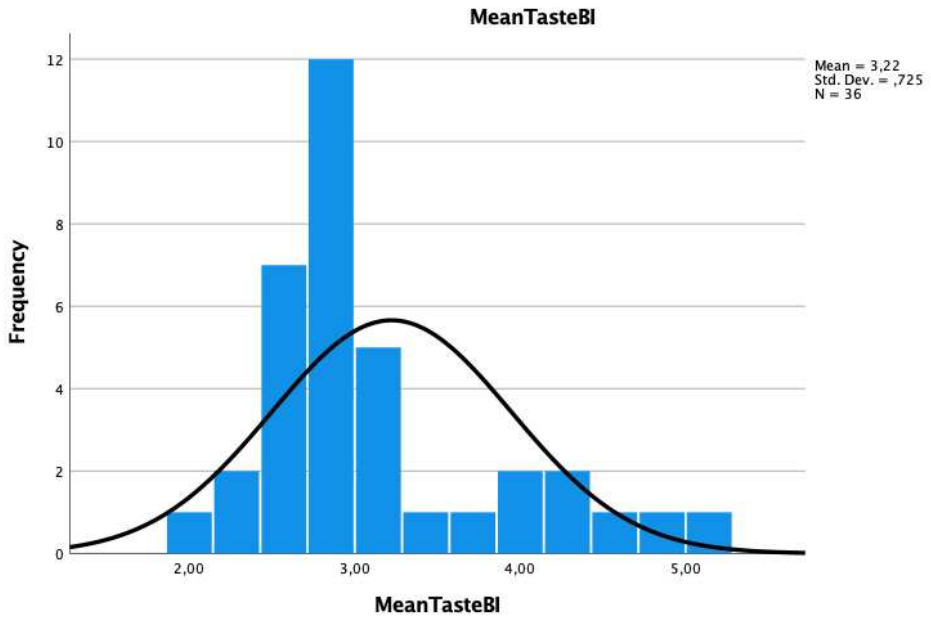


Figure 9: Taste Brand Image

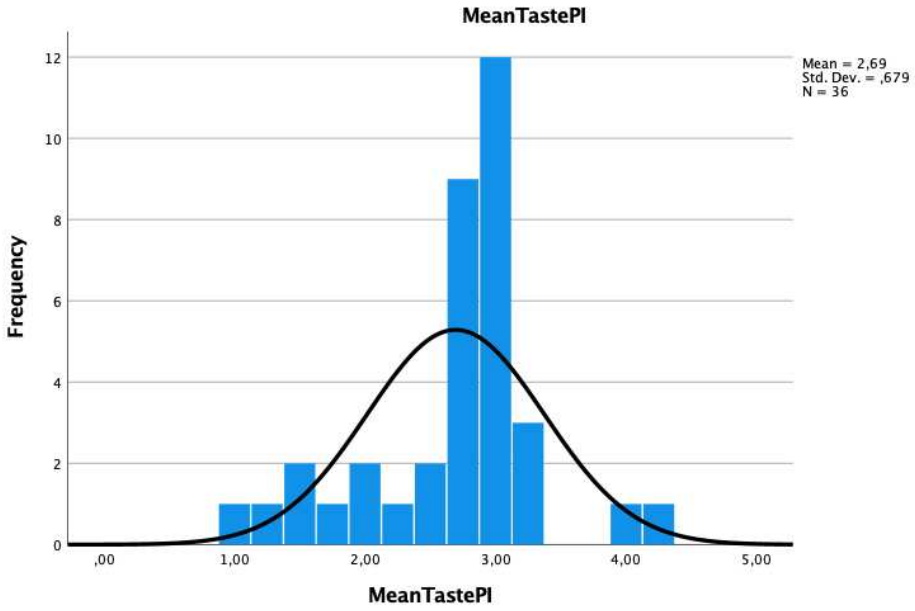


Figure 10: Taste Purchase Intention

For environmental sustainability, the means were significantly higher, ranging from 5.69 to 6.44, with an overall mean of 6.19. The WTP mean was 2.68 Euro and the averages for PI ranged from 5.67 to 5.78, indicating a rather high PI with a mean of 5.73.

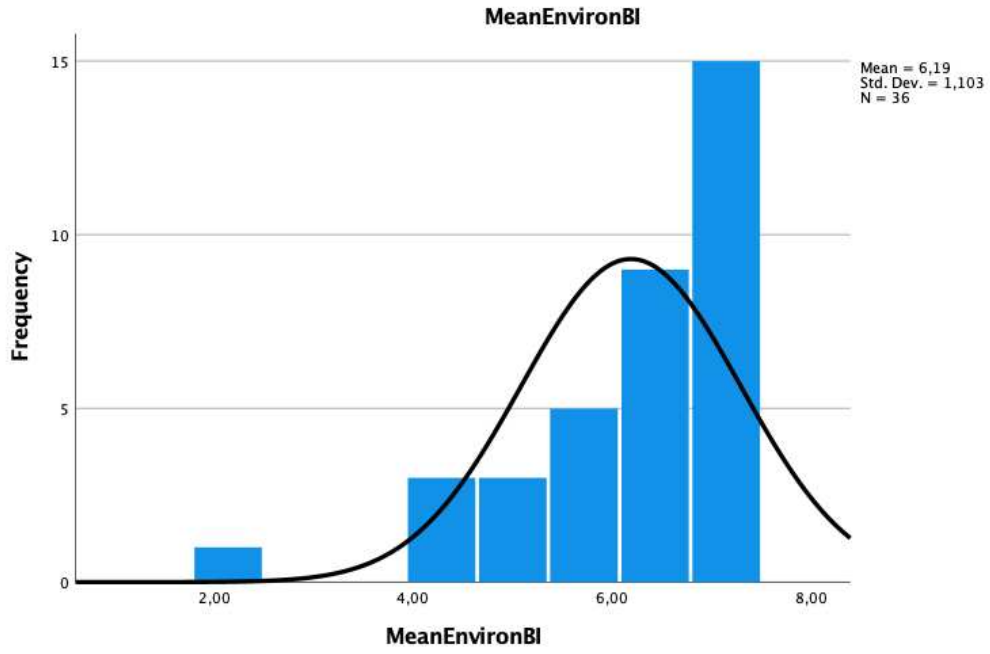


Figure 11: Brand Image Environmental Sustainability

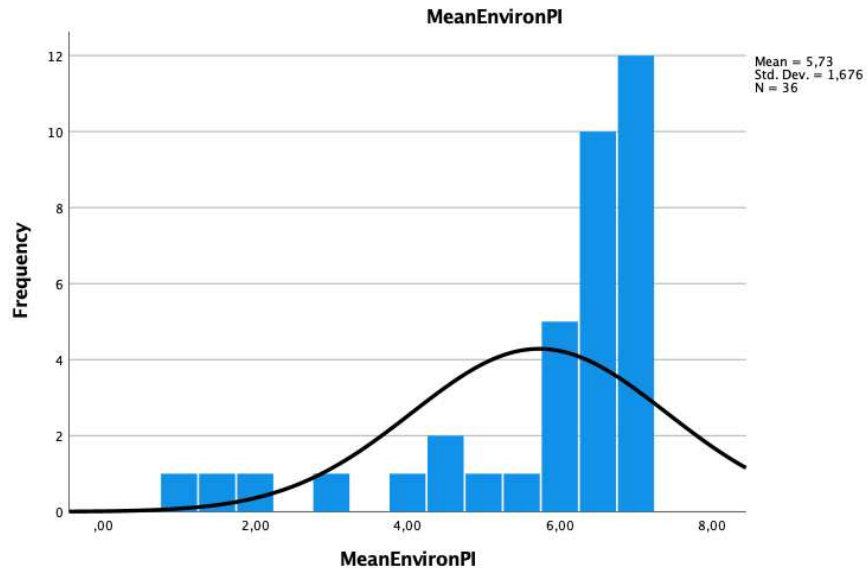


Figure 12: Purchase Intention Environmental Sustainability

Participants who were exposed to social sustainability also indicated moderate agreement with the statements for BI (the overall mean is 5.34), indicating a relatively high BI, ranging from means from 5.16 to 5.5. The values are slightly lower than for environmental sustainability, however, clearly higher than for the first stimuli (taste). The average for WTP lies at 2.2 Euros per bottle. PI was also relatively high, ranging from 5.37 to 5.66 (overall mean 5.52).

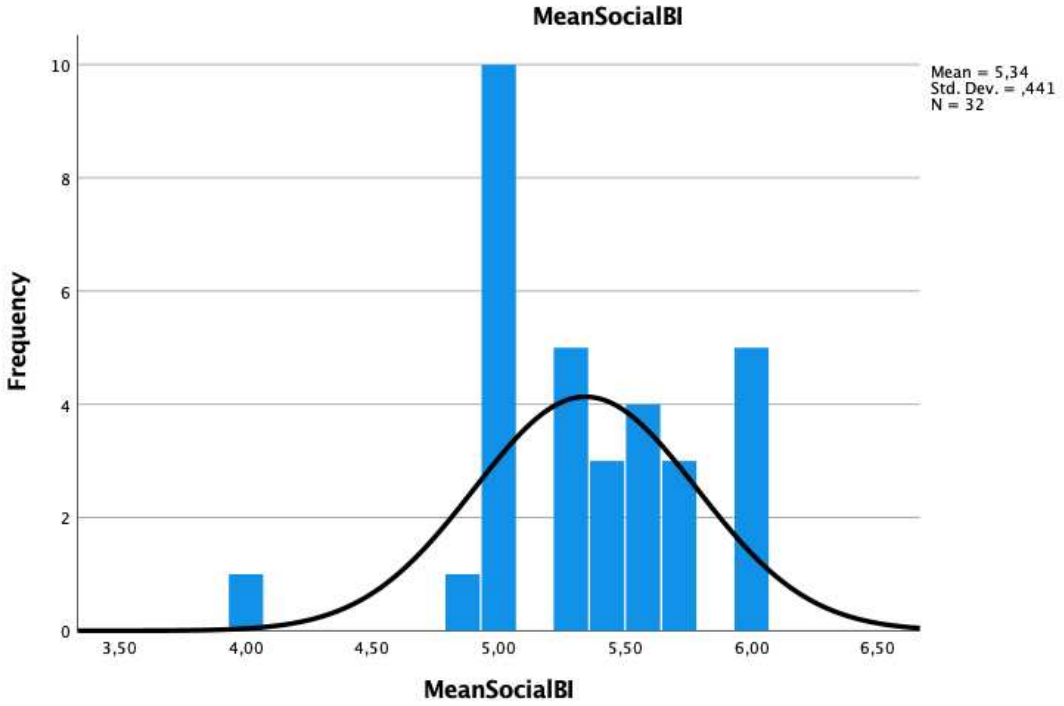


Figure 13: Brand Image Social Sustainability

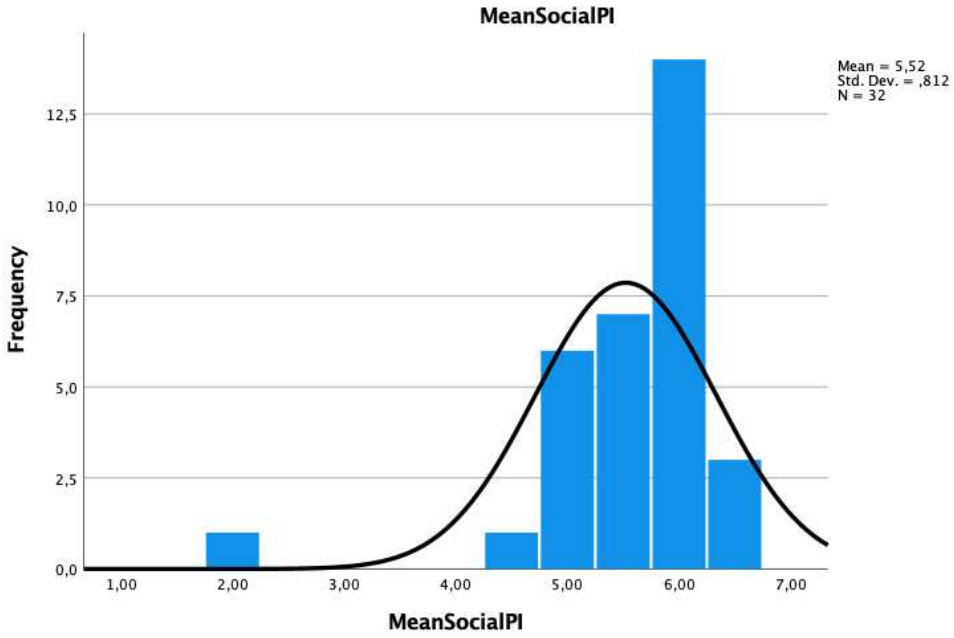


Figure 14: Purchase Intention Social Sustainability

The last stimuli, economic sustainability, demonstrated relative disagreement with the statements, ranging from 2.78 to 3.38 (overall 3.03) and a WTP of 1.62 euros. Accordingly, the PI was relatively low with values from 2.72 to 2.94 and an overall mean of 2.87.

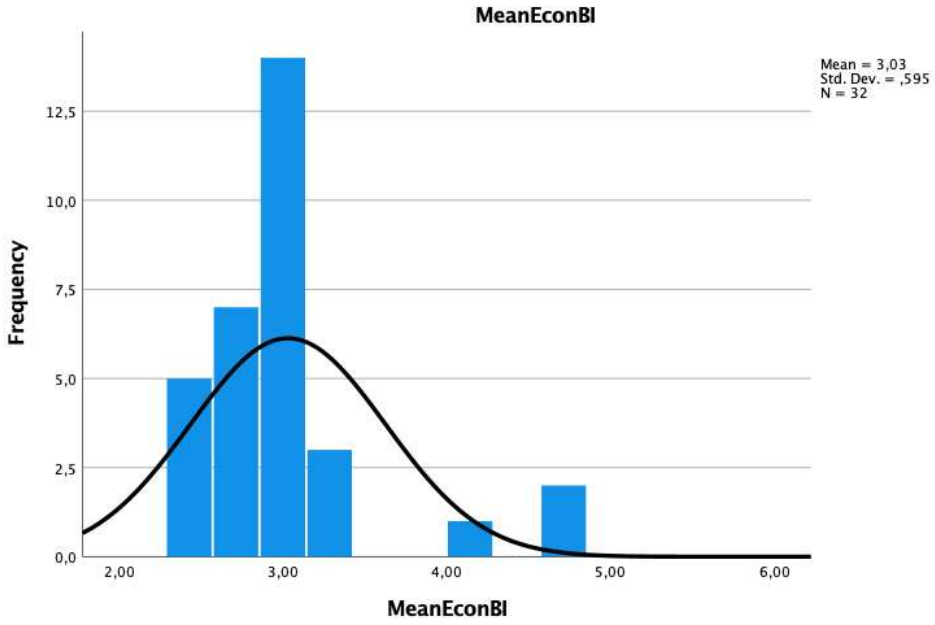


Figure 15: Brand Image Economic Sustainability

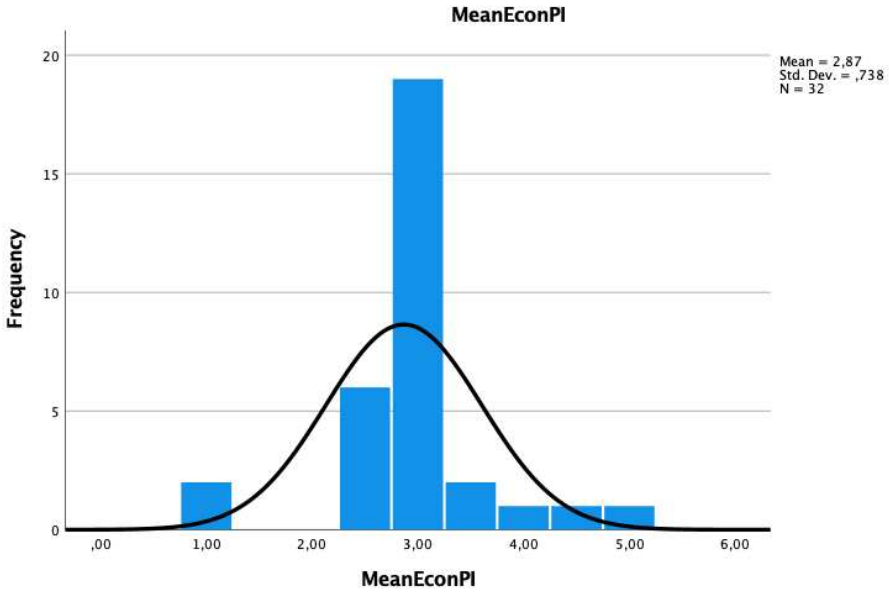


Figure 16: Purchase Intention Economic Sustainability

The statements measuring sustainability consciousness showed in general relatively high values indicating that most participants are very sustainability conscious. All statements had a mean

ranging between 5.67 and 5.91, except for the statement "I think that using more natural resources than we need does not threaten the health and well-being of people in the future" which had a mean of 2.74. However, this item has a reversed scale, therefore indicating general disagreement with the statement and consequently a high level of sustainability consciousness. The overall mean for BI for all stimuli is 4.46. For PI a mean of 4.2 was calculated and the average WTP was 2.05 Euro per bottle.

4.1.3 Hypothesis Testing

In this chapter, the developed hypotheses are tested.

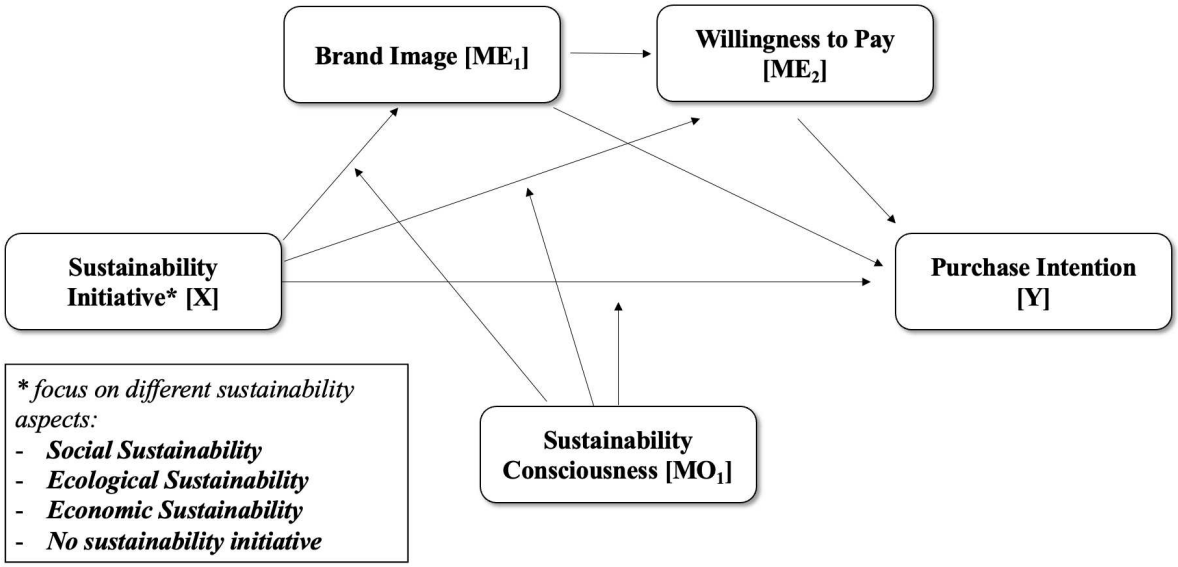


Figure 17: Conceptual Framework

4.1.3.1 Hypothesis 1

H_1: *The implementation of sustainability initiatives leads to an increased purchase intention*
H_0: The implementation of sustainability initiatives leads to a similar purchase intention as the implementation of a no-sustainability initiative.

To investigate this hypothesis, a linear regression was conducted (as there is only one IV with four stimuli). To ensure the data is parametric the five criteria requirements (normal distribution, linearity of residuals, independence of observations, normal distribution of residuals, and homoscedasticity of residuals) need to be checked by using the Shapiro-Wilk test. The test of normality indicates that the data is not parametric as the p-value is below 0.05.

However, as the central theorem states, when having more than 30 valid participants, normality can be assumed (Kwak & Kim, 2017). Furthermore, independence of observation is ensured as the data was collected only at one point in time. The other criteria have been investigated and confirmed. Hence, the data is assumed to be parametric.

A linear regression will be conducted, where the independent variable (categorical) is the manipulated stimuli. A dummy variable has been coded where 1 signifies the no-initiative (focus on taste) and all other stimuli (environmental, economic, and social sustainability) have the value 2. The dependent variable, PI, is a metric scale.

As the Pearson correlation coefficient is positive (.509), a positive relationship between the sustainability initiatives and PI is indicated. By increasing the value of the initiative (from 1 to 2), the outcome also increases, meaning the PI is higher for any type of initiative compared to having no sustainability initiative. The p-value is below 0.05 which suggests a statistically significant result. This means that any type of initiative positively correlates to the PI and therefore H_1 cannot be rejected. The R-square has a value of .259 which suggests that 25.9% of the variation in PI can be explained by the variation of the independent variable, in this case, the no initiative vs any of the three sustainability initiative scenario. The result of the Durbin-Watson test has a value of 2.117 which is close to 2 and therefore suggests no autocorrelation. The unstandardized Beta shows how much the dependent variable changes with an increase of 1 in the independent variable. By implementing any sustainability initiative, an increase of 2.053 in PI can be demonstrated.

To sum up, these findings suggest that H_0 can be rejected as sustainability initiatives have a positive, significant effect on PI.

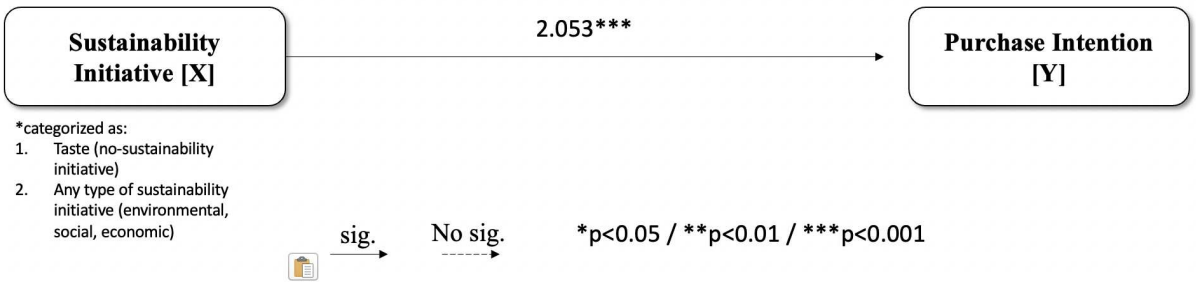


Figure 18: Hypothesis 1

4.1.3.2 Hypothesis 2

H_2: Sustainability initiatives have a positive impact on PI mediated by BI
H_0: BI has no mediating effect on the relationship between sustainability initiatives and PI

As H_2 includes a mediator variable, the tool PROCESS in SPSS was used (model 4, which can be used for simple mediation) with the sustainability initiatives as the independent initiative and PI as the dependent variable. BI served as the mediator and was recoded into a metric variable.

In the first step, the independent variable will only be categorized into two groups. Group 1 is the taste (no-sustainability initiative) and group 2 is any type of sustainability initiative (environmental, social, or economic). The goal is to confirm if the implementation of any initiative has a positive effect on PI, mediated through BI.
The R-square for the outcome variable BI has the value .2272 hence the implementation of any type of initiative explains 22.72% of variation in BI. This finding is significant as p=0. By implementing any initiative BI can be increased by 1.685. As the bootstrap value does not include 0, we can conclude that the coefficient value is significant.
For the outcome variable PI, 79.65% of variation can be explained through the implementation of sustainability initiatives (independent variable). The p-value is also 0, therefore, confirming that statistical significance is given. When implementing an initiative, PI would increase by .4504 (with a given p-value of .0133) when holding BI constant, and for every unit increase in BI, PI increases by .9512 (with a p-value of 0). Both results are hence statistically significant. For both results, we can conclude that the coefficients are significant as the bootstrap values do not include 0.
The direct effect of the independent variable on PI has a value of .4504 with a p-value of 0.0133. The bootstrap confidence interval does not include 0 therefore, these results are significant. Thus, BI is confirmed to serve as a partial mediator between the implementation of sustainability initiatives and PI. Hence, H_2 is confirmed.

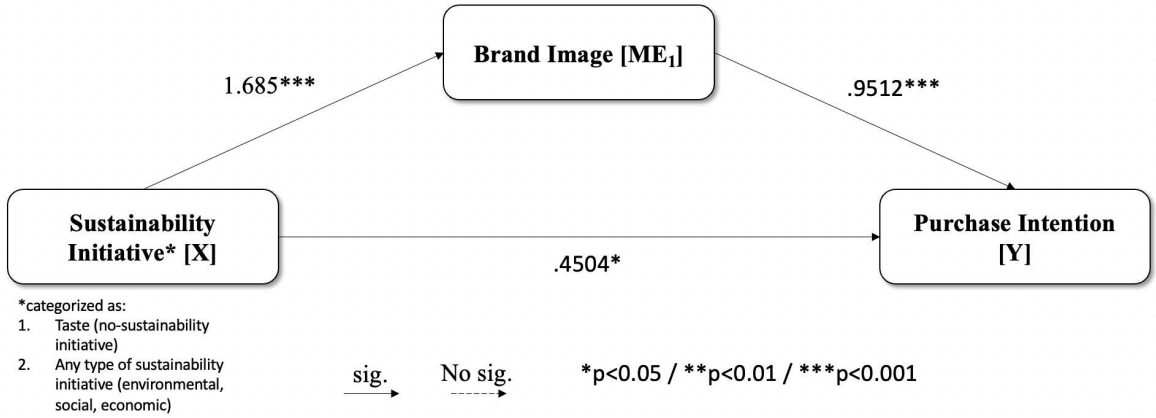


Figure 19: Hypothesis 2

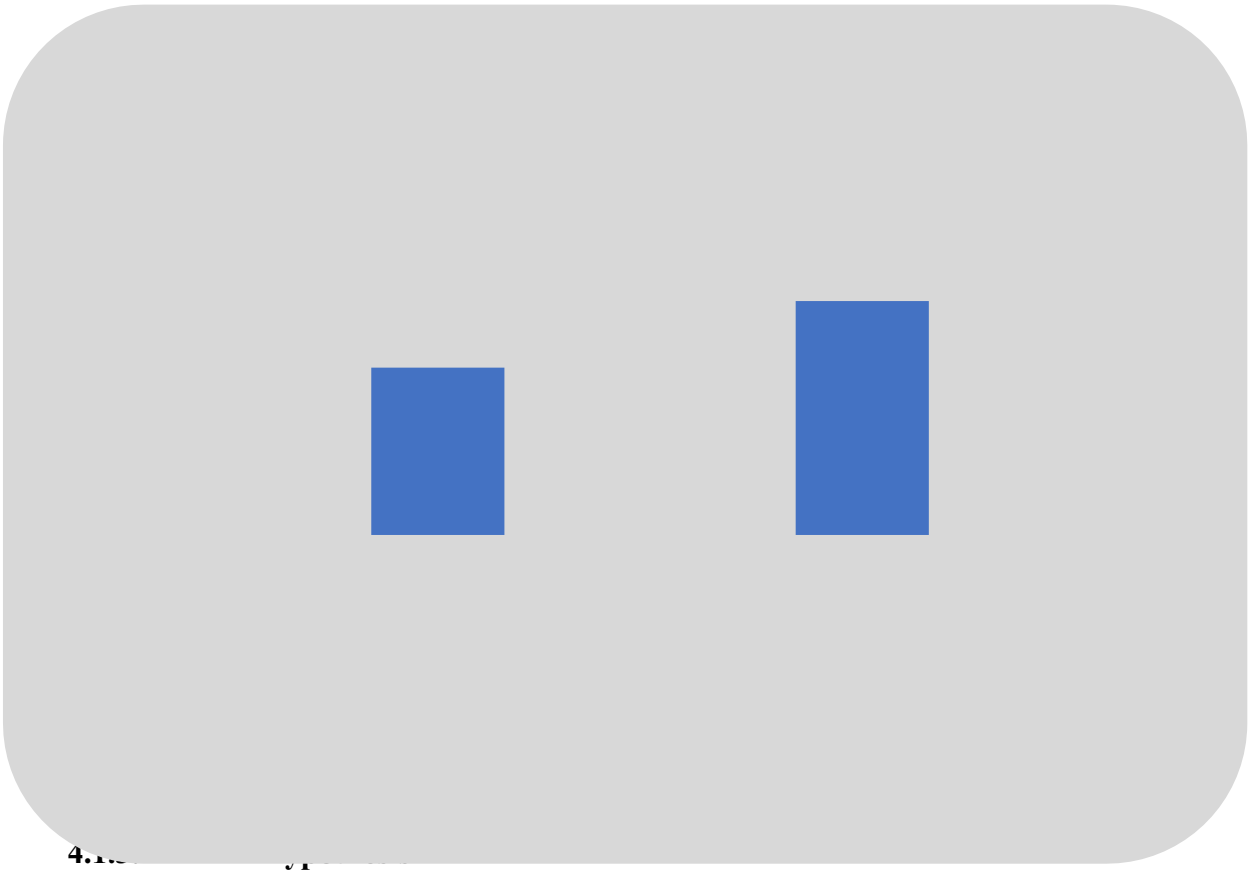
4.1.3.3 Hypothesis 3

H_3: If consumers demonstrate a high level of sustainability consciousness, their WTP is higher
H_0: WTP is equal for consumers with high and low levels of sustainability consciousness

An ANOVA to compare the means for WTP was used to investigate H_3 with sustainability consciousness as the independent (categorical) variable and WTP as the dependent (metric) variable. It was necessary to group participants into two groups (high/low level of sustainability consciousness). This was coded by using the mean of answers of sustainability consciousness questions. The higher the value, the higher the level of sustainability consciousness. As the overall mean was relatively high it suggested that all participants were somewhat sustainability conscious. To divide them into two equal groups the 50th percentile was calculated (at a mean of 5.44). Every value below was categorized as low sustainability consciousness (label 1) and every value of 5.44 and above as high sustainability consciousness (label 2). As several participants had a mean of 5.44, the whole group indicating 5.44 was counted as having high sustainability consciousness.

For the group with 'low sustainability consciousness', the mean WTP was 1.99 Euro per bottle, and for the group who indicated high sustainability consciousness the WTP was 2.10 Euro.

Even though the means were slightly different, H_0 cannot be rejected as the p-value was higher than 0.005 ($p=0.37$). To conclude, sustainability consciousness is not a good predictor for WTP and H_3 can be rejected. This is also supported by using the Welch and Brown-Forsythe test, as no strong evidence can be found for differences between WTP for the different stimuli manipulations.



H_4: Implemented sustainability initiatives lead to higher PI, mediated by consumers' WTP

H_0: WTP has no mediating effect on the relationship between sustainability initiatives and PI

H_4 is another hypothesis that includes a mediator therefore the tool PROCESS is used by (model 4). The same variables are used as in H_2, except that BI is exchanged for WTP (metric scale). In the first step, the independent variable is again categorized into two groups (taste initiative vs any sustainability initiative)

For the outcome variable WTP, R-square is .0951. Only 9.5% of variations in WTP can be explained by the independent variable. The p-value suggests statistical significance (p=.0003). By implementing any initiative, PI can be increased by .4993. As the bootstrap interval does not include 0, the coefficient is significant.

For the outcome variable PI, the model explains 54.39% of the variation. This result is statistically significant (p=0). The coefficient for the relationship of WTP and PI has a value of 1.3968 and a p-value of 0. The bootstrap interval does not include 0.

The direct effect of X on Y is 1.3556 with a p-value of 0 and the bootstrap interval not including 0. The indirect effect of WTP has a value of .6974 with a bootstrap interval not including 0 hence with statistical significance. Therefore, the H_0 can be rejected, and we can assume that WTP is a partial mediator for the relationship between the implementation of any sustainability initiative and PI.

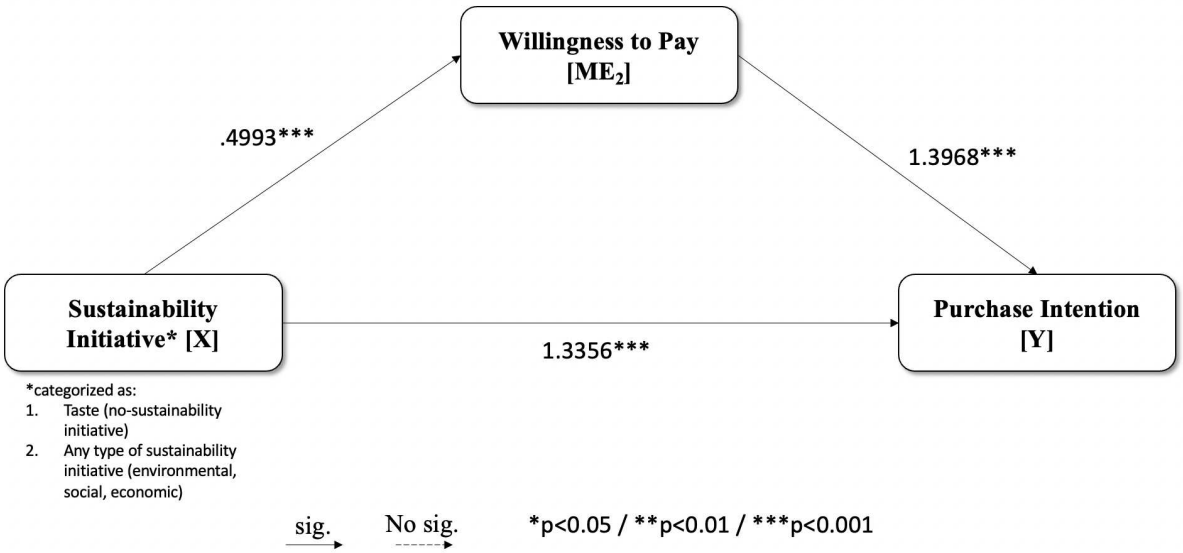


Figure 21: Hypothesis 4

4.1.3.5 Hypothesis 5

H_5: Increased BI leads to higher PI, mediated by WTP

H_0: WTP has no mediating effect on the relationship between BI and PI

In this hypothesis, BI serves as the independent variable where WTP serves as the mediator and PI again as the dependent variable. Again, the tool PROCESS with model 4 is used.

WTP as the outcome variable has an R-square of .4871 and hence explains a variation of 48% in PI and is statistically significant (p-value = 0). The coefficient is .3197, therefore, indicating that an increase in BI leads to an increase of .3197 in WTP. The bootstrap interval does not include 0 and therefore the result is significant.

For the outcome variable PI, the R-square of .7908 demonstrates that 79% of the variation of PI can be explained by the variables. WTP has a coefficient of .2207 which indicates that a one-unit increase in WTP leads to an increase of .2207 in PI. However, this result has a p-value of .1119 and the bootstrap interval includes a 0 and therefore has no statistical significance.

The direct effect of X on Y has the value .0414 indicating a positive relationship of BI on PI. The indirect effect of WTP is also positive but appears weak as the coefficient has a value of .0705 and the bootstrap interval includes a 0. The indirect effect is therefore not significant. In this case, we cannot reject H_0 and must assume that WTP is not an appropriate mediator for the relationship between BI and PI.

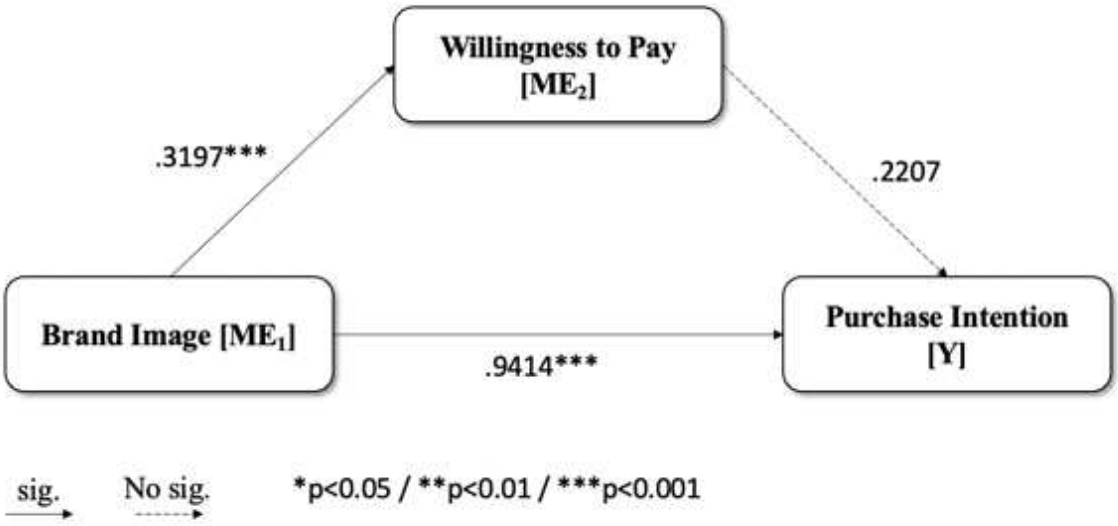


Figure 22: Hypothesis 5

4.1.3.6 Hypothesis 6

H_6: Sustainability Consciousness moderates the relationship between Sustainability initiatives and PI

H_0: There is no significant interaction of sustainability consciousness on the relationship between sustainability initiatives and PI

In this hypothesis, sustainability consciousness serves as the moderator of the relationship between the sustainability initiatives and PI. To analyze its impact, model 1 was used as it calculates the effect of a single moderator. Again, the construct sustainability consciousness was recoded into two groups (high and low sustainability consciousness). In the first step, the two group variables of sustainability initiatives are used (no sustainability initiative vs. any type of sustainability initiative).

The outcome variable PI has an R-square of .2721 and therefore, 27% of variations are explained by the model. With a p-value of 0, statistical significance is assumed. The results indicate that when implementing a sustainability initiative, PI increases by 1.1199 (holding all other variables constant). Increasing the value of sustainability consciousness (in this case going from low sustainability consciousness to high consciousness), PI would decrease by .7103. However, these results both show a p-value above 0.05 and are therefore not statistically

significant. The results also include the combined effect of sustainability initiatives and sustainability consciousness on PI. The coefficient is .5926, meaning that when sustainability consciousness increases by one unit, the effect of sustainability initiative on PI is higher by a value of .5926. However, this result has a p-value of .3274, so no statistical significance can be assumed.

Based on these results, H_0 cannot be rejected.

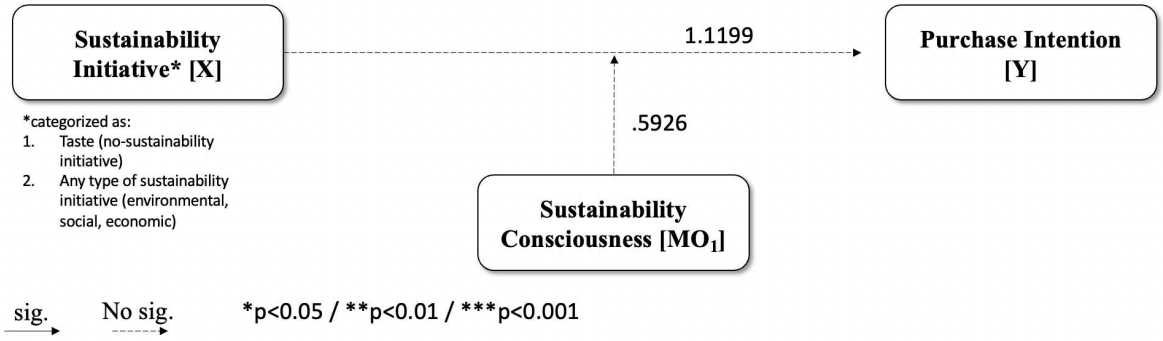


Figure 23: Hypothesis 6

The analysis was repeated by exchanging the independent variable (including two groups) for a variable including the four groups (taste, environmental, social, and economic sustainability). The results also indicate that there is no statistical significance for the hypothesis and therefore H_0 cannot be rejected. The exact results can be seen in the appendix.

4.1.3.7 Hypothesis 7

H_7: Sustainability Consciousness moderates the relationship between Sustainability initiatives and BI

H_0: Sustainability Consciousness has no moderating effect on the relationship between Sustainability initiatives and BI

In H_7 the effect of sustainability consciousness (moderator) on the relationship between sustainability initiatives (independent variable) and BI (dependent variable) is investigated by using PROCESS (model 1). The independent variable is categorized into two groups (no-sustainability initiative vs any sustainability initiative).

For the outcome variable BI, the model explains about 28% of the variation (R-square = .2827) with a p-value of 0. The coefficient for the effect of sustainability initiatives on BI is positive (1.3880) indicating a positive relationship. However, the p-value is 0.0980 therefore no statistical significance is found. The effect of sustainability consciousness also demonstrates a positive relationship (.5117), however, also shows no statistical significance. None of the coefficients in the model show a p-value below 0.05 therefore H_7 must be rejected, and sustainability consciousness cannot be assumed as an appropriate moderator.

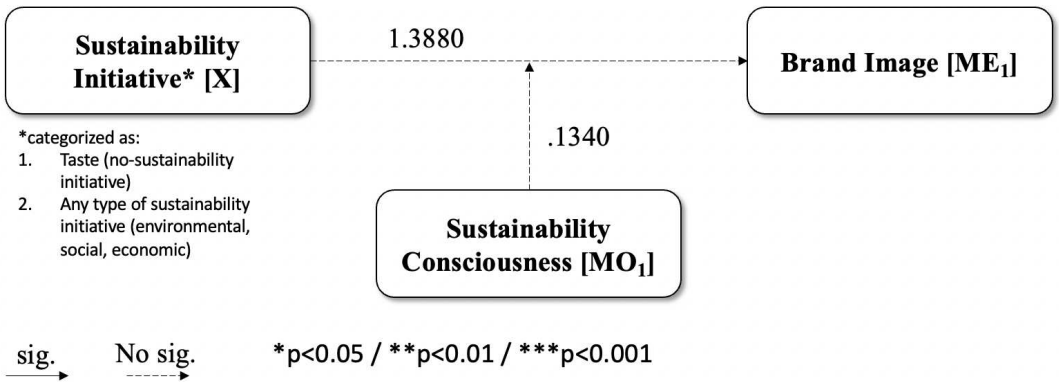


Figure 24: Hypothesis 7

The analysis has been repeated with the four sustainability initiatives and results appear similar as no statistical significance is demonstrated in the new model. The exact results can be found in the appendix.

4.1.4 Hypothesis Testing Overview

Table 4: Hypothesis Testing Overview

Hypothesis	Description	Result
H1	The implementation of sustainability initiatives leads to an increased purchase intention.	significant
H2	Sustainability initiatives have a positive impact on PI through/mediated by improving BI	significant
H3	If consumers demonstrate a high level of sustainability consciousness, their WTP is higher	not significant
H4	Implemented sustainability initiatives lead to higher PI, mediated by consumers' WTP	significant
H5	Increased BI leads to higher PI, mediated by WTP	not significant
H6	Sustainability Consciousness moderates the relationship between Sustainability initiatives and PI	not significant
H7	Sustainability Consciousness moderates the relationship between Sustainability initiatives and BI	not significant

4.1.5 Full Model Test

For conducting the full model test, PROCESS was used with the model 8 setting. Sustainability initiatives (categorized into the two groups: no initiative vs. any sustainability initiative) served as the independent variables, PI as the dependent variables, BI and WTP as the mediators, and sustainability consciousness (categorized into two groups: high and low sustainability consciousness) as the moderator.

For the outcome variable BI, the model was able to explain 28.27% of the variation. This value demonstrates a p-value of 0. The individual variables sustainability consciousness and the sustainability initiatives however are both not statistically significant.

For the outcome variable WTP, the given model predicts about 9.74% of variation with a p-value of .0035 (statistical significance). Similarly, as for BI, neither sustainability consciousness nor sustainability initiatives have a p-value below .05.

The model predicts 81.5% of the variation in PI with a p-value of 0. The only two statistically significant variables on PI are BI (with a coefficient of .9281 and a p-value of 0) and Sustainability Consciousness with a negative coefficient (-1,2182) and a p-value of .0277.

The conditional direct effect of sustainability initiatives on PI is moderated through sustainability consciousness with the following effect: for low sustainability consciousness (value 1) the value lies at .2054 with a p-value of .3763. As the bootstrap interval includes 0, no statistical significance can be assumed. For the group 'high sustainability consciousness' the effect lies at .6864 and demonstrates statistical significance (p-value = .0036).

The indirect effect of sustainability initiatives on PI, mediated through BI demonstrates that for low sustainability initiatives, the effect lies at 1.4125 (with the bootstrap interval not including 0). For the group with high sustainability consciousness, the effect has a value of 1.5369 and is also statistically significant (bootstrap not including 0).

The indirect effect of the independent variable on the dependent variable, mediated through WTP shows no statistical significance for either low or high sustainability consciousness.

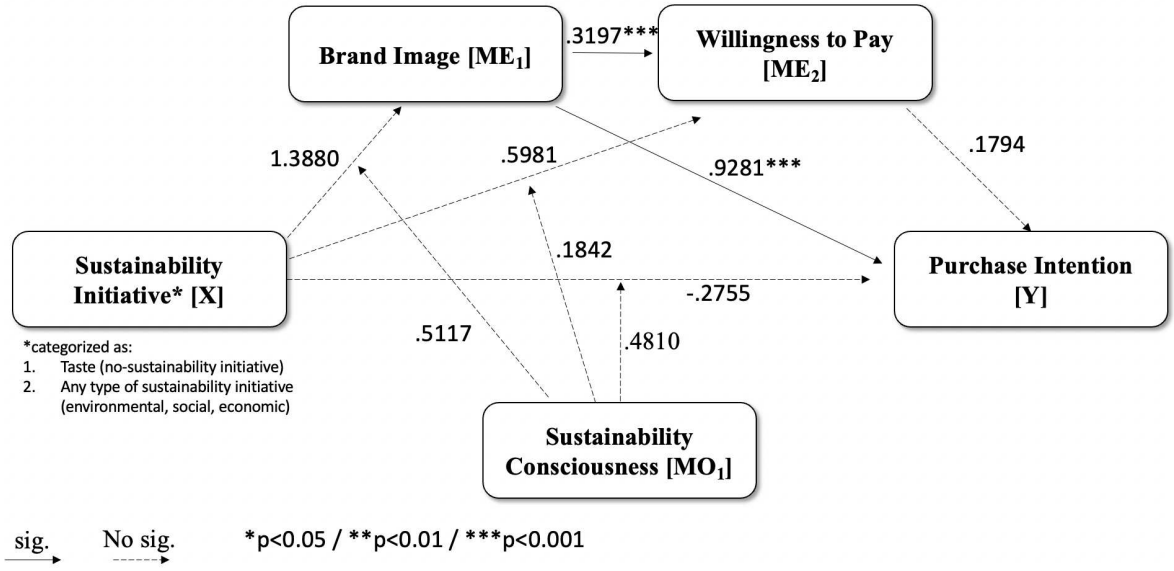


Figure 25: Full Model Test

4.1.6 Further analysis

Effect of different sustainability initiatives on PI

After carefully testing the hypotheses, further research will be conducted. Continuing the idea of H_1, it will be investigated which of the sustainability initiatives has the biggest effect on PI. The independent variables are categorical and as there are more than two groups an ANOVA will be conducted to find out if there are significant differences between the four groups. In this case, 1 still stands for the taste initiative, 2 for environmental sustainability, 3 for social sustainability, and 4 for economic sustainability.
As Table 5 shows the means differ substantially, with environmental sustainability and social sustainability having relatively high means (5.73 and 5.52 respectively) and economic sustainability and tase low means (2.87 and 2.69 respectively).

Table 5: ANOVA Mean Comparison

Stimuli	Mean
taste	2,6944
environment	5,7292
social	5,5234
economic	2,8672

The tests of homogeneity of variances show that in contrast to H_0, the variances between the means of each group are different and significant ($p<0.001$) (Levene's test). This means H_0 can be rejected, and that PI is influenced by sustainability initiatives. Environmental initiatives have the biggest impact, followed by social initiatives whereas taste and economic sustainability do have a positive impact, however, it is rather small comparatively.

Even though the data is assumed to be parametric, a further analysis using the Kruskal-Wallis test was conducted which assumes the data to be non-parametric. The results and analysis can be found in the appendix.

Effect of different sustainability initiatives on PI, with mediator BI

H_2 showed that the implementation of any type of sustainability initiative has a significant effect on PI, with the mediator BI. As a second step, the independent variable now contains the differentiation between the three sustainability initiatives and the control group (taste).

For the outcome variable BI, the R-squared had a value of .0062 so only a very small portion of BI is explained by sustainability initiatives. Furthermore, the p-value is .3616 which implies that these results are not statistically significant. The value of the t-statistic is -.9155 which is close to 0. As the t-tests investigate if the coefficient is zero (tests the H_0), the H_0 cannot be rejected in this case. The coefficient has a value of -.1101 and therefore indicates a negative impact. However, these results are not statistically significant as p = .3616 and is therefore higher than the scientifically recognized p-value of .05. The bootstrap interval includes 0 and therefore, has no statistical significance.

For the outcome variable PI, the R-Squared had a value of .7992 which means that almost 80% of the variance in the dependent variable (PI) can be explained by manipulation of the independent variable. The p-value = 0 and the results are therefore statistically significant. The effect of BI has a coefficient of 1.0219 (increasing BI by one unit leads to an increase of 1.0219 in PI), with a p-value of 0. 0 is not included in the bootstrap interval and therefore statistical significance for the coefficients can be assumed.

The direct effect of sustainability initiatives on PI is .1775 (a positive coefficient indicates a positive relationship; if the independent variable increases by one, the dependent variable increases by .1775) and a p-value of .005. is statistically significant.

The bootstrap method is a statistical test used to determine uncertainty around given results by repeating the analysis many times (in this case 5000) and calculating the result. The outcome provides variability in the results. As the indirect effect of sustainability initiatives on PI, mediated through BI is -.1125, it indicates a negative relationship. The bootstrap value in this case gives the estimated effect of BI (the mediator) on the relationship of the initiatives on PI. For the indirect effect of BI, the bootstrap interval includes 0, and therefore BI is not a good mediator in this model.

Generally, there is a significant effect of sustainability initiative and PI, and also for the effect of BI on PI, but the relationship of the initiatives and BI has no significant effect. We therefore cannot reject H_0.

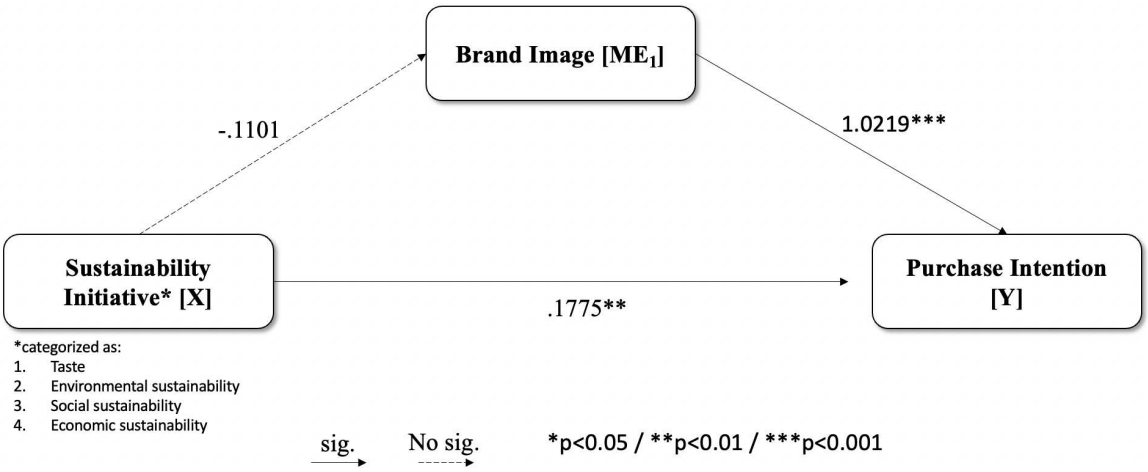


Figure 26: Hypothesis 2b

Concluding, it can be assumed that implementing any type of sustainability initiative has a positive impact on PI, however, it does not matter which type is implemented.

Effect of different sustainability initiatives on PI, with mediator WTP

In the following paragraph, the findings of H_4 will be further investigated, as it will be discussed how the result changes with changing the independent variable from H_4 to the categorization into four groups (the three sustainability initiatives and the no-sustainability initiative). The outcome variable WTP has a R-square of .0086 thus only a very small part of the variation of WTP can be explained by the stimuli manipulations (0.86%). The p-value is .2821 hence not statistically significant. The coefficient is negative (-.0594) indicating a negative relationship.
For the dependent variable PI as the outcome variable, the R-square indicates that 45.22% of variation can be explained through the independent variable. As the p-value = 0, these results are statistically significant. The effect of WTP on PI is 1.6789 with a p-value of 0 and the bootstrap interval not including a 0. Hence, the results are significant.
The direct effect of sustainability initiatives on PI is positive (.1647) however has a p-value above .05 (p= .1111) and is therefore not statistically significant. The indirect effect of WTP is negative (-.0998) indicating a negative effect on the relationship between sustainability initiatives and PI. The bootstrap interval includes a 0 therefore statistically these results are not significant. We cannot reject H_0 and must assume that WTP has no mediating effect on the variables.
These results confirm the assumption, that implementing any type of initiative has a positive effect on PI, however, it is not relevant which type is implemented.

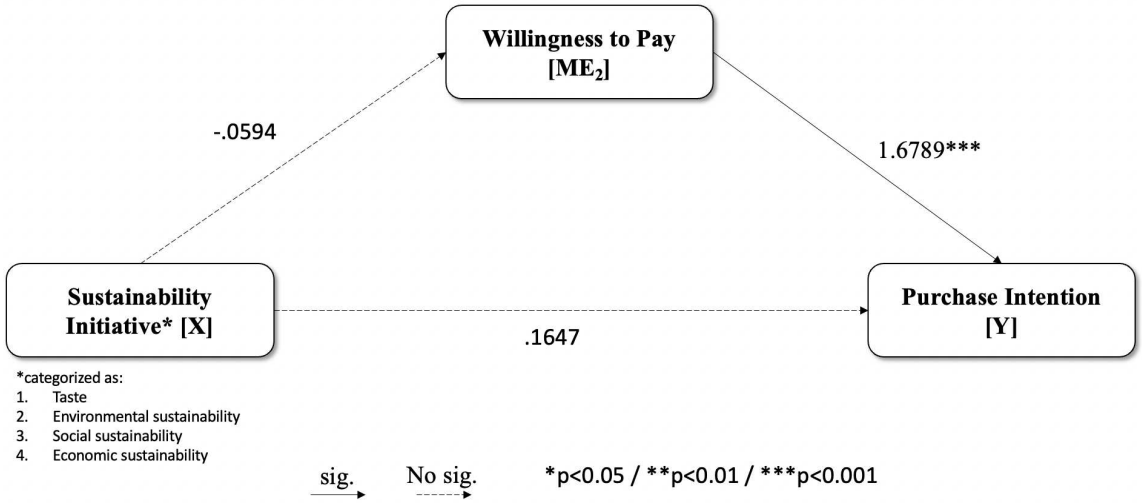


Figure 27: Hypothesis 4b

Further Full Model Testing

Repeating the full model test with the four types of stimuli as the independent variable provides slightly different results. For the outcome variable BI, the model has an R-square of .0869 and hence 8.69% of the variation in the dependent variable (PI) can be explained through the variables. With a p-value of .0072, these findings are significant. None of the variables have a significant coefficient on BI (all bootstrap intervals include 0). For the outcome variable WTP, the model explains 2.32% of the variation, however as the p-value is equal to .7560, this finding is not significant. Neither of the coefficients is statistically significant.

The outcome variables PI (dependent variable) provide a high R-square, indicating that 81.85% of variation can be explained through the model (p-value=0). The two statistically significant coefficients are BI (coefficient = .9930) and sustainability consciousness (-.9096). For both variables, the bootstrap interval does not include 0.

Only the high level of sustainability consciousness has a statistically significant effect (.2924) with a p-value of .0012.

All indirect effects seem to not be statistically significant as all bootstrap intervals include 0. The mediators BI and WTP consequently do not seem appropriate for the model.

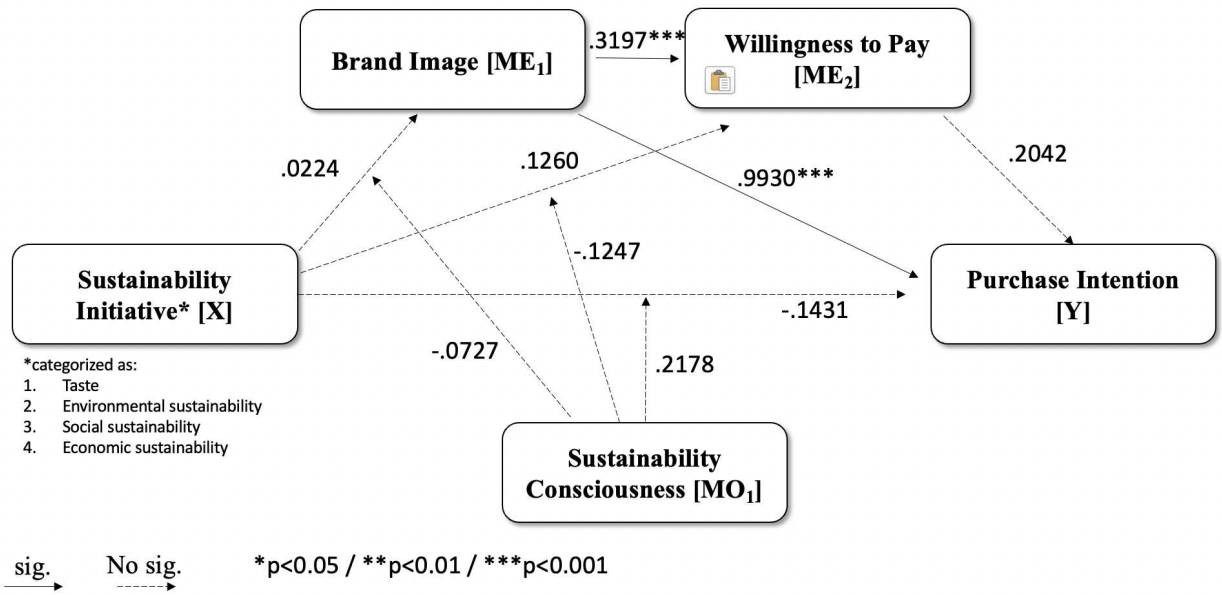


Figure 28: Full Model Test B

4.2 Discussion

As the results from H_1 suggest, the implementation of any type of sustainability initiative has a positive effect on PI. Furthermore, environmental sustainability was found to have the biggest positive impact. It is recommended to confirm those findings in further research. Nonetheless, the results reflect previous research which found that environmental issues had the biggest impact on the intention to behave more sustainably (Minton & Rose, 1997; Vining & Ebreo, 1992).

As H_2 can be confirmed, BI is an appropriate mediator in the relationship between sustainability initiatives and PI. However, when looking at each initiative individually, this could not be proven. These results can also be partially found in existing literature, where results show that BI is generally a good mediator in this context (Chen, 2008; Mukonza & Swarts, 2020; Polonsky, 2011; Wu & Lin, 2016).

H_3 was developed based on research that demonstrated a higher WTP for participants with a higher level of sustainability consciousness (Brugarolas Mollá-Bauzá et al., 2005; Rahman & Reynolds, 2017; Remaud et al., 2008). The results of this thesis show a slightly higher WTP for the high level of sustainability consciousness, however, no statistical significance was found. Consequently, this could be subject to further research to confirm or reject the hypothesis.

H_4 was confirmed as a significant relationship and mediator of WTP for sustainability initiatives and PI was found. Similar to the results of H_1, further investigation (looking at each type of sustainability initiative) proved not to be of statistical significance. However, as the implementation of any sustainability initiative does lead to a higher PI, previous research is confirmed (De Toni et al., 2022; Ghorai et al., 2021; Rucker & Galinsky, 2008). Further research is suggested to determine which type of sustainability initiative has the highest impact on PI, mediated by WTP.

The results of H_5 suggest that WTP is not an appropriate variable in the relationship between BI and PI, as no statistical significance can be found. This contradicts previous research (Bondesson, 2012), hence further research should be conducted to find conclusive results in the beer industry.

Both hypotheses H_6 and H_7 need to be rejected as no statistical significance was found. Consequently, sustainability consciousness can generally be rejected as an appropriate moderator in this thesis. This contradicts previous research which suggests this variable to be an appropriate moderator (Izzat Alhalalmeh et al., 2020; Jang et al., 2015). Due to several limitations (which will be discussed in detail in Chapter 5.3), it is still recommended to conduct further research in the beer industry.

The results of the full model test suggest no overall statistical significance, as H_3, H_4, H_5, H_6, and H_7 all had a p-value above 0.05. The concept of statistical significance is, for some researchers, controversial (Carver, 1978; McShane et al., 2019). There are some limitations in the data collection and analysis which could cause the results to provide a p-value above the confidence level of 5%. Consequently, the hypotheses should not be assumed to be generally untrue, however, need to be investigated further.

To sum up, these results demonstrate that sustainability consciousness does not have a moderating effect on the model, as it is not statistically significant. Furthermore, both mediator BI and WTP do not have significant interaction with each other as only the models including either BI or WTP have statistical significance. Potential reasons will be discussed in the following chapter.

Chapter 5: Conclusions and Limitations

5.1 Main Findings and Conclusions

In this chapter, the three research questions will be answered based on the gathered data. Furthermore, the main findings will be summarized, and managerial and academic implications will be described. Lastly, the limitations of the thesis and possible further research will be discussed.

How effective are sustainability initiatives compared to non-sustainability initiatives on consumers' purchase intentions in the beer industry?

Based on this research, sustainability initiatives seem to be very effective in the sense that they increase PI. By implementing any sustainability initiatives (environmental, social, or economic) PI can be raised significantly (unstandardized beta = 2.053). It shows that even though the impact of environmental initiatives is the biggest, even implementing economic initiatives (which were shown to have the least impact among the three dimensions) can be beneficial for PI. Consequently, it can be concluded that sustainability initiatives are not a waste of money but have a measurable impact on business performance.
Environmental initiatives show the highest mean; hence this should be the focus when implementing a sustainability initiative.

How do BI and WTP impact the relationship between sustainability initiatives and PI?

The results show that both BI and WTP are appropriate mediators in the model of the relationship between sustainability initiatives and PI. By implementing a sustainability initiative, BI is increased (by 1.685) and for every unit increase of BI, PI would increase (by .9512) (as shown in H_2). BI helps consequently in explaining the relationship between the initiatives and PI. Similarly, WTP increases by .4993 when implementing any sustainability initiative and for every unit increase in WTP, PI is increased by 1.3968, suggesting that WTP is also an appropriate mediator.
H_5 shows no statistical significance, hence WTP does not serve as a mediator in the relationship between BI and PI. Consequently, WTP does not explain their relationship.

Both variables BI and WTP hence only explain the relationship between the implementation of sustainability initiative and PI, but not the relationship between BI and PI.

How does the consumers' sustainability consciousness affect brand image and willingness to pay in the beer industry?

In this research, the effect of sustainability consciousness shows no statistical significance and can therefore not satisfactorily explain the moderating effect on the other variables. For H_6 and H_7 the positive coefficients (.5926 and .1340 respectively) could suggest a positive impact of increasing the level of sustainability initiatives, however as the results for H_6 and H_7 are both not of statistical significance the expressive power is very limited.

As described in Chapter 2, the hypotheses and the full model has been based on previous research. The findings previously described, however, suggest that there is no statistical significance. A potential explanation could be the distinct features of the investigated beer industry. It could be hypothesized that sustainability does not have a big impact in this industry and consumers do not consider sustainability initiatives in the context of beer purchase. In the future, it could be interesting to test the model in a different industry, which demonstrates a higher level of association with sustainability in consumers. Moreover, a new model could replace the moderator sustainability consciousness with sustainability associations.

5.2 Managerial and Academic Implications

One main finding concludes that managers should implement sustainability initiatives to increase BI and ultimately PI. The question, which was posed in the beginning, if the implementation would be a waste of money (and resources) can thereby be negated. Furthermore, it is recommended that these initiatives focus on environmental sustainability to maximize the impact. Even though the beer industry seems to be a distinct industry for various reasons (as explained in Chapter 1), sustainability seems to also have an impact and can help in developing a competitive advantage in the future.

In the context of academic research, this study has attempted to close the research gap by combining the variables BI, WTP, and PI as they have not been sufficiently researched in this combination. Moreover, the relationship between the implementation of sustainability

initiatives and PI and consequently the measurable effect has been investigated in the context of the beer industry. The beer industry in the marketing context is yet an interesting field to investigate and leaves space for further groundbreaking research.

5.3 Limitations and Possible Further Research

Several limitations need to be kept in mind when generalizing the results and drawing conclusions. Firstly, it is controversial in research how meaningful the variable of PI is in measuring actual behavior. Some research suggests that measuring intentions can be a reliable manner in predicting behavior whereas others criticize that consumers behave (very) differently to their indicated intentions (for various reasons, like not wanting to indicate or not knowing how one would behave) (Fishbein & Ajzen, 1975; Kalwani et al., 1982).
The variable PI was nevertheless chosen, as real-life experiments are very costly and time-consuming and simply would not have been feasible for the scope of this study.
Secondly, WTP is a measure that is difficult to measure in a survey. Similar to the problem above, consumers might not know exactly how much they would pay in a real-life situation and consequently over- or underestimate the amount. Still, it can be a good measure to compare different amounts between the stimuli groups and take the indicated amount as a comparison (in the sense that respondents of stimulus X would pay more than those exposed to stimulus Y).
However, it is still important to keep in mind that PI and WTP cannot be directly transferred to consumers' real-life behavior.
Another possible limitation is the non-random convenience sampling method to gather respondents for the survey. The survey was mostly distributed by friends and family and therefore did not pose as a correct representation of society. It is recommended to confirm results in a more generalizable sample.
Another limitation was the stimuli development and manipulation check in the survey. In previous chapters, the stimuli development was described in detail, as well as the purpose of manipulation questions. A large number of participants had to be excluded from the analysis as they did not correctly answer the manipulation question. It is not fully clear as to the reason why, it might be that the stimuli were misunderstood, or participants were simply inattentive. In future research, it would be recommended to conduct even more 1on1 interviews to confirm the stimuli and also include a pretest (which was not done in this thesis). That way, it

would likely be possible to significantly reduce the number of excluded participants due to incorrectly answering the manipulation questions.

In the context of data analysis and interpretation, one should tread carefully with a generalization of results. As the gathered data seemed to be parametric due to the Central Limit Theory (more than 30 participants per stimuli), this could not be confirmed by the test of normality. For non-parametric data it is usually not recommended to use IBM's SPSS for analysis. Due to the limited scope of this thesis, this was done, nonetheless. Results may vary as normality of distribution could not be guaranteed. Consequently, further research is highly recommended.

In addition, further research could be done on how these sustainability initiatives should be implemented to be most effective. Especially, in times of rising concern towards greenwashing practices, the implementation should be carefully investigated and tested.

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Appendix

1. Background Information

E. J. Lee et al. (2020) showed in their research that the highest PI can be reached if both a sustainable label and information that can be traced are provided. More traceability reduces the risk when third-party information is provided. If a consumer is very knowledgeable in the area, the PI is only improved when a sustainable label is shown, as it has a positive effect on product efficacy which consequently reduces the risk. On the contrary, when the consumer has little knowledge, PI is increased when a non-sustainable label is provided. Consequently, PI can be enhanced by providing more transparency and diverse environmental cues and by enhancing the consumers' knowledge regarding labels.

Measurement WTP

One method is using existing market data. The underlying assumption is that past behavior can predict how consumers act in the future. The advantages are the high validity, real purchase behavior, and observable choice behavior. This method has strong disadvantages as no new products can be observed.

Experiments have the advantage of being able to test new products, however, they are very costly and time-consuming. Direct Surveys, where the consumer is directly asked how much they would be willing to pay, are very cost-effective, require little time, and have individual-level estimations. However, they demonstrate lower validity and don't measure real purchase behavior or observed choice behavior. Indirect surveys demonstrate high flexibility when it comes to new products, but low real purchase behavior. It is often used as it demonstrates higher internal and external validity (Breidert et al., 2006; Miller et al., 2011).

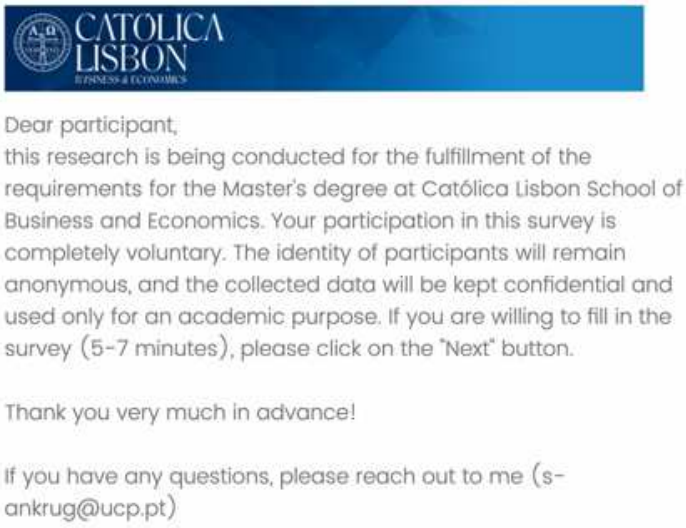
2. Structure Questionnaire

a. Intro
b. Screening questions
c. Stimuli
    a. No-initiative stimuli (all participants)
    b. Environmental sustainability stimulus
    c. Social sustainability stimulus
    d. Economic sustainability stimulus

(b, c, and d are randomized and each participant sees only one of the three)

d. Main questions
    a. BI
    b. WTP
    c. PI
e. Manipulation question
f. Sustainability Consciousness
g. Demographics

Introduction



Screening questions

Stimuli

CATOLICA LISBON
BUSINESS & ECONOMICS

A new beer brand has introduced the following advertisement campaign. Please pay attention to it.

CATOLICA LISBON
BUSINESS & ECONOMICS

A new beer brand has introduced the following advertisement campaign. Please pay attention to it.

CATOLICA LISBON
BUSINESS & ECONOMICS

A new beer brand has introduced the following advertisement campaign. Please pay attention to it.

CATOLICA LISBON
BUSINESS & ECONOMICS

A new beer brand has introduced the following advertisement campaign. Please pay attention to it.

Brand Image

1.1 BI

Based on the previous information, please answer the following questions, based on your opinion

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The product has a high quality	○	○	○	○	○	○	○
The product has better characteristics than competitors	○	○	○	○	○	○	○
The brand is nice	○	○	○	○	○	○	○
The brand has a personality that distinguishes itself from competitors' brands	○	○	○	○	○	○	○
It's a brand that doesn't disappoint its customers	○	○	○	○	○	○	○
It's one of the best brands in the sector	○	○	○	○	○	○	○
The brand is very consolidated (established) in the market	○	○	○	○	○	○	○

Willingness to Pay

1.2 WTP

How much would you be willing to pay for one bottle of this beer in the supermarket?

Purchase Intention

Based on the previous information, please answer the following questions, based on your opinion

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I will buy larger quantities of this brand in the coming months	○	○	○	○	○	○	○
I will consider this brand as my first purchase option concerning other categories of beverages	○	○	○	○	○	○	○
I intend to increase the volume of this beer consumption	○	○	○	○	○	○	○
I will encourage friends, neighbors and/or relatives to buy and consume this beer	○	○	○	○	○	○	○

Manipulation Questions

Q34

Do you know the beer brand that was presented in the picture?

○ No

○ Yes

Q35

Please state your level of agreement with the below statements: "The presented advertisement had a focus on _____."

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
great taste	○	○	○	○	○	○	○
social issues	○	○	○	○	○	○	○
economic issues	○	○	○	○	○	○	○
environmental issues	○	○	○	○	○	○	○

Sustainability Consciousness

Please indicate how much you agree with each statement.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I think that using more natural resources than we need does not threaten the health and well-being of people in the future.	○	○	○	○	○	○	○
I think that we need stricter laws and regulations to protect the environment.	○	○	○	○	○	○	○
I think that it is important to take measures against problems that have to do with climate change.	○	○	○	○	○	○	○
I think that everyone ought to be (should be) given the opportunity to acquire the knowledge, values and skills that are necessary to live sustainably.	○	○	○	○	○	○	○
I think that we, who are living now, should make sure that people in the future enjoy the same quality of life as we do today.	○	○	○	○	○	○	○
I think that women and men throughout the world must be given the same opportunities for education and employment.	○	○	○	○	○	○	○

I think that companies have a responsibility to reduce the use of packaging and disposable articles	○	○	○	○	○	○	○
I think it is important to reduce poverty.	○	○	○	○	○	○	○
I think that companies in rich countries should give employees in poor nations the same conditions as in rich countries.	○	○	○	○	○	○	○

Demographics

Q15

Which statement best describes your current employment status?

- ○ Working (paid employee)
- ○ Working (self-employed)
- ○ Not working (temporary layoff from a job)
- ○ Not working (looking for work)
- ○ Not working (retired)
- ○ Not working (disabled)
- ○ Not working (other)
- ○ Student
- ○ Prefer not to answer

Q26

What is your gender?

- ○ male
- ○ female
- ○ non-binary / third gender
- ○ prefer not to say

Q27

How old are you?

- ○ Under 18
- ○ 18-24 years old
- ○ 25-34 years old
- ○ 35-44 years old
- ○ 45-54 years old
- ○ 55-64 years old
- ○ 65+ years old

Q29

What is your monthly gross income?

- ○ less than 500€
- ○ 501€ - 1,000€
- ○ 1,001€ - 1,500€
- ○ 1,501€ - 2,000€
- ○ 2,001€ - 2,500€
- ○ more than 2,500€

Q30

What is your marital status?

- single
- married
- divorced
- in a partnership
- widowed
- prefer not to say
- other:

Q31

What is your highest education level?

- no degree
- high school degree or equivalent
- some college but no degree
- associate degree
- bachelor's degree
- master's degree
- doctor's degree

What best describes your current diet?

- vegetarian
- vegan
- Flexitarian
- Pescetarian
- gluten-free
- I do not have any restrictions
- I do not think about my diet
- Other

Q19

Think of the habits of the last three months: How often do you consume alcoholic beverages in general?

- daily
- 4-6 times a week
- 2-3 times a week
- Once a week
- 1-2 times a month
- less than once a month
- Never

Q57

What is your country of origin?

- Portugal
- Germany
- Other

Q55 | Please enter your email address

Please enter your email address

Important: This information will NOT be used to trace responses back to your identity and will be used for evaluation purposes only. This is only to prevent participants to answer repeatedly. You will not receive any emails on the provided email adress.

1. Analysis

1.1 Measure Reliability

Cronbachs Alpha Taste

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	36	26,5
	Excluded[a]	100	73,5
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,856	,857	7

Inter-Item Correlation Matrix

	Taste BI: high quality	taste BI: better characteristics	taste BI: nice brand	taste BI: distinguished personality	taste BI: doesnt dissapoint	taste BI: best brands in the sector	tase BI: consolidated brand
Taste BI: high quality	1,000	,642	,570	,664	,622	,658	,244
taste BI: better characteristics	,642	1,000	,361	,516	,644	,414	,246
taste BI: nice brand	,570	,361	1,000	,425	,738	,592	,189
taste BI: distinguished personality	,664	,516	,425	1,000	,651	,487	-,220
taste BI: doesnt dissapoint	,622	,644	,738	,651	1,000	,507	,182
taste BI: best brands in the sector	,658	,414	,592	,487	,507	1,000	,546
tase BI: consolidated brand	,244	,246	,189	-,220	,182	,546	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Taste BI: high quality	18,97	16,485	,798	,697	,807
taste BI: better characteristics	19,50	19,400	,646	,578	,833
taste BI: nice brand	19,19	18,447	,644	,737	,833
taste BI: distinguished personality	19,28	18,321	,592	,832	,843
taste BI: doesnt dissapoint	19,31	18,675	,797	,813	,813
taste BI: best brands in the sector	19,50	20,543	,723	,793	,830
tase BI: consolidated brand	19,58	23,679	,212	,750	,880

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	36	26,5
	Excluded[a]	100	73,5
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,860	,861	4

Inter-Item Correlation Matrix

	taste: PI1	taste:PI2	taste: PI3	taste: PI4
taste: PI1	1,000	,375	,313	,563
taste:PI2	,375	1,000	,778	,765
taste: PI3	,313	,778	1,000	,852
taste: PI4	,563	,765	,852	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
taste: PI1	7,75	5,050	,459	,419	,917
taste:PI2	8,36	4,237	,750	,644	,803
taste: PI3	8,08	4,536	,773	,797	,801
taste: PI4	8,14	3,552	,890	,832	,735

Cronbach Alpha environment

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	36	26,5
	Excluded[a]	100	73,5
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,950	,964	7

Inter-Item Correlation Matrix

	environ BI high quality	environ BI: better characteristics	environ BI: nice brand	environ BI: distinguished personality	environ BI: doesnt dissapoint	environ BI: best brands in the sector	environ BI: consolidated brand
environ BI high quality	1,000	,881	,884	,762	,889	,875	,831
environ BI: better characteristics	,881	1,000	,813	,655	,831	,815	,778
environ BI: nice brand	,884	,813	1,000	,813	,763	,849	,750
environ BI: distinguished personality	,762	,655	,813	1,000	,609	,715	,515
environ BI: doesnt dissapoint	,889	,831	,763	,609	1,000	,844	,883
environ BI: best brands in the sector	,875	,815	,849	,715	,844	1,000	,871
environ BI: consolidated brand	,831	,778	,750	,515	,883	,871	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
environ BI high quality	36,92	46,250	,946	,913	,938
environ BI: better characteristics	37,08	45,793	,872	,798	,941
environ BI: nice brand	36,86	46,466	,891	,853	,940
environ BI: distinguished personality	36,86	46,980	,710	,750	,952
environ BI: doesnt dissapoint	37,11	46,273	,896	,867	,940
environ BI: best brands in the sector	37,39	40,302	,924	,868	,935
environ BI: consolidated brand	37,61	36,930	,847	,867	,954

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	36	26,5
	Excluded[a]	100	73,5
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,962	,966	4

Inter-Item Correlation Matrix

	environ PI:1	environ PI2	environ PI3	environ PI4
environ PI:1	1,000	,768	,938	,823
environ PI2	,768	1,000	,875	,934
environ PI3	,938	,875	1,000	,911
environ PI4	,823	,934	,911	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
environ PI:1	17,17	23,914	,876	,892	,963
environ PI2	17,14	28,523	,888	,883	,959
environ PI3	17,25	24,307	,965	,944	,932
environ PI4	17,19	25,647	,927	,911	,944

Cronbach Alpha Social sustainability

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	32	23,5
	Excluded[a]	104	76,5
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,838	,847	7

Inter-Item Correlation Matrix

	social BI The product has a high quality	social BI The product has better characteristics than competitors	social BI The brand is nice	social BI The brand has a personality that distinguishes itself from competitors' brands	social BI It's a brand that doesn't disappoint its customers	social BI It's one of the best brands in the sector	social BI The brand is very consolidated (established) in the market
social BI The product has a high quality	1,000	,480	,616	,571	,750	,475	,355
social BI The product has better characteristics than competitors	,480	1,000	,204	,457	,597	,440	,123
social BI The brand is nice	,616	,204	1,000	,329	,450	,609	,603
social BI The brand has a personality that distinguishes itself from competitors' brands	,571	,457	,329	1,000	,259	,225	-,060
social BI It's a brand that doesn't disappoint its customers	,750	,597	,450	,259	1,000	,491	,577
social BI It's one of the best brands in the sector	,475	,440	,609	,225	,491	1,000	,721
social BI The brand is very consolidated (established) in the market	,355	,123	,603	-,060	,577	,721	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
social BI The product has a high quality	31,94	7,028	,728	,812	,796
social BI The product has better characteristics than competitors	32,16	7,491	,488	,676	,832
social BI The brand is nice	31,91	7,443	,663	,625	,808
social BI The brand has a personality that distinguishes itself from competitors' brands	32,06	8,319	,355	,518	,846
social BI It's a brand that doesn't disappoint its customers	31,97	6,999	,744	,846	,794
social BI It's one of the best brands in the sector	32,25	6,581	,719	,736	,794
social BI The brand is very consolidated (established) in the market	32,16	6,523	,536	,814	,836

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	32	23,5
	Excluded[a]	104	76,5
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,874	,877	4

Inter-Item Correlation Matrix

	social PI I will buy larger quantities of this brand in the coming months	social PI – I will consider this brand as my first purchase option concerning other categories of beverages	social PI– I intend to increase the volume of this beer consumption	social PI – I will encourage friends, neighbors and/or relatives to buy and consume this beer
social PI I will buy larger quantities of this brand in the coming months	1,000	,733	,674	,712
social PI – I will consider this brand as my first purchase option concerning other categories of beverages	,733	1,000	,642	,494
social PI– I intend to increase the volume of this beer consumption	,674	,642	1,000	,593
social PI – I will encourage friends, neighbors and/or relatives to buy and consume this beer	,712	,494	,593	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
social PI I will buy larger quantities of this brand in the coming months	16,44	5,867	,836	,711	,796
social PI – I will consider this brand as my first purchase option concerning other categories of beverages	16,59	6,443	,701	,585	,850
social PI– I intend to increase the volume of this beer consumption	16,53	6,515	,726	,532	,841
social PI – I will encourage friends, neighbors and/or relatives to buy and consume this beer	16,72	5,886	,676	,538	,866

Cronbach's alpha Economic Sustainability

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	32	23,5
	Excluded[a]	104	76,5
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,844	,853	7

Inter-Item Correlation Matrix

	econ BI The product has a high quality	econ BI The product has better characteristics than competitors	econ BI The brand is nice	econ BI The brand has a personality that distinguishes itself from competitors' brands	econ BI It's a brand that doesn't disappoint its customers	econ BI It's one of the best brands in the sector	econ BI The brand is very consolidated (established) in the market
econ BI The product has a high quality	1,000	,584	,298	,314	,381	,593	,488
econ BI The product has better characteristics than competitors	,584	1,000	,452	,470	,720	,690	,455
econ BI The brand is nice	,298	,452	1,000	,073	,274	,537	,433
econ BI The brand has a personality that distinguishes itself from competitors' brands	,314	,470	,073	1,000	,717	,240	,136
econ BI It's a brand that doesn't disappoint its customers	,381	,720	,274	,717	1,000	,482	,296
econ BI It's one of the best brands in the sector	,593	,690	,537	,240	,482	1,000	,882
econ BI The brand is very consolidated (established) in the market	,488	,455	,433	,136	,296	,882	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
econ BI The product has a high quality	17,91	13,572	,593	,435	,824
econ BI The product has better characteristics than competitors	18,31	11,706	,791	,739	,790
econ BI The brand is nice	18,22	13,725	,435	,319	,848
econ BI The brand has a personality that distinguishes itself from competitors' brands	17,84	13,168	,431	,553	,855
econ BI It's a brand that doesn't disappoint its customers	18,22	12,757	,686	,714	,809
econ BI It's one of the best brands in the sector	18,44	12,641	,774	,893	,798
econ BI The brand is very consolidated (established) in the market	18,38	13,919	,586	,826	,826

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	32	23,5
	Excluded[a]	104	76,5
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,870	,877	4

Inter-Item Correlation Matrix

	econ PI– I will buy larger quantities of this brand in the coming months	econ PI – I will consider this brand as my first purchase option concerning other categories of beverages	econ PI – I intend to increase the volume of this beer consumption	econ PI – I will encourage friends, neighbors and/or relatives to buy and consume this beer
econ PI– I will buy larger quantities of this brand in the coming months	1,000	,701	,638	,592
econ PI – I will consider this brand as my first purchase option concerning other categories of beverages	,701	1,000	,436	,695
econ PI – I intend to increase the volume of this beer consumption	,638	,436	1,000	,778
econ PI – I will encourage friends, neighbors and/or relatives to buy and consume this beer	,592	,695	,778	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
econ PI– I will buy larger quantities of this brand in the coming months	8,53	5,870	,738	,662	,841
econ PI – I will consider this brand as my first purchase option concerning other categories of beverages	8,75	5,032	,681	,709	,853
econ PI – I intend to increase the volume of this beer consumption	8,56	5,093	,699	,740	,844
econ PI – I will encourage friends, neighbors and/or relatives to buy and consume this beer	8,56	4,448	,821	,783	,792

Sustainability Consciousness

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	136	100,0
	Excluded[a]	0	,0
	Total	136	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,685	,843	9

Inter-Item Correlation Matrix

	Please indicate how much you agree with each statement. – I think that using more natural resources than we need does not threaten the health and well-being of people in the future.	Please indicate how much you agree with each statement. – I think that we need stricter laws and regulations to protect the environment.	Please indicate how much you agree with each statement. – I think that it is important to take measures against problems that have to do with climate change.	Please indicate how much you agree with each statement. – I think that everyone ought to be (should be) given the opportunity to acquire the knowledge, values and skills that are necessary to live sustainably.	Please indicate how much you agree with each statement. – I think that we, who are living now, should make sure that people in the future enjoy the same quality of life as we do today.	Please indicate how much you agree with each statement. – I think that women and men throughout the world must be given the same opportunities for education and employment.	Please indicate how much you agree with each statement. – I think that companies have a responsibility to reduce the use of packaging and disposable articles	Please indicate how much you agree with each statement. – I think it is important to reduce poverty.	Please indicate how much you agree with each statement. – I think that companies in rich countries should give employees in poor nations the same conditions as in rich countries.
Please indicate how much you agree with each statement. – I think that using more natural resources than we need does not threaten the health and well-being of people in the future.	1,000	-,107	-,192	-,109	-,123	-,064	-,222	-,110	-,124
Please indicate how much you agree with each statement. – I think that we need stricter laws and regulations to protect the environment.	-,107	1,000	,567	,642	,633	,607	,528	,629	,305
Please indicate how much you agree with each statement. – I think that it is important to take measures against problems that have to do with climate change.	-,192	,567	1,000	,628	,555	,673	,543	,537	,207
Please indicate how much you agree with each statement. – I think that everyone ought to be (should be) given the opportunity to acquire the knowledge, values and skills that are necessary to live sustainably.	-,109	,642	,628	1,000	,632	,723	,566	,681	,283
Please indicate how much you agree with each statement. – I think that we, who are living now, should make sure that people in the future enjoy the same quality of life as we do today.	-,123	,633	,555	,632	1,000	,698	,518	,626	,300
Please indicate how much you agree with each statement. – I think that women and men throughout the world must be given the same opportunities for education and employment.	-,064	,607	,673	,723	,698	1,000	,562	,683	,168
Please indicate how much you agree with each statement. – I think that companies have a responsibility to reduce the use of packaging and disposable articles	-,222	,528	,543	,566	,518	,562	1,000	,426	,256
Please indicate how much you agree with each statement. – I think it is important to reduce poverty.	-,110	,629	,537	,681	,626	,683	,426	1,000	,323
Please indicate how much you agree with each statement. – I think that companies in rich countries should give employees in poor nations the same conditions as in rich countries.	-,124	,305	,207	,283	,300	,168	,256	,323	1,000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Please indicate how much you agree with each statement. - I think that using more natural resources than we need does not threaten the health and well-being of people in the future.	46,90	21,598	-,178	,084	,884
Please indicate how much you agree with each statement. - I think that we need stricter laws and regulations to protect the environment.	43,79	17,488	,663	,557	,613
Please indicate how much you agree with each statement. - I think that it is important to take measures against problems that have to do with climate change.	43,70	17,605	,573	,538	,623
Please indicate how much you agree with each statement. - I think that everyone ought to be (should be) given the opportunity to acquire the knowledge, values and skills that are necessary to live sustainably.	43,74	17,470	,712	,648	,609
Please indicate how much you agree with each statement. - I think that we, who are living now, should make sure that people in the future enjoy the same quality of life as we do today.	43,74	17,648	,666	,587	,615
Please indicate how much you agree with each statement. - I think that women and men throughout the world must be given the same opportunities for education and employment.	43,78	17,151	,717	,706	,603
Please indicate how much you agree with each statement. - I think that companies have a responsibility to reduce the use of packaging and disposable articles	43,74	18,104	,504	,450	,636
Please indicate how much you agree with each statement. - I think it is important to reduce poverty.	43,82	17,796	,662	,602	,618
Please indicate how much you agree with each statement. - I think that companies in rich countries should give employees in poor nations the same conditions as in rich countries.	43,98	18,896	,258	,175	,680

1.2 Manipulation Check

Shapiro-Wilk

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Manip: taste	136	100,0%	0	0,0%	136	100,0%
Manip Social	136	100,0%	0	0,0%	136	100,0%
Manip Econ	136	100,0%	0	0,0%	136	100,0%
Manip environ	136	100,0%	0	0,0%	136	100,0%

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Manip: taste	,408	136	<,001	,618	136	<,001
Manip Social	,389	136	<,001	,624	136	<,001
Manip Econ	,402	136	<,001	,599	136	<,001
Manip environ	,390	136	<,001	,626	136	<,001

a. Lilliefors Significance Correction

Kruskal Wallis Test

Test Statistics[a,b]

	Manip: taste	Manip Social	Manip Econ	Manip environ
Kruskal-Wallis H	113,744	102,942	108,194	110,240
df	3	3	3	3
Asymp. Sig.	<,001	<,001	<,001	<,001

a. Kruskal Wallis Test

b. Grouping Variable: Stimuli group

2. Descriptives

Which statement best describes your current employment status?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Working (paid employee)	61	44,9	44,9	44,9
	Working (self-employed)	5	3,7	3,7	48,5
	Not working (temporary layoff from a job)	1	,7	,7	49,3
	Not working (looking for work)	1	,7	,7	50,0
	Not working (retired)	3	2,2	2,2	52,2
	Student	65	47,8	47,8	100,0
	Total	136	100,0	100,0	

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	54	39,7	39,7	39,7
	female	82	60,3	60,3	100,0
	Total	136	100,0	100,0	

How old are you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24 years old	33	24,3	24,3	24,3
	25-34 years old	71	52,2	52,2	76,5
	35-44 years old	18	13,2	13,2	89,7
	45-54 years old	8	5,9	5,9	95,6
	55-64 years old	4	2,9	2,9	98,5
	65+ years old	2	1,5	1,5	100,0
	Total	136	100,0	100,0	

What is your monthly gross income?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 500€	38	27,9	27,9	27,9
	501€ - 1,000€	30	22,1	22,1	50,0
	1,001€ - 1,500€	10	7,4	7,4	57,4
	1,501€ - 2,000€	6	4,4	4,4	61,8
	2,001€ - 2,500€	5	3,7	3,7	65,4
	more than 2,500€	47	34,6	34,6	100,0
	Total	136	100,0	100,0	

What is your marital status? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	single	46	33,8	33,8	33,8
	married	21	15,4	15,4	49,3
	divorced	1	,7	,7	50,0
	in a partnership	65	47,8	47,8	97,8
	widowed	2	1,5	1,5	99,3
	prefer not to say	1	,7	,7	100,0
	Total	136	100,0	100,0	

What is your marital status? - other: - Text

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	136	100,0	100,0	100,0

What is your highest education level?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no degree	1	,7	,7	,7
	high school degree or equivalent	18	13,2	13,2	14,0
	some college but no degree	3	2,2	2,2	16,2
	associate degree	3	2,2	2,2	18,4
	bachelor's degree	73	53,7	53,7	72,1
	master's degree	34	25,0	25,0	97,1
	doctor's degree	4	2,9	2,9	100,0
	Total	136	100,0	100,0	

What best describes your current diet? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	vegetarian	47	34,6	34,6	34,6
	vegan	18	13,2	13,2	47,8
	Flexitarian	19	14,0	14,0	61,8
	Pescetarian	3	2,2	2,2	64,0
	I do not have any restrictions	32	23,5	23,5	87,5
	I do not think about my diet	16	11,8	11,8	99,3
	Other	1	,7	,7	100,0
	Total	136	100,0	100,0	

What best describes your current diet? - Other - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		135	99,3	99,3	99,3
	just few restrictions and sometimes try eat healthy	1	,7	,7	100,0
	Total	136	100,0	100,0	

Think of the habits of the last three months: How often do you consume alcoholic beverages in general?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	daily	1	,7	,7	,7
	2-3 times a week	46	33,8	33,8	34,6
	Once a week	60	44,1	44,1	78,7
	1-2 times a month	28	20,6	20,6	99,3
	less than once a month	1	,7	,7	100,0
	Total	136	100,0	100,0	

What is your country of origin? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Portugal	5	3,7	3,7	3,7
	Germany	95	69,9	69,9	73,5
	Other	36	26,5	26,5	100,0
	Total	136	100,0	100,0	

What is your country of origin? - Other - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		114	83,8	83,8	83,8
	Austria	1	,7	,7	84,6
	France	3	2,2	2,2	86,8
	Hong Kong	1	,7	,7	87,5
	Sweden	1	,7	,7	88,2
	Tunisia	1	,7	,7	89,0
	Turkey	1	,7	,7	89,7
	UK	1	,7	,7	90,4
	United States	1	,7	,7	91,2
	US	2	1,5	1,5	92,6
	USA	10	7,4	7,4	100,0
	Total	136	100,0	100,0	

3. Key Variables

Stimuli Taste:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Taste BI: high quality	36	2	7	3,58	1,204
taste BI: better characteristics	36	2	6	3,06	,955
taste BI: nice brand	36	2	6	3,36	1,099
taste BI: distinguished personality	36	1	6	3,28	1,186
taste BI: doesnt dissapoint	36	2	6	3,25	,906
taste BI: best brands in the sector	36	2	5	3,06	,715
tase BI: consolidated brand	36	2	6	2,97	,736
Taste: WTP	36	,53	2,78	1,6878	,42042
taste: PI1	36	1	6	3,03	,810
taste:PI2	36	1	4	2,42	,806
taste: PI3	36	1	4	2,69	,710
taste: PI4	36	1	5	2,64	,899
Valid N (listwise)	36				

Stimuli Environment:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
environ: high quality	36	3	7	6,39	,964
environ BI: better characteristics	36	3	7	6,22	1,072
environ BI: nice brand	36	2	7	6,44	,998
environ BI: distinguished personality	36	1	7	6,44	1,157
environ BI: doesnt dissapoint	36	4	7	6,19	1,009
environ BI: best brands in the sector	36	1	7	5,92	1,461
environ BI: consolidated brand	36	1	7	5,69	1,864
environ WTP	36	,99	3,67	2,6819	,77880
environ PI:1	36	1	7	5,75	1,991
environ PI2	36	1	7	5,78	1,495
environ PI3	36	1	7	5,67	1,821
environ PI4	36	1	7	5,72	1,734
Valid N (listwise)	36				

Stimuli Social:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
social BI The product has a high quality	32	4	6	5,47	,567
social BI The product has better characteristics than competitors	32	3	6	5,25	,622
social BI The brand is nice	32	5	6	5,50	,508
social BI The brand has a personality that distinguishes itself from competitors' brands	32	5	6	5,34	,483
social BI It's a brand that doesn't disappoint its customers	32	4	6	5,44	,564
social BI It's one of the best brands in the sector	32	3	6	5,16	,677
social BI The brand is very consolidated (established) in the market	32	2	6	5,25	,842
social WTP	32	,99	4,50	2,1981	,58441
social PI I will buy larger quantities of this brand in the coming months	32	2	7	5,66	,937
social PI – I will consider this brand as my first purchase option concerning other categories of beverages	32	2	7	5,50	,916
social PI– I intend to increase the volume of this beer consumption	32	2	7	5,56	,878
social PI – I will encourage friends, neighbors and/or relatives to buy and consume this beer	32	2	7	5,37	1,070
Valid N (listwise)	32				

Stimuli economic:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
econ BI The product has a high quality	32	2	5	3,31	,738
econ BI The product has better characteristics than competitors	32	2	6	2,91	,893
econ BI The brand is nice	32	1	6	3,00	,880
econ BI The brand has a personality that distinguishes itself from competitors' brands	32	2	6	3,38	1,008
econ BI It's a brand that doesn't disappoint its customers	32	2	5	3,00	,803
econ BI It's one of the best brands in the sector	32	1	5	2,78	,751
econ BI The brand is very consolidated (established) in the market	32	1	5	2,84	,677
econ WTP	32	,98	2,89	1,6194	,42711
econ PI- I will buy larger quantities of this brand in the coming months	32	1	5	2,94	,669
econ PI - I will consider this brand as my first purchase option concerning other categories of beverages	32	1	5	2,72	,924
econ PI - I intend to increase the volume of this beer consumption	32	1	5	2,91	,893
econ PI - I will encourage friends, neighbors and/or relatives to buy and consume this beer	32	1	6	2,91	,963
Valid N (listwise)	32				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Please indicate how much you agree with each statement. - I think that using more natural resources than we need does not threaten the health and well-being of people in the future.	136	1	7	2,74	1,940
Please indicate how much you agree with each statement. - I think that we need stricter laws and regulations to protect the environment.	136	5	7	5,86	,742
Please indicate how much you agree with each statement. - I think that it is important to take measures against problems that have to do with climate change.	136	2	7	5,95	,810
Please indicate how much you agree with each statement. - I think that everyone ought to be (should be) given the opportunity to acquire the knowledge, values and skills that are necessary to live sustainably.	136	4	7	5,91	,704
Please indicate how much you agree with each statement. - I think that we, who are living now, should make sure that people in the future enjoy the same quality of life as we do today.	136	4	7	5,91	,715
Please indicate how much you agree with each statement. - I think that women and men throughout the world must be given the same opportunities for education and employment.	136	4	7	5,87	,748
Please indicate how much you agree with each statement. - I think that companies have a responsibility to reduce the use of packaging and disposable articles	136	3	7	5,90	,797
Please indicate how much you agree with each statement. - I think it is important to reduce poverty.	136	4	7	5,83	,694
Please indicate how much you agree with each statement. - I think that companies in rich countries should give employees in poor nations the same conditions as in rich countries.	136	2	7	5,67	1,004
Valid N (listwise)	136				

Overall means

Statistics

		MeanTasteBI	MeanTastePI	MeanEnvironBI	MeanEnvironPI	MeanSocialBI	MeanSocialPI	MeanEconBI	MeanEconPI
N	Valid	36	36	36	36	32	32	32	32
	Missing	100	100	100	100	104	104	104	104
Mean		3,2222	2,6944	6,1865	5,7292	5,3438	5,5234	3,0313	2,8672
Std. Deviation		,72478	,67905	1,10278	1,67585	,44123	,81161	,59484	,73776
Minimum		2,00	1,00	2,14	1,00	4,00	2,00	2,43	1,00
Maximum		5,14	4,25	7,00	7,00	6,00	6,50	4,86	5,00

Statistics

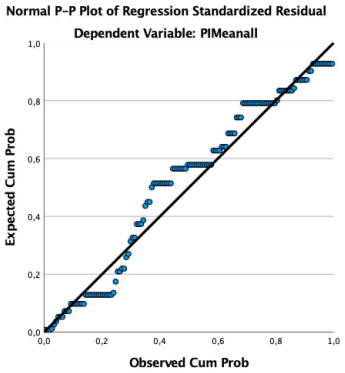
		BIMeanall	PIMeanall	WTPMeanall	SusConMeanall
N	Valid	136	136	136	136
	Missing	0	0	0	0
Mean		4,4611	4,2040	2,0549	5,5163
Std. Deviation		1,56521	1,78554	,71694	,52300
Minimum		2,00	1,00	,53	4,44
Maximum		7,00	7,00	4,50	7,00

4. Hypothesis 1

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PIMeanall	,213	136	<,001	,910	136	<,001

a. Lilliefors Significance Correction



Linear regression

Descriptive Statistics

	Mean	Std. Deviation	N
PIMeanall	4,2040	1,78554	136
InitativeNoInitatives	1,74	,443	136

Correlations

		PIMeanall	InitativeNoInitatives
Pearson Correlation	PIMeanall	1,000	,509
	InitativeNoInitatives	,509	1,000
Sig. (1-tailed)	PIMeanall	.	<,001
	InitativeNoInitatives	,000	.
N	PIMeanall	136	136
	InitativeNoInitatives	136	136

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,509[a]	,259	,254	1,54250	2,117

a. Predictors: (Constant), InitativeNoInitatives

b. Dependent Variable: PIMeanall

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111,575	1	111,575	46,894	<,001[b]
	Residual	318,826	134	2,379		
	Total	430,400	135			

a. Dependent Variable: PIMeanall

b. Predictors: (Constant), InitativeNoInitatives

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	,641	,537		1,195	,234		
	InitativeNoInitatives	2,053	,300	,509	6,848	<,001	1,000	1,000

a. Dependent Variable: PIMeanall

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	Variance Proportions InitativeNoInitatives
1	1	1,969	1,000	,02	,02
	2	,031	7,992	,98	,98

a. Dependent Variable: PIMeanall

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2,6944	4,7475	4,2040	,90911	136
Residual	-3,74750	2,25250	,00000	1,53677	136
Std. Predicted Value	-1,661	,598	,000	1,000	136
Std. Residual	-2,430	1,460	,000	,996	136

a. Dependent Variable: PIMeanall

5. Hypothesis 2

Independent variable: no initiatives vs any initiative

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : PIMeanal
    X  : typeofSt
    M  : BIMeanal

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 BIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,0788      ,0062     2,4528      ,8381     1,0000   134,0000      ,3616

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,7299      ,3229    14,6488      ,0000     4,0913     5,3686
typeofSt     -,1101      ,1203     -,9155      ,3616     -,3480      ,1278

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,8940      ,7992      ,6500   264,5939     2,0000   133,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     -,7881      ,2681    -2,9396      ,0039    -1,3183     -,2578
typeofSt      ,1775      ,0621     2,8571      ,0050      ,0546      ,3003
BIMeanal     1,0219      ,0445    22,9802      ,0000      ,9340     1,1099


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ******************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      ,1775      ,0621     2,8571      ,0050      ,0546      ,3003

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
BIMeanal     -,1125      ,1219     -,3647      ,1186

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

6. Hypothesis 3

Grouping into high and low sustainability consciousness

Statistics

SusConMeanall

N	Valid	136
	Missing	0
Mean		5,5163
Std. Deviation		,52300
Minimum		4,44
Maximum		7,00
Percentiles	25	5,0000
	50	5,4444
	75	6,0000

SusConMeanall

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4,44	1	,7	,7	,7
	4,56	2	1,5	1,5	2,2
	4,67	2	1,5	1,5	3,7
	4,78	3	2,2	2,2	5,9
	4,89	6	4,4	4,4	10,3
	5,00	23	16,9	16,9	27,2
	5,11	6	4,4	4,4	31,6
	5,22	12	8,8	8,8	40,4
	5,33	4	2,9	2,9	43,4
	5,44	16	11,8	11,8	55,1
	5,56	9	6,6	6,6	61,8
	5,67	3	2,2	2,2	64,0
	5,78	2	1,5	1,5	65,4
	5,89	3	2,2	2,2	67,6
	6,00	20	14,7	14,7	82,4
	6,11	8	5,9	5,9	88,2
	6,22	5	3,7	3,7	91,9
	6,33	8	5,9	5,9	97,8
	6,44	1	,7	,7	98,5
	6,56	1	,7	,7	99,3
	7,00	1	,7	,7	100,0
	Total	136	100,0	100,0	

ANOVA

Descriptives

WTPMeanall

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low Sustainability Consciousness	59	1,9917	,64410	,08386	1,8238	2,1595	,53	3,65
High Sustainability Consciousness	77	2,1034	,76872	,08760	1,9289	2,2779	,91	4,50
Total	136	2,0549	,71694	,06148	1,9333	2,1765	,53	4,50

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
WTPMeanall	Based on Mean	3,564	1	134	,061
	Based on Median	2,492	1	134	,117
	Based on Median and with adjusted df	2,492	1	131,899	,117
	Based on trimmed mean	3,320	1	134	,071

ANOVA

WTPMeanall

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,417	1	,417	,809	,370
Within Groups	68,974	134	,515		
Total	69,390	135			

Robust Tests of Equality of Means

WTPMeanall

	Statistic[a]	df1	df2	Sig.
Welch	,848	1	132,889	,359
Brown-Forsythe	,848	1	132,889	,359

a. Asymptotically F distributed.

7. Hypothesis 4

Matrix

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : PIMeanal
    X  : Initiati
    M  : WTPMeana

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 WTPMeana

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,3084      ,0951      ,4686    14,0843     1,0000   134,0000      ,0003

Model
              coeff         se          t          p       LLCI       ULCI
constant     1,1885      ,2382     4,9888      ,0000      ,7173     1,6596
Initiati      ,4993      ,1330     3,7529      ,0003      ,2362      ,7625

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,7375      ,5439     1,4761    79,2899     2,0000   133,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    -1,0186      ,4604    -2,2124      ,0286    -1,9293     -,1080
Initiati     1,3556      ,2482     5,4608      ,0000      ,8646     1,8466
WTPMeana     1,3968      ,1533     9,1100      ,0000     1,0935     1,7001


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
     1,3556      ,2482     5,4608      ,0000      ,8646     1,8466

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
WTPMeana      ,6974      ,1480      ,4217     1,0059

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

8. Hypothesis 5

Matrix

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : PIMeanal
    X  : BIMeanal
    M  : WTPMeana

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 WTPMeana

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      ,6979      ,4871      ,2656   127,2589     1,0000   134,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      ,6288      ,1339     4,6951      ,0000      ,3639      ,8937
BIMeanal      ,3197      ,0283    11,2809      ,0000      ,2636      ,3757

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      ,8893      ,7908      ,6768   251,4535     2,0000   133,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -,4489      ,2307    -1,9458      ,0538     -,9052      ,0074
BIMeanal      ,9414      ,0632    14,9029      ,0000      ,8164     1,0663
WTPMeana      ,2207      ,1379     1,6001      ,1119     -,0521      ,4934


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ******************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      ,9414      ,0632    14,9029      ,0000      ,8164     1,0663

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
WTPMeana      ,0705      ,0493     -,0271      ,1664

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

9. Hypothesis 6

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : PIMeanal
    X  : Initiati
    W  : HighLowS

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,5216      ,2721     2,3734    16,4482     3,0000   132,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     1,7478     1,6834     1,0382      ,3011    -1,5822     5,0778
Initiati     1,1199      ,9572     1,1700      ,2441     -,7735     3,0132
HighLowS     -,7103     1,0756     -,6603      ,5102    -2,8380     1,4174
Int_1         ,5926      ,6028      ,9831      ,3274     -,5998     1,7851

Product terms key:
 Int_1    :        Initiati x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0053      ,9665     1,0000   132,0000      ,3274
```

10. Hypothesis 7

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : BIMeanal
    X  : Initiati
    W  : HighLowS

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 BIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,5317      ,2827     1,7974    17,3371     3,0000   132,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,8836     1,4650      ,6031      ,5474    -2,0143     3,7815
Initiati     1,3880      ,8330     1,6663      ,0980     -,2597     3,0356
HighLowS      ,5117      ,9360      ,5467      ,5855    -1,3399     2,3633
Int_1         ,1340      ,5246      ,2555      ,7987     -,9037     1,1718

Product terms key:
 Int_1    :        Initiati x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0004      ,0653     1,0000   132,0000      ,7987
```

11. Full Model test

Matrix

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 8
    Y  : PIMeanal
    X  : Initiati
   M1  : BIMeanal
   M2  : WTPMeana
    W  : HighLowS

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 BIMeanal

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      ,5317      ,2827     1,7974    17,3371     3,0000   132,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,8836     1,4650      ,6031      ,5474    -2,0143     3,7815
Initiati     1,3880      ,8330     1,6663      ,0980     -,2597     3,0356
HighLowS      ,5117      ,9360      ,5467      ,5855    -1,3399     2,3633
Int_1         ,1340      ,5246      ,2555      ,7987     -,9037     1,1718

Product terms key:
 Int_1    :        Initiati x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      ,0004      ,0653     1,0000   132,0000      ,7987

**************************************************************************
OUTCOME VARIABLE:
 WTPMeana

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,3121      ,0974      ,4745     4,7483     3,0000   132,0000      ,0035

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,9227      ,7527     1,2259      ,2224     -,5662     2,4116
Initiati      ,5981      ,4280     1,3974      ,1646     -,2485     1,4446
HighLowS      ,1842      ,4809      ,3830      ,7023     -,7671     1,1356
Int_1        -,0708      ,2695     -,2626      ,7933     -,6040      ,4624

Product terms key:
 Int_1    :        Initiati x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      ,0005      ,0689     1,0000   132,0000      ,7933

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,9028      ,8150      ,6125   114,5361     5,0000   130,0000      ,0000
```

```
Model
              coeff         se          t          p       LLCI       ULCI
constant      ,7623      ,8604      ,8860      ,3773     -,9398     2,4644
Initiati     -,2755      ,4916     -,5605      ,5761    -1,2481      ,6970
BIMeanal      ,9281      ,0687    13,5144      ,0000      ,7922     1,0639
WTPMeana      ,1794      ,1337     1,3419      ,1820     -,0851      ,4438
HighLowS    -1,2182      ,5471    -2,2269      ,0277    -2,3005     -,1359
Int_1         ,4810      ,3067     1,5680      ,1193     -,1259     1,0878

Product terms key:
 Int_1    :        Initiati x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      ,0035     2,4587     1,0000   130,0000      ,1193


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Conditional direct effects of X on Y
   HighLowS     Effect         se          t          p       LLCI       ULCI
     1,0000      ,2054      ,2314      ,8878      ,3763     -,2523      ,6632
     2,0000      ,6864      ,2314     2,9658      ,0036      ,2285     1,1442

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 Initiati    ->    BIMeanal    ->    PIMeanal

   HighLowS     Effect     BootSE   BootLLCI   BootULCI
     1,0000     1,4125      ,2763      ,9108     1,9884
     2,0000     1,5369      ,2816     1,0140     2,1179

Index of moderated mediation (difference between conditional indirect effects):
              Index     BootSE   BootLLCI   BootULCI
HighLowS      ,1244      ,3623     -,5760      ,8272

INDIRECT EFFECT:
 Initiati    ->    WTPMeana    ->    PIMeanal

   HighLowS     Effect     BootSE   BootLLCI   BootULCI
     1,0000      ,0946      ,0891     -,0634      ,2992
     2,0000      ,0819      ,0727     -,0595      ,2318

Index of moderated mediation (difference between conditional indirect effects):
              Index     BootSE   BootLLCI   BootULCI
HighLowS     -,0127      ,0514     -,1466      ,0715

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

12. Further Analysis

12.1 Hypothesis 1 – Further Analysis

ANOVA

Descriptives

PIMeanall

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
taste	36	2,6944	,67905	,11318	2,4647	2,9242	1,00	4,25
environment	36	5,7292	1,67585	,27931	5,1621	6,2962	1,00	7,00
social	32	5,5234	,81161	,14347	5,2308	5,8161	2,00	6,50
economic	32	2,8672	,73776	,13042	2,6012	3,1332	1,00	5,00
Total	136	4,2040	1,78554	,15311	3,9012	4,5068	1,00	7,00

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
PIMeanall	Based on Mean	9,067	3	132	<,001
	Based on Median	3,823	3	132	,012
	Based on Median and with adjusted df	3,823	3	70,731	,013
	Based on trimmed mean	6,177	3	132	<,001

ANOVA

PIMeanall

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	278,672	3	92,891	80,812	<,001
Within Groups	151,729	132	1,149		
Total	430,400	135			

Robust Tests of Equality of Means

PIMeanall

	Statistic[a]	df1	df2	Sig.
Welch	109,032	3	71,586	<,001
Brown-Forsythe	83,835	3	79,549	<,001

a. Asymptotically F distributed.

Kruskal Wallis

As a next step, it will be investigated which of the sustainability initiatives has the biggest effect on PI. The independent variables are categorical and as there are more than 2 groups an Kruskal-Wallis will be conducted (since the data is non-parametric) with the goal to find out if there are significant differences between the four groups.

The test statistics indicate a statistical significance (p-value < .001). As environmental sustainability demonstrates the highest mean rank, it suggests that this stimulus has the biggest positive impact on PI, followed by social sustainability. Economic sustainability and taste have the least impact on PI.

As these results are statistically significant, a follow-up test (Mann-Whitney U test) is necessary to test pairwise comparison. When comparing the stimuli taste and environmental sustainability, it is indicated that environment has a statistically significant higher mean rank and consequently has a bigger impact on PI. When comparing taste and social sustainability, the second stimulus has a significantly higher mean rank. Looking at taste and economic sustainability, the mean rank is relatively similar, and the difference is not statistically significant, as the p-value is .447. The difference in the mean rank between environmental and social sustainability is statistically significant with a p-value of .003, indicating that environmental sustainability has a bigger impact on PI. Comparing environmental and economic sustainability, the mean rank in environmental sustainability is significantly higher (p-value < .001). The last comparison indicates that social sustainability is more important than economic with statistical significance (p-value < .001)

To conclude, it can be seen that environmental sustainability has the highest impact on PI, whereas taste (the no sustainability initiative) has the lowest impact.

NPar Tests

[DataSet1] /Users/annikakrug/Desktop/FINAL.sav

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
PIMeanall	136	4,2040	1,78554	1,00	7,00
Stimuli group	136	2,44	1,121	1	4

Kruskal-Wallis Test

Ranks

	Stimuli group	N	Mean Rank
PIMeanall	taste	36	37,15
	environment	36	102,46
	social	32	92,94
	economic	32	41,13
	Total	136	

Test Statistics[a,b]

	PIMeanall
Kruskal-Wallis H	78,086
df	3
Asymp. Sig.	<,001

a. Kruskal Wallis Test

b. Grouping Variable: Stimuli group

Mann-Whitney pairwise comparison

NPar Tests

Mann-Whitney Test

Ranks

	Stimuli group	N	Mean Rank	Sum of Ranks
PIMeanall	taste	36	21,99	791,50
	environment	36	51,01	1836,50
	Total	72		

Test Statistics[a]

	PIMeanall
Mann-Whitney U	125,500
Wilcoxon W	791,500
Z	-5,918
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: Stimuli group

NPar Tests

Mann-Whitney Test

Ranks

	Stimuli group	N	Mean Rank	Sum of Ranks
PIMeanall	taste	36	19,33	696,00
	social	32	51,56	1650,00
	Total	68		

Test Statistics[a]

	PIMeanall
Mann-Whitney U	30,000
Wilcoxon W	696,000
Z	-6,753
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: Stimuli group

NPar Tests

Mann-Whitney Test

Ranks

	Stimuli group	N	Mean Rank	Sum of Ranks
PIMeanall	taste	36	32,83	1182,00
	economic	32	36,38	1164,00
	Total	68		

Test Statistics[a]

	PIMeanall
Mann-Whitney U	516,000
Wilcoxon W	1182,000
Z	-,761
Asymp. Sig. (2-tailed)	,447

a. Grouping Variable: Stimuli group

NPar Tests

Mann-Whitney Test

Ranks

	Stimuli group	N	Mean Rank	Sum of Ranks
PIMeanall	environment	36	41,22	1484,00
	social	32	26,94	862,00
	Total	68		

Test Statistics[a]

	PIMeanall
Mann-Whitney U	334,000
Wilcoxon W	862,000
Z	-3,002
Asymp. Sig. (2-tailed)	,003

a. Grouping Variable: Stimuli group

NPar Tests

Mann-Whitney Test

Ranks

	Stimuli group	N	Mean Rank	Sum of Ranks
PIMeanall	environment	36	47,22	1700,00
	economic	32	20,19	646,00
	Total	68		

Test Statistics[a]

	PIMeanall
Mann-Whitney U	118,000
Wilcoxon W	646,000
Z	-5,664
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: Stimuli group

NPar Tests

Mann-Whitney Test

Ranks

	Stimuli group	N	Mean Rank	Sum of Ranks
PIMeanall	social	32	47,44	1518,00
	economic	32	17,56	562,00
	Total	64		

Test Statistics[a]

	PIMeanall
Mann-Whitney U	34,000
Wilcoxon W	562,000
Z	-6,471
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: Stimuli group

12.2 Hypothesis 2 – Further Analysis

Independent variable: each type of initiative

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

         Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : PIMeanal
    X  : typeofSt
    M  : BIMeanal

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 BIMeanal

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      ,0788      ,0062     2,4528      ,8381     1,0000   134,0000      ,3616

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,7299      ,3229    14,6488      ,0000     4,0913     5,3686
typeofSt     -,1101      ,1203     -,9155      ,3616     -,3480      ,1278

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      ,8940      ,7992      ,6500   264,5939     2,0000   133,0000      ,0000

Model
```

```
Model
              coeff         se          t          p       LLCI       ULCI
constant     -,7881      ,2681    -2,9396      ,0039    -1,3183     -,2578
typeofSt      ,1775      ,0621     2,8571      ,0050      ,0546      ,3003
BIMeanal     1,0219      ,0445    22,9802      ,0000      ,9340     1,1099


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      ,1775      ,0621     2,8571      ,0050      ,0546      ,3003

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
BIMeanal     -,1125      ,1219     -,3647      ,1186

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

12.3 Hypothesis 4 – Further Analysis

Matrix

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : PIMeanal
    X  : typeofSt
    M  : WTPMeana

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 WTPMeana

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,0929      ,0086      ,5134     1,1665     1,0000   134,0000      ,2821

Model
              coeff         se          t          p       LLCI       ULCI
constant     2,2000      ,1477    14,8932      ,0000     1,9078     2,4922
typeofSt     -,0594      ,0550    -1,0800      ,2821     -,1683      ,0494

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,6724      ,4522     1,7728    54,8917     2,0000   133,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      ,3519      ,4473      ,7867      ,4328     -,5328     1,2367
typeofSt      ,1647      ,1027     1,6038      ,1111     -,0384      ,3679
WTPMeana     1,6789      ,1605    10,4585      ,0000     1,3614     1,9964


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      ,1647      ,1027     1,6038      ,1111     -,0384      ,3679

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
WTPMeana     -,0998      ,0828     -,2745      ,0499

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

12.4 Hypothesis 6 – Further Analysis

4 types of initiatives:

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : PIMeanal
    X  : typeofSt
    W  : HighLowS

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1573      ,0247     3,1800     1,1159     3,0000   132,0000      ,3451

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,6123     1,1753     3,0736      ,0026     1,2875     5,9371
typeofSt     -,0952      ,4254     -,2238      ,8232     -,9367      ,7462
HighLowS      ,2358      ,7408      ,3183      ,7507    -1,2296     1,7012
Int_1         ,1201      ,2753      ,4363      ,6633     -,4244      ,6647

Product terms key:
 Int_1    :        typeofSt x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0014      ,1903     1,0000   132,0000      ,6633
```

12.5 Hypothesis 7 – Further Analysis

Independent variable with 4 groups

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : BIMeanal
    X  : typeofSt
    W  : HighLowS

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 BIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,2947      ,0869     2,2879     4,1854     3,0000   132,0000      ,0072

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,0067      ,9969     3,0161      ,0031     1,0348     4,9787
typeofSt      ,0224      ,3608      ,0620      ,9507     -,6914      ,7361
HighLowS     1,0696      ,6284     1,7021      ,0911     -,1734     2,3126
Int_1        -,0727      ,2335     -,3113      ,7560     -,5346      ,3892

Product terms key:
 Int_1    :        typeofSt x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0007      ,0969     1,0000   132,0000      ,7560
```

12.6 Full Model – Further Analysis

PROCESS with 4 types of stimuli

Matrix

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 4.2 beta ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 8
    Y  : PIMeanal
    X  : typeofSt
   M1  : BIMeanal
   M2  : WTPMeana
    W  : HighLowS

Sample
Size:  136

**************************************************************************
OUTCOME VARIABLE:
 BIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,2947      ,0869     2,2879     4,1854     3,0000   132,0000      ,0072

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,0067      ,9969     3,0161      ,0031     1,0348     4,9787
typeofSt      ,0224      ,3608      ,0620      ,9507     -,6914      ,7361
HighLowS     1,0696      ,6284     1,7021      ,0911     -,1734     2,3126
Int_1        -,0727      ,2335     -,3113      ,7560     -,5346      ,3892

Product terms key:
 Int_1    :        typeofSt x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0007      ,0969     1,0000   132,0000      ,7560

**************************************************************************
OUTCOME VARIABLE:
 WTPMeana

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1522      ,0232      ,5135     1,0428     3,0000   132,0000      ,3759

Model
              coeff         se          t          p       LLCI       ULCI
constant     1,5801      ,4723     3,3457      ,0011      ,6459     2,5143
typeofSt      ,1260      ,1709      ,7373      ,4623     -,2121      ,4642
HighLowS      ,4083      ,2977     1,3716      ,1725     -,1806      ,9972
Int_1        -,1247      ,1106    -1,1275      ,2616     -,3436      ,0941

Product terms key:
 Int_1    :        typeofSt x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0094     1,2714     1,0000   132,0000      ,2616

**************************************************************************
OUTCOME VARIABLE:
 PIMeanal

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,9047      ,8185      ,6010   117,2301     5,0000   130,0000      ,0000
```

```
Model
                coeff         se          t          p       LLCI       ULCI
constant       ,3041      ,5337      ,5698      ,5698     -,7518     1,3600
typeofSt      -,1431      ,1856     -,7712      ,4420     -,5103      ,2241
BIMeanal       ,9930      ,0631    15,7389      ,0000      ,8682     1,1178
WTPMeana       ,2042      ,1332     1,5332      ,1277     -,0593      ,4676
HighLowS      -,9096      ,3256    -2,7932      ,0060    -1,5538     -,2654
Int_1          ,2178      ,1205     1,8077      ,0730     -,0206      ,4561

Product terms key:
 Int_1    :        typeofSt x        HighLowS

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      ,0046     3,2676     1,0000   130,0000      ,0730
----------
    Focal predict: typeofSt (X)
          Mod var: HighLowS (W)

Conditional effects of the focal predictor at values of the moderator(s):

   HighLowS     Effect         se          t          p       LLCI       ULCI
     1,0000      ,0746      ,0815      ,9160      ,3614     -,0865      ,2358
     2,0000      ,2924      ,0886     3,3005      ,0012      ,1171      ,4676


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Conditional direct effects of X on Y
   HighLowS     Effect         se          t          p       LLCI       ULCI
     1,0000      ,0746      ,0815      ,9160      ,3614     -,0865      ,2358
     2,0000      ,2924      ,0886     3,3005      ,0012      ,1171      ,4676

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 typeofSt    ->    BIMeanal    ->    PIMeanal

   HighLowS     Effect     BootSE   BootLLCI   BootULCI
     1,0000     -,0500      ,1322     -,3330      ,1921
     2,0000     -,1222      ,1822     -,5002      ,2334

Index of moderated mediation (difference between conditional indirect effects):
              Index     BootSE   BootLLCI   BootULCI
HighLowS     -,0722      ,2231     -,5253      ,3711

INDIRECT EFFECT:
 typeofSt    ->    WTPMeana    ->    PIMeanal

   HighLowS     Effect     BootSE   BootLLCI   BootULCI
     1,0000      ,0003      ,0154     -,0297      ,0362
     2,0000     -,0252      ,0271     -,0927      ,0120

Index of moderated mediation (difference between conditional indirect effects):
              Index     BootSE   BootLLCI   BootULCI
HighLowS     -,0255      ,0323     -,1108      ,0164

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```