CATÓLICA LISBON
BUSINESS & ECONOMICS

How Scarcity Messages Influence Consumers' Willingness to Pay:
The Mediation Effect of Perceived Exclusivity.

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Dissertation written under the supervision of Prof. Paulo Romeiro.

Dissertation submitted in partial fulfillment of requirements for the MSc in Business, at the Universidade Católica Portuguesa, January 2022.

ABSTRACT

Title: "How Scarcity Messages Influence Consumers' Willingness to Pay: The Mediation Effect of Perceived Exclusivity"
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Scarcity messages are marketing strategies known to leverage businesses' sales and profits. Common well-known types are limited, special and seasonal editions, usually associated with the luxury industry. In consumers' minds, the high prices are justified by the hedonic feelings they generate.

In a FMCG context, the purpose of this investigation is to understand how scarcity messages influence consumers' willingness to pay, considering the mediated effect of perceived exclusivity on this relationship. The research approach started by a focus group, whose findings allowed to choose the chocolate industry as the center of this investigation, as well as the creation and confirmation of four stimuli representing limited, special, seasonal and regular edition chocolates of an imaginary brand, "Fenice". Followingly, the main study resided on an online survey to gather data from a wider sample, from which a quantitative analysis was executed using IBM SPSS Statistics.

The findings show scarcity messages increase consumers' willingness to pay, with limited editions having the highest impact, followed by regular, special and seasonal editions. Additionally, it was also concluded that perceived exclusivity has a positive effect on the relationship between scarcity messages and willingness to pay. As for future research, seasonal editions could be explored in further detail, as well as their impact on consumers' willingness to pay.

Keywords: Scarcity Messages, Consumers' Willingness to Pay, Perceived Exclusivity, Limited Editions, Special Editions, Seasonal Editions, Regular Editions, Chocolate Industry

SUMÁRIO

Título: "Qual o Impacto que as Mensagens de Escassez podem ter na Disponibilidade de Compra dos Consumidores: O Efeito Mediador da Perceção de Exclusividade"
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Mensagens de escassez são estratégias de marketing conhecidas por aumentarem vendas e lucros. As mais conhecidas são as edições limitadas, especiais e sazonais, normalmente associadas à indústria de luxo. Na mente dos consumidores, os preços altos são justificados por sentimentos hedónicos.

Num contexto de Bens de Consumo, esta investigação pretende entender como as mensagens de escassez influenciam a disponibilidade de compra, considerando o efeito mediador da perceção de exclusividade. A pesquisa começou por um grupo de foco, cujos resultados permitiram escolher a indústria do chocolate, bem como a criação e confirmação dos quatro estímulos de chocolates da marca imaginária "Fenice", representantes da edição limitada, especial, sazonal e normal. O estudo principal residiu num questionário online para recolher dados mais abrangentes, tendo sido executada uma análise quantitativa através do IBM SPSS Statistics.

Os resultados mostram que as mensagens de escassez aumentam a disponibilidade de compra dos consumidores, tendo edições limitadas o maior impacto, seguidas das edições regulares, especiais e sazonais. Também foi concluído que a perceção de exclusividade influencia positivamente a relação entre mensagens de escassez e disponibilidade de compra. Relativamente a estudos futuros, as edições sazonais podem ser exploradas mais detalhadamente, bem como o seu impacto na disponibilidade de compra.

Palavras-chave: Mensagens de Escassez, Disponibilidade de Compra, Perceção de Exclusividade, Edições Limitadas, Edições Especiais, Edições Sazonais, Edições Normais, Indústria do Chocolate

ACKNOWLEDGEMENTS

Firstly, I would like to acknowledge my advisor, Professor Paulo Romeiro, who provided an essential guidance and feedback in the development of this dissertation. Marketing in the Fast-Moving Consumer Goods industry has been a growing passion of mine, especially the areas of product management and brand management, which was even more enhanced due to the valuable knowledge I acquired during the "Product Management in Consumer Packaged Goods" seminar.

Secondly, I would like to thank my father, Manuel Pardal Monteiro, for being the most important figure in my life, both personally and professionally. You are teaching me to never give up on my dreams. Thank you for making me the person I am today.

An heartfelt appreciation goes to Khrystyna Potyatynnyk and Vera Moreira, for not only being my best friends, but for also contributing so highly to the final outcome of this investigation, as your knowledge and skills were pivotal in achieving this academic milestone. I will be forever grateful for your support and for having you in my life.

Fourthly, to my grandmother Isabel Cottinelli Telmo and my uncle Miguel Araújo, for having believed in me when I couldn't believe in myself. To the shiniest stars in the sky:

"Two lonely stars that shine so bright,
Even the deep blue skies envy your light,
When the sun starts shining you're out of sight,
I'll meet you again into the deep dark night.

Two lonely stars on a one-way flight,
They pray for this soul to end up alright
As the mind keeps strong and the heart gets tight,
I won't go to the moon and back, but to the stars I might."
12/21, Carolina

Lastly, I would like to especially thank my friends and family for all the support I have been given during my academic path, as well as to all the participants who took part in this investigation.

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GLOSSARY

SM Scarcity Messages

WTP Willingness to Pay

PE Perceived Exclusivity

LQS Limited Quantity Scarcity Message

LTS Limited Time Scarcity Message

LEPs Limited Edition Packages

CLT Central Limit Theorem

LE Limited Edition

SE Special Edition

SEAE Seasonal Edition

RE Regular Edition

FMCG Fast-Moving Consumer Goods

CPG Consumer Packaged Goods

HoReCa Hotel, Restaurant and Cafeterias/Catering

CHAPTER 1: INTRODUCTION

1.1 Background and problem statement

The current days have been marked by the Covid-19 pandemic, which has not only affected our daily lives as citizens, but has also had negative impacts on companies, as they are still recovering from economic turbulences (Kaushik & Guleria, 2020). Consequently, businesses have been trying to find ways to cope with the negative impacts of 2020 and 2021, by adopting new strategies to drive sales and attract new customers. This was especially the case for the HoReCa segment that depends mainly on presential consumption, in which hotels, restaurants and cafeterias found a solution in home delivery. Concerning the Fast-Moving Consumer Goods (FMCG) industry, companies have been using scarcity cues as they are essential in leveraging sales, as well as an important factor to determine the return of consumers to retail stores. As an example, in Consumer Packaged Goods (CPG), limited editions (LE) are being used as line extensions to introduce new products (Esch & Winter, 2010a) and their limited edition packages (LEPs) have played a crucial role in captivating consumers' attention, which leads to higher frequencies of purchase.

As such, scarcity messages (SM) can be considered as one of the most powerful and most effective marketing strategies to increase companies' sales and profits. Limited editions, special editions (SE) and seasonal editions (SEAE) are commonly associated with the luxury industry, as they indirectly imply a sense of low availability, in terms of time and/or quantity, and encompass a certain perception of exclusivity. As consumers have an urge to achieve temporarily brief, hedonic escapes from everyday life (Holmqvist et al., 2020), they are willing to pay higher prices for these goods.

Past literature has been mainly focusing on the impact that scarcity messages may have on consumers' purchase intent, with a special focus on limited editions and special editions, disregarding the possible advantages that seasonal editions may bring to increase companies' revenues. Considering that these strategies present different prices, usually higher than regular edition products (RE), consumers' willingness to pay (WTP) was considered to be more relevant to be investigated than purchase intention. Additionally, the luxury industry has been receiving higher research levels concerning the relationship between these cues and exclusivity compared to the FMCG industry, which is a gap that this dissertation aims to fulfill.

1.2 Problem Statement

The research purpose of this investigation is to understand the impact that scarcity messages may have on consumers' willingness to pay, with the mediated effect of perceived exclusivity (PE). Since exclusivity is commonly associated with the luxury industry, a special focus was given in exploring its effect on the Fast-Moving Consumer Goods industry. Therefore, the problem statement can be formulated as:

PS: *How does perceived exclusivity impact consumers' willingness to pay for different scarcity messages?*

With the aim of solving the problem statement, the following research questions were created:

RQ1: *What is the impact of scarcity messages on consumers' willingness to pay?*
RQ2: *Which type of scarcity message has the highest impact on consumers' willingness to pay?*
RQ3: *What effect does perceived exclusivity have on the relationship between scarcity messages and consumers' willingness to pay?*

In conclusion, the objective of this investigation is to understand if scarcity messages have an impact on consumers' willingness to pay and if perceived exclusivity has a mediated effect on this relationship. Additionally, the study of different perceived exclusivities towards each type of scarcity message and their diverse impacts on willingness to pay will also be explored.

1.3 Relevance

Limited edition and special edition products are widely known by consumers for being available for a certain time or a certain quantity. Since they are usually associated with the luxury industry, it was found to be relevant and advantageous to explore them in a FMCG context. Therefore, the study of scarcity messages is of particular interest for the academic and managerial communities, especially for sales and marketing managers, since their benefits for companies have already been proven through past literature.

From a personal approach, when I started this investigation, the difference between limited, special and seasonal edition products was not clear and, since seasonal marketing is especially implemented during the holiday season, an interest to look further into these strategies emerged, which culminated into an important aspect of this research. Through the literature review, it was possible to understand that this type of marketing has a lower focus in studies than limited or special editions and sometimes it may be undervalued, since it has been proven to have the same advantages for companies as the other two (QueenmaryXM & ShivanyS, 2019). As such, it was insightful to study seasonal editions in further detail and compare its findings to the other types of scarcity messages.

In terms of academic relevance, this dissertation has the objective of understanding the impact of scarcity messages on consumers' willingness to pay and if the different perceived exclusivities regarding each type of scarcity message may, or may not, have an impact on this relationship and, if it may be the case, the difference of these effects towards willingness to pay.

Concerning its managerial relevance, this research seeks to provide marketing managers with findings regarding consumers' perceptions of limited, special, seasonal and regular edition products, with a special focus on the chocolate industry, and how this may influence their willingness to pay. Additionally, by adding an effect of perceived exclusivity regarding these goods, it may be an opportunity for companies to adopt new marketing strategies and set higher prices, which result in higher sales and profits, since consumers are more acceptant towards these when in the presence of perceived exclusivity (Smith & Colgate, 2007).

1.4 Research methods

The research methodology includes both qualitative and quantitative methods to address the problem statement and answer the research questions.

Initially, a thorough research through existing literature on willingness to pay, scarcity messages and perceived exclusivity was performed, to understand and define the variables and the relationships between them. Following this step, the research's hypotheses were developed and the data collection process was designed.

The second research method to be implemented was the focus group, with the aim of understanding the initial perceptions regarding different types of scarcity messages. This step also allowed to choose the chocolate industry as the focus of this investigation. Then, the results from this activity led to the creation of the stimuli using Adobe Illustrator, which were later tested through semi-structured interviews with a convenient sample (Creswell, 2009).

Lastly, the main study of this investigation was an online survey delivered via Qualtrics to ensure the reach of the highest number of people possible. Thus, the wider data gathered allowed the hypotheses to be tested through various statistical tests using IBM SPSS Statistics.

1.5 Dissertation outline

The dissertation is divided into five different chapters, specifically: (1) Introduction; (2) Literature Review and Conceptual Framework; (3) Methodology; (4) Results and Discussion; and (5) Conclusions and Limitations.

Chapter 1 – Introduction – is subdivided into background and problem statement, the formulation of the problem statement and research questions, followed by the relevancy of this investigation, as well as the research methods and the dissertation outline.

In Chapter 2 – Literature Review and Conceptual Framework – the concepts of willingness to pay, scarcity messages, specifically limited, special and seasonal editions, and perceived exclusivity are explored, resulting in the formulation of the investigation's hypotheses. Then, the conceptual model presents the conceptual framework and a 2x2 matrix of time and quantity.

Chapter 3 – Methodology – is introduced by the research approach, followed by the presentation of the primary data, which is divided into the choice on the type of product, the stimuli creation and the main study.

On Chapter 4 – Results and Discussion – the subchapter of descriptive statistics includes data cleaning, sample characterization, key variable means, min., max. and st. deviation, construct's measure reliability and manipulation check. Followingly, inference statistics is subdivided into assumptions and the hypotheses test, which includes the full model test.

Lastly, Chapter 5 – Conclusions and Limitations – presents the main findings and conclusions, managerial/academic implications, limitations and further research.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

This chapter aims to provide a theoretical approach on the variables being studied, specifically the types of scarcity messages, such as limited, special and seasonal editions, the willingness to pay of consumers and the mediator of perceived exclusivity. The findings and conclusions drawn from past studies enabled the formulation of the hypotheses of this investigation.

The literature review starts by exploring the concept of willingness to pay, specifically regarding its definition and relevant previous research.

Secondly, the investigation focuses on the definition of scarcity messages, with a special focus on limited, special and seasonal edition products, followed by a thorough revision of the key papers and important literature on the impact of scarcity messages on willingness to pay and, finally, the creation of the hypotheses based on these findings.

On the last section of the theorical approach, there is a special focus on the mediator of perceived exclusivity, starting by its definition and review on important past literature, especially the impact that it has on the relationship between scarcity messages and willingness to pay, which, similarly to the previous section, enabled the creation of a final hypothesis.

2.1 Willingness to Pay

2.1.1 Definition

In marketing literature there are various definitions for willingness to pay, but they all recognize its importance for marketing managers to decide on which prices to practice, or to make decisions on the development of new products (Breidert et al., 2006).

Willingness to pay can be defined as the maximum price a buyer is accepting to pay for a determined number of goods or services (Kalish & Nelson, 1991; Kohli & Mahajan, 1991; Wertenbroch & Skiera, 2002), or, alternatively, as the maximum price that customers are willing to pay before switching to another product (E. W. Anderson, 1996). The reservation price (Kalish & Nelson, 1991; Krishna et al., 2006; Kristensen & Gärling, 1997) is also an important element to take into consideration when studying willingness to pay, since they are similar concepts but differ in terms of meaning, and it can be defined as the maximum price that the consumer is 100% certain he wants to buy a specific product (le Gall-Ely, 2009).

In addition, willingness to pay is closely related to other variables that also have an influence on consumers' decision-making process, such as their loyalty or satisfaction levels

(le Gall-Ely, 2009). Customer satisfaction is a fundamental aspect to leverage any business since it can have a positive impact on willingness to pay, which has already been proven that when there are high customer satisfaction indexes, companies receive higher economic returns (Homburg et al., 2005). As such, it is pivotal to determine demand, while also enabling firms to set appropriate prices (Wertenbroch & Skiera, 2002).

2.1.2 Key Papers Review

As mentioned before, the importance of estimating consumers' willingness to pay is essential for developing pricing strategies (Balderjahn, 2003), since small variations in price and its consequent consumer behavior can have an impact on a company's revenues and profits (Marn et al., 2003), being a crucial aspect in the areas of product development, competitive strategy, and brand management (J. C. Anderson et al., 1993). For that purpose, various studies have developed relevant methods to measure willingness to pay. According to (Breidert et al., 2006), it can be estimated through four different ways: direct surveys, indirect surveys, experiments, and analysis of market data.

In this investigation, a special focus was given to direct surveys since it was found to be the most accurate method to be used as the main study. As such, it can be divided into two types: customer surveys, and expert judgements (Breidert et al., 2006).

A customer survey was initially implemented by (Stoetzel, 1954), in which customers were directly asked the maximum and the minimum price they would be willing to pay for a certain product, using two sentences developed by (Marbeau, 1987a): "Above which price would you definitely not buy the product, because you can't afford it or because you didn't think it was worth the money?", and "Below which price would you say you would not buy the product because you would start to suspect the quality?". Both items were essential in measuring the willingness to pay of the participants in the online survey, which then allowed to test the hypotheses and draw conclusions to answer the research questions. Despite having its benefits, this method may also have some disadvantages, especially the fact that consumers may not have the intent to reveal their true willingness to pay, to avoid looking greedy (Nagle & Reed, 2002), the lack of familiarity with the product in question (T. C. Brown et al., 1996), the misjudgment of the product's price (Marbeau, 1987b), or even consumers not incurring into purchasing behavior (Hanna & Dodge, 2017).

Regarding expert judgements, on the one hand they are highly popular amongst marketing and sales managers since they are time and cost efficient, but, on the other hand, the

projection of customer's willingness to pay may result in biases concerning its estimations (Hanna & Dodge, 2017).

Despite indirect surveys, experiments and analysis of market data not being the methods applied in this research, a comprehensible review on each one was performed to choose the most suitable to be applied on the main study of this investigation.

As described in past research, indirect surveys can be defined as a method in which customers are presented different products with dissimilar prices and asked if they would purchase the good for a certain price (Marbeau, 1987b) and it is divided into discrete choice analysis and conjoint analysis (Breidert et al., 2006).

Concerning experiments, in laboratory experiments participants are given an amount of money and asked to spend it on a range of goods. Contrarily to this, on field experiments auctions are performed to evaluate consumers' perceptions towards a certain product, leading to a decision in terms of pricing (N. Malhotra et al., 2006), while also incentivizing their true valuation of a product, since they will have to buy it if they win the auction (Vickrey, 1961). Both types of experiments were not applied in this investigation due to the bias that can be generated from the participant's awareness of the study, as well as the large sample needed which would lead to higher costs.

Lastly, market data is also useful when analyzing consumers' behavior since it is also less costly and more time efficient, but it will depend on the data already available and the size of the data set (Breidert et al., 2006).

2.2 Scarcity Messages: Limited, Special and Seasonal Editions

2.2.1 Definition

Scarcity messages are often linked to marketing strategies adopted especially in the luxury sector, inherently encompassing a certain perception of exclusivity.

According to (Aggarwal 2011), there are two types of scarcity messages, which can be characterized as limited-quantity (LQS) and limited-time (LTS). More specifically, LQS are similar to limited editions (Song et al., 2021), giving consumers the perception of limited availability of a certain product or service from the supplier's side, while LTS convey the idea of a product or service only being available for a certain period of time (Gierl et al., 2008; Song, Lee, et al., 2019; L. Wu & Lee, 2016). In addition to this, (Song, Lee, et al., 2019) divided LQS

into the categories of unit scarcity messaging, perceived with a higher credibility, and option scarcity messaging, usually associated with a higher sellout risk.

One of the most important aspects about scarcity messages is that they make consumers feel that products are more desirable, special, unique and valuable, which positively influences their evaluation (Jang et al., 2015).

2.2.2 Key Papers Review

Past literature has shown that scarcity messages increase a product's desirability and perceived value, resulting in a higher purchase intention (Bae & Lee, 2005; Jung & Kellaris, 2004; Lynn, 1992), mainly due to its heuristics cue nature (Bae & Lee, 2005; Cialdini, 1987; Lynn, 1992; Suri et al., 2007). According to (Aggarwal et al., 2011), consumers are highly affected by brand concepts, especially regarding luxury brands, such as Rolex or Chanel, which give them the perceptions of exclusivity and uniqueness, while also enhancing their self-image.

Despite this effect, it is important to consider that different scarcity messages have different effects on consumers' decision-making process (Aggarwal et al., 2011; Gierl & Huettl, 2010a; Griskevicius et al., 2009; Ku et al., 2012; Lynn, 1992; Song, Noone, et al., 2019; W. Wu et al., 2012), which can be exemplified through previous research by (Aggarwal, 2011; Lee et al., 2015; Noone & Lin, 2020), whose findings concluded that LTS and LQS have different impacts in consumers' persuasion. On the one hand, according to (Aggarwal et al., 2011) and (L. Wu & Lee, 2016), LQS are more effective than LTS since they have a stronger influence in creating a sense of urgency and exclusivity, as well as a higher perception of a product's value, which will have a higher effect on consumers' purchase intent. On the other hand, (Lee et al., 2015) found that consumers' impulsive buying behavior was more influenced by LTS than LQS. A possible explanation for the different effects of both types of scarcity messages is that they may vary depending on the category of the product.

Seasonal scarcity messages also have the aim of increasing companies' sales. Seasonal promotions and seasonal flavours (Esch & Winter, 2010b) attract the attention of consumers and increase traffic in retail stores, which leads to a higher frequency of purchase (QueenmaryXM & ShivanyS, 2019). According to (Ancarani & Shankar, 2004), retail products are sometimes sold at lower prices, even when they have higher quality, as retailers start to practice the pricing penetration strategy in some specific seasons (Bolton & Shankar, 2003).

Another important aspect of scarcity messages is packaging, since it leverages their desired effect by highlighting a product's meaning, uniqueness and originality (Silayoi &

Speece, 2004), which contributes to an increase in a product's desirability (Jung & Kellaris, 2004; Lynn & Bogert, 1996). More specifically, limited edition packages (LEPs) are a scarcity product strategy that uses the packaging to create an exclusive and limited offer (Rita Dörnyei, n.d.) and since they are variations of the original product (Rita Dörnyei, n.d.) they need to be aligned with it to maintain or enhance its positive effects (Schoormans & Robben, 1997). LEPs are a differential key and important point-of-purchase tool in the FMCG industry, especially where there is strong competition (Ståhlberg & Ville Maila Maila, 2010).

Finally, consumer competition also has an essential role when persuading consumers through scarcity messaging while promoting sales (D. Malhotra, 2010; Nichols, 2012) and (Nichols, 2012) defines it as "Active processes of striving against others for the acquisition of a consumption object of mutual interest". Researchers have defended that consumers have a higher desire for products which are scarce and they want these even more intensely when they have to compete for them (Cialdini & James, 2009). Another important aspect to take into consideration regarding consumer competition is that consumers, in its presence, experience a decrease in rationality, which leads to a higher dependance on heuristics (Aggarwal et al., 2011; Cialdini & James, 2009; Huang et al., 2020; Worchel et al., 1975) and a higher perception of rarity and scarcity of a product, making it even more valuable and attractive (Cialdini, 1987; Cialdini & James, 2009; Lynn, 1992).

2.2.3 Impact of Scarcity Messages on Willingness to Pay

Past experiments have shown that consumers tend to choose products that are scarce over the ones which are available in a more abundant way, leading to a higher willingness to pay from their side, who pay higher prices for limited offers (Mittone & Savadori, 2009). As stated by (Cremer, 2018) "For physical consumer goods with no considerable information component, past research has identified scarcity, due to market conditions or as a producer strategy, as a driver of intention to purchase and willingness to pay.". This effect can be exemplified through a study conducted by (Jung & Kellaris, 2004), whose results showed that a low availability of wine was perceived as more appealing, also resulting in a higher willingness to pay, or through the findings of (Parker & Lehmann, 2011), who defended that when a product is presented in a shelf with a scarcity cue and can be found in a competitive setting, consumers are willing to pay more for such product. Similarly, a study conducted by (Robinson et al., 2016) concluded that participants who were exposed to scarcity cues on shelves were willing to pay 0,74$ more than those who were exposed to the abundant scenario.

2.2.4 Hypotheses

To facilitate the order of ideas following the literature review, the hypotheses were divided into three main topics. The first two can be found on the scarcity messages section and the third on the section of perceived exclusivity.

(1) The Impact of Scarcity Messages on Willingness to Pay and Perceived Exclusivity

Through the review of past literature, one can conclude that scarcity messages have a positive impact on willingness to pay (Mittone & Savadori, 2009) and perceived exclusivity (Jang et al., 2015), hence:

H1a: *The presence of scarcity messages increases consumers' willingness to pay.*
H1b*: The presence of scarcity messages increases a product's perceived exclusivity.*

(2) The Impact of Limited, Special, Seasonal and Regular Editions on Willingness to Pay

Since limited editions are the type of scarcity message that have the highest impact on willingness to pay (Aggarwal et al., 2011; L. Wu & Lee, 2016), the following hypotheses can be drawn:

H2a: *Limited editions have the highest impact on willingness to pay compared to special, seasonal and regular editions.*
H2b: *Willingness to pay is lower for special editions compared to limited editions.*

Bearing in mind that seasonal editions are less studied in research papers compared to limited and special editions, though, as mentioned before, also positively impact companies' sales and profits (QueenmaryXM & ShivanyS, 2019), the following hypotheses were created:

H2c: *Willingness to pay is higher for seasonal editions compared to regular editions.*
H2d: *Regular editions have the lowest impact on willingness to pay compared to limited, special and seasonal editions.*

2.3 Perceived Exclusivity

2.3.1 Definition

The concept of exclusivity carries several possible definitions that are commonly associated with a sense of limitation, scarcity, or restriction and are linked to a perception of a determined social class, style, or expense, which, in its essence, is linked to an idea of differentiation (Upshaw et al., 2017).

It is important to understand that exclusivity may vary depending upon the context that we are considering. On the one hand, luxury products have exclusivity has one of its main characteristics (Kepferer & Bastien, 2009; Okonkwo, 2009), since it is directly linked to limited accessibility, and is part of the "rarity effect" (Phau & Prendergast, 2000). In other words, and as mentioned by (Hudders, 2012), normally luxury brands are exclusive, automatically implying that they are expensive and rare. On the other hand, in terms of exclusivity in a marketing context, it is more focused on the perception of scarcity from the buyer, which, according to (Upshaw et al., 2017), this definition should include both luxury, and non-luxury products.

In a FMCG context, the definition of product exclusivity carries the connotation of a product being unique, inimitable and with a clear and strong value proposition (Sorescu et al., 2011).

2.3.2 Key Papers Review

Perceived exclusivity is commonly linked to luxury, as luxury goods are associated to good quality and an appealing design (Hudders, 2012), and they have the particularity of generating hedonic value, intangible benefits and personal prestige for consumers (Tynan et al., 2010; Vigneron & Johnson, 1999).

The hedonic value that buyers take from acquiring a product that they perceive as being exclusive is an important component to be studied in this investigation. (Carpenter et al., 1994) believe that a product with normal characteristics may be valuable to consumers under certain conditions, which may be enhanced by a certain notion of pleasure and exclusivity that is going to be generated after the purchase. When products which are only available in a limited number of items are acquired, the buyer feels admired by their friends and for having a good taste (Gierl & Huettl, 2010b).

Ergo, to exemplify the idea that scarce products enhance perceived exclusivity, the commodity theory developed by (Brock, 1968) can be applied, since it defends that "any commodity will be valued to the extent that it is unavailable", in which commodity can be defined as "anything that can be possessed, is useful to the possessor and is transferable from one person to the other" (Lynn, 1991), or, in a more general approach, it is a "useful and transferable object" (Brock & Mazzocco, 2004; Gierl & Huettl, 2010a).

Considering that exclusivity is a key component for luxury brands, it is important to understand that with the technological advancement some challenges have emerged. In terms of online channels and with the "luxurification of society" (Atwal & Williams, 2017), luxury companies have been facing difficulties regarding the adoption of mass marketing strategies to heighten the sense of exclusivity of their products (Okonkwo, 2010), but recognize their importance to leverage brand equity. The perceived exclusivity of the brands' products is a key component of the values that need to be promoted via these online channels, according to (Hennigs et al., 2012).

2.3.3 Impact of Perceived Exclusivity on the Relationship between Scarcity Messages and Willingness to Pay

To understand the impact of perceived exclusivity on the relationship between scarcity messages and willingness to pay, firstly it is important to distinguish the concept of exclusivity and scarcity since they are related concepts but have different meanings. According to the Harvard Business Review, exclusive products may not be scarce, but advertised exclusivity has been used as a marketing tool whilst implying a certain perception of exclusivity, as stated by (S. Brown, 2001): "Customers crave exclusivity and scarcity is "one of the oldest arrows in marketing quiver.".

Following the previous reasonings, scarcity messages have been proven to have a positive impact on willingness to pay since consumers tend to choose scarce products over the ones which are available in a more abundant way, translating into them paying higher prices for limited goods (Mittone & Savadori, 2009). Since price has been proven to be an indication of quality, especially regarding limited availability (Dodds et al., 1991; Rao & Monroe, 1989; Zeithaml, 1988), it means that higher prices make products and services more attractive (Erickson & Johansson, 1985; Lichtenstein et al., 1988; Rao & Monroe, 1989). In the consumers' mind, the high prices of scarce products are justified by their exclusivity (Smith & Colgate, 2007).

2.3.4 Hypotheses

From what has been found through the literature review, it is possible to conclude that when there is perceived exclusivity regarding a product with a scarcity message, whether it may be limited (LQS), special (LTS) or seasonal (SEAE), consumers' willingness to pay (WTP) will increase (Smith & Colgate, 2007). Bearing this in mind, the following hypothesis was formulated:

(3) The Impact of Perceived Exclusivity on the Relationship Between Scarcity Messages and Willingness to Pay

H3: *The effect of scarcity messages on consumers' willingness to pay is mediated by perceived exclusivity.*

2.4 Conceptual Model

2.4.1 Conceptual Framework

The Conceptual Framework illustrates the variables of Scarcity Messages and Consumers' Willingness to Pay, with the mediated effect of Perceived Exclusivity, and the previously described hypotheses:

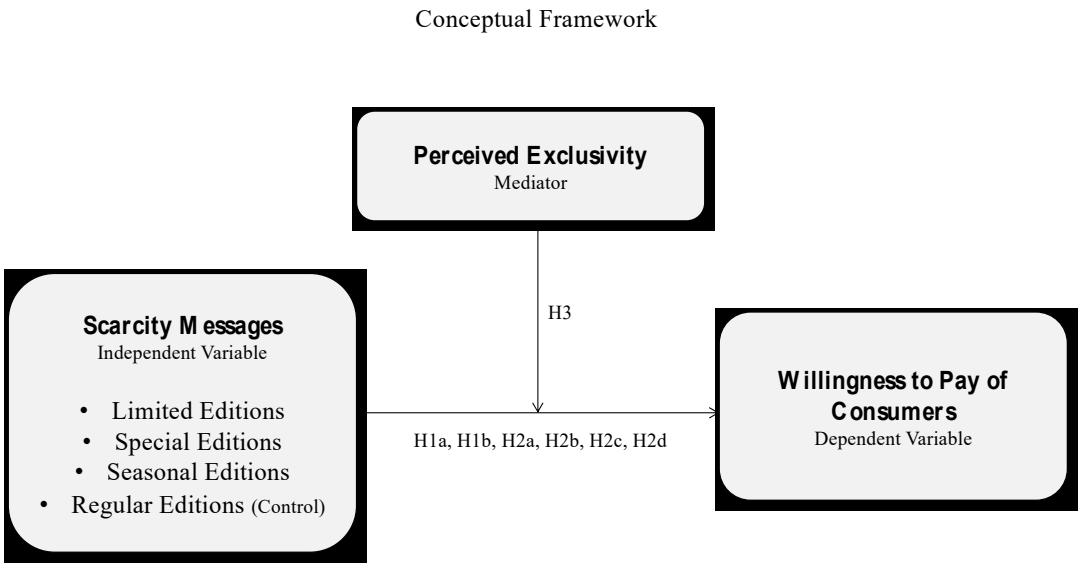

Figure 1: Conceptual Framework

2.4.2 Matrix of Time and Quantity

After the conclusions drawn through the literature review, it was possible to understand that the definitions of limited, special, seasonal and regular editions differ from each other, especially in terms of time and quantity. Bearing this in mind, a 2x2 matrix was developed to illustrate the specificities of each type of scarcity message.

Matrix of Time and Quantity

Time / Quantity	No Limited Quantity	Limited Quantity
No Limited Time	Regular Edition	Limited Edition
Limited Time	Special Edition	Seasonal Edition

Figure 2: 2x2 Matrix of Time and Quantity

CHAPTER 3: METHODOLOGY

The purpose of this chapter is to provide a detailed description on how the topic of this dissertation was investigated. The methodology was developed with the aim of answering the research questions and reaching conclusions regarding the hypotheses. The techniques that were adopted in this research were a mix between qualitative and quantitative research, which will be described firstly in the research approach, followed by the primary data.

3.1 Research Approach

The main goal of this dissertation is to understand the impact of SM, specifically LE, SE, SEAE and RE, on WTP and test the mediated effect of PE on this relationship. To achieve this objective and to facilitate the comprehension of this approach, a model of the process was created (Figure 3), where both exploratory, the focus group and the semi-structured interviews, and explanatory methods, the online survey, are presented (Saunders et al., 2009).

The first step of this analysis was to perform an in-depth research on existing literature regarding SM, PE and WTP, which was crucial in defining the research questions and in the formulation of the hypotheses, resulting in the design of the conceptual framework. With the aim of reaching the research objectives, the conceptual model turned into an operational model (Table 1).

Secondly, a focus group was performed to explore the initial perceptions of consumers regarding each type of SM from as many angles as possible (Longhurst, 2003), which was essential in defining the industry and the type of product that this research would focus on. The results showed that consumers highly associate SM to the food industry, especially chocolate bars.

Based on this stage and with the aim of avoiding bias in this study, four stimuli were created for LE, SE, SEAE and RE chocolate bars, which were later tested through semi-structured interviews. Although this method has the disadvantage of using a small sample (Boyce & Neale, 2006), it was essential to understand if the stimuli created were conveying the pretended messages, or if some adjustments needed to be made.

Lastly, the main study of this research was the online survey, with the objective of reaching at least 200 participants, that evaluated the influence of PE on WTP for different types of SM. After gathering the quantitative data, the results were analyzed and confronted with the hypotheses, with the purpose of answering the research questions.

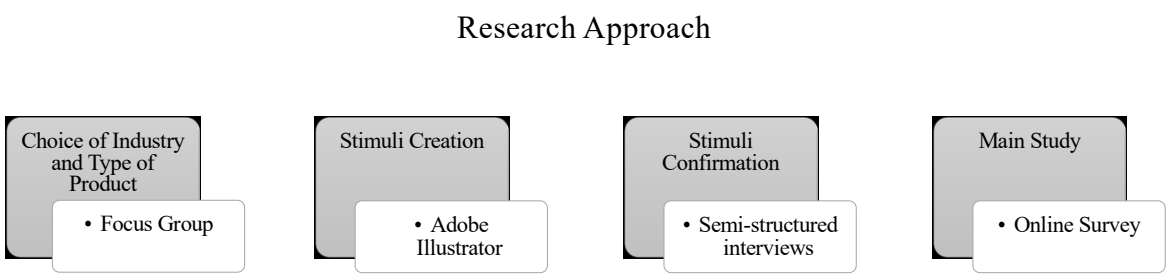

Figure 3: Research Approach

3.2 Primary Data

The primary data was gathered through several steps: (1) The Choice on the Type of Product; (2) Stimuli Creation and Confirmation; and (3) Main Study.

3.2.1 Choice on the Type of Product

To decide on the type of product to be used in this investigation, a focus group was conducted to understand the initial perceptions of consumers regarding SM.

3.2.1.1 Data Collection

The first step of the data collection was to perform a focus group to incentivize the interaction between all the members (Cameron, 2005; Morgan, 1996) and to understand how these individuals experience and make sense of their own lives (Valentine, 2005). Due to Covid-19, it was performed through Zoom with 12 people of ages 19 – 24 in an informal setting (Longhurst, 2003).

To start, the moderator thanked everyone for taking the time to participate in the focus group related to the master's dissertation. Then, proceeded to explain that the goal of this phase of the research was to understand the initial perceptions on SM, which, in this case, were related to LE, SE, SEAE and RE.

On rules and guidelines, the moderator explained that this activity would last between 45 minutes and 1 hour and that participants were expected to talk one at a time, also adding that their honest opinion was highly valued and that there were no right or wrong answers. Then, they were asked for their permission to record the session with a voice recorder and were informed that all the data gathered would be treated with confidentiality and anonymity, as two

essential ethical issues (Longhurst, 2003). To conclude part 1, the moderator proceeded to introduce herself by addressing her name, age, nationality and current occupation and asked the participants to do the same.

In Individual Assessment, two short surveys on Qualtrics were created to understand the overall initial perceptions on each type of SM, the imagery or packaging, that the participants associated with them. The first survey was divided into four corresponding sections, regarding LE, SE, SEAE and RE, in which the first question aimed to find the level of familiarity with each type of edition and the second question the type of product most associated with them (Figure 4). The second survey was divided into three sections regarding the chocolate, coffee and drinks industries, in which participants were asked to drag and drop four images representing LE, SE, SEAE and RE to their corresponding type of SM (Figure 5).

In Role Playing, four different scenarios were presented, each one representing a real-life situation, with the goal of reaching a consensus on the type of SM that was better suited for each one. To gather the qualitative data, the moderator firstly asked the participants to read the scenarios and to start discussing amongst themselves the occasions that were being depicted, the reasons why they would opt for a type of product edition and not another and to choose only the one most appropriate for that specific scenario (Appendix 2). This projective technique (Nunan et al., 2020) was highly important to understand, in more depth, how participants perceived the different kinds of product editions and for which occasions they were mainly associated with.

On Closure and Q&A, the moderator thanked everyone for their time and availability to participate in the focus group and answered the questions that had arisen during the activities.

3.2.1.2 Measurement/Indicators

With the aim of understanding the perceptions regarding SM, in the focus group the participants were firstly asked to answer two surveys: (1) The initial perceptions for each type of SM; (2) The imagery associated with each type of SM.

On the first survey, for each type of SM there was a specific section. In the first questions, participants were asked to use a Likert Scale of Familiarity ranging from 1 (not at all familiar) to 5 (extremely familiar). On the second question, participants were directly asked the type of product they associated each type of SM with the most, by means of a semi-open-ended question.

Then, the second survey on imagery association was delivered, in which they had to drag and drop the images of different SM to their due sections.

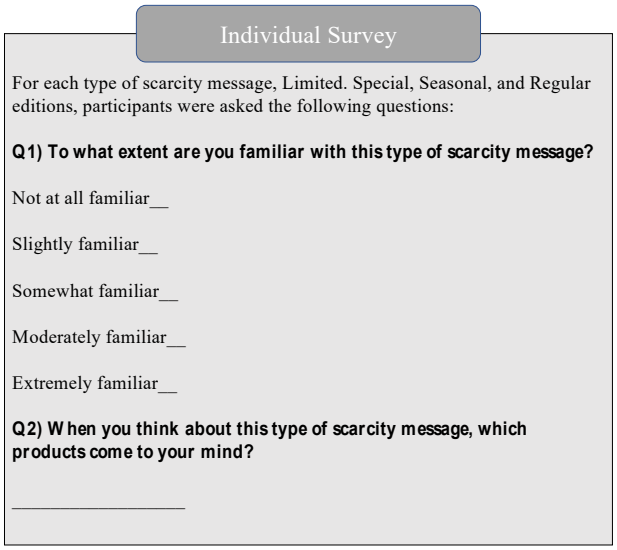

Figure 4: Focus Group Individual Survey - Initial Perceptions on Scarcity Messages

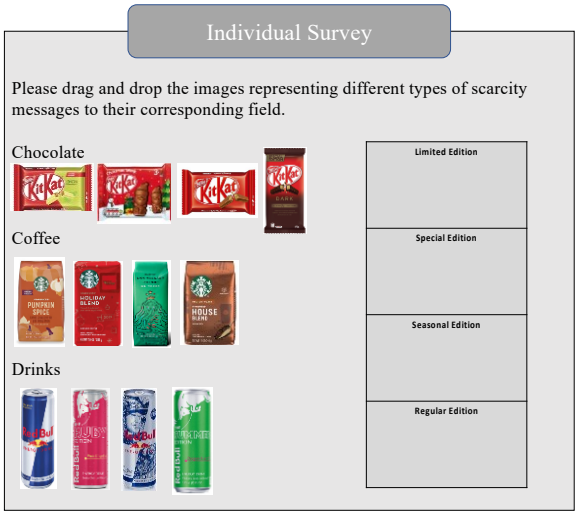

Figure 5: Focus Group Individual Survey – Imagery Association on Scarcity Messages

3.2.1.3 Data Analysis

By analyzing both quantitative and qualitative data, a conclusion on the type of product and corresponding industry to be used in this research was reached. Considering the results of the focus group, participants were more familiar with LE compared to SE and SEAE, and since chocolate was the product that had the best performance, both in product associations and

imagery association, it served as the basis for the creation of the stimuli. The findings of the focus group are shown below (Figure 6).

Quantitative Data

Level of Familiarity

Type of Scarcity Message	Mean	Std. Deviation
Limited Edition	4.25	1.01
Special Edition	4.18	1.11
Seasonal Edition	3.92	1.19
Regular Edition	3.42	1.19

Quantitative Data

Product Associations

Type of Product	Number of mentions
Chocolate	15
Clothes	14
Beverages	7
Makeup	2
Perfume	2
Cosmetics	2
Cars	2
Luxury goods	1
Movies	1
Toys	1
Fruit	1
Total	48

Quantitative Data

Imagery Association on Scarcity Messages

Chocolate	Correct Answers	Incorrect Answers
Limited Edition	10	2
Special Edition	10	2
Seasonal Edition	12	-
Regular Edition	12	-

Coffee	Correct Answers	Incorrect Answers
Limited Edition	9	3
Special Edition	9	3
Seasonal Edition	12	-
Regular Edition	11	1

Drinks	Correct Answers	Incorrect Answers
Limited Edition	7	5
Special Edition	8	4
Seasonal Edition	12	-
Regular Edition	12	-

Figure 6: Results from Focus Group

3.2.2. Stimuli Creation and Confirmation

The focus group enabled to conclude that chocolate would be the focus of the research. Hence, a new brand of chocolate called “Fenice: Il Rinascimento del Vero Cioccolato” was created (Figure 7).

Figure 7: New Brand of Chocolate: Fenice

Four chocolate bars were designed, each one representing a different type of SM. To achieve a good quality on the development of the new brand and its products, the researcher collaborated with a designer. Therefore, Adobe Illustrator was the program of choice to ensure the researcher's and designer's visions were met.

3.2.2.1 Data Collection

The data was collected through 13 semi-structured interviews, considered a convenient sample (Creswell, 2009), which were conducted in English and Portuguese, with 12 participants from different backgrounds, nationalities and ages. The researcher started each interview with a brief presentation and asked if the session could be voice recorded. Then, the stimuli were showcased to the participants who were asked to describe the product being presented on the image and to identify the type of SM that it depicted.

3.2.2.2 Results

The purpose of the previous methods was to assess the perceptions of participants regarding SM, namely LE, SE, SEAE and RE, and if they were able to correctly interpret and associate them to the corresponding stimuli (Gravetter et al., 2020).

In the first attempt of stimuli interpretation, four different chocolate bars were presented to participants, each one representing a different type of SM. The conceptualizations of the stimuli were highly strategic, from the choices on the shape, color, type of chocolate, origin, labelling and name of the chocolate bar. Amongst the four stimuli, only three were perceived

as desired, namely the SE, LE and RE. The main reason behind this misinterpretation was the expression “Christmas edition”, which was being wrongly considered as being as SE instead of a SEAE (Figure 8).

Figure 8: Stimuli – First Attempt

Since the only chocolate bar which was being wrongly perceived was the SEAE, a new stimulus was created and used on the semi-structured interviews. This time, the word “Christmas” was replaced by “Summer”, resulting in the participants’ correct interpretation of the four stimuli (Figure 9).

Figure 9: Stimuli – Second Attempt

Despite obtaining the intended results on the interpretation of the stimuli on the second attempt, the four stimuli had to be submitted to several alterations in terms of the packaging itself and the name variations. Regarding the packages, the consistency amongst the four products had to be maintained, with the RE chocolate bar serving as a base for design, since it was the most neutral to avoid biases from the participants who could be influenced by factors such as their prior beliefs (Pechmann & Ratneshwar, 1992). Then, all the final stimuli were entitled "Dark Chocolate – 70% Cacao" but still maintained the previous labels of SE, LE and SEAE (Figure 10,11,12,13).

Figure 10: Final Stimuli – Special Edition

Figure 11: Final Stimuli – Limited Edition

Figure 12: Final Stimuli – Regular Edition

Figure 13: Final Stimuli – Seasonal Edition

3.2.3 Main Study

An online survey delivered through Qualtrics was the main study to gather a large amount of data for this research, with the aim of drawing conclusions to answer the problem statement and research questions.

3.2.3.1 Pilot Testing

To ensure the terms and concepts used in the survey were being correctly understood and the imagery perceived as desired, 12 pilot tests were performed amongst participants.

Regarding the terms and concepts, a few alterations had to be made, specifically on the block related to WTP. The initial measuring scale was not clear since respondents were asked to answer the extent of their agreement with different statements related to the fairness of a price of specific LE, SE, SEAE and RE and most of them found it difficult to answer due to the lack of knowledge on their regular prices. Therefore, the researcher changed the scale to measure WTP by directly questioning the participants on what was the maximum price they would be willing to pay for a certain type of SM and below which price they wouldn't definitely buy it. After inserting a dragging scale ranging from 1 € to 10 €, participants found it more intuitive and easier to answer the questions.

Lastly, another consideration was the language of the survey, which was initially created in English but was later also translated into Portuguese and, regarding the PE statements, the expression "luxury goods" was replaced by "exclusive products".

3.2.3.2 Data Collection

The online survey was published on November 15th 2021 and was closed on November 25th 2021, gathering a total of 239 responses. The Qualtrics questionnaire was developed both in English and Portuguese to ensure the highest number of respondents possible and shared through social media platforms.

3.2.3.3 Research Design

The survey started with a brief introduction where the researcher thanked the respondents for the time they were taking by answering the survey and presented herself. According to (Crow & Wiles, 2008), anonymity and confidentiality are one of the central ethical research practices, hence both were ensured.

On block 1 – Screening Questions – participants were asked if they had bought chocolate in the last year, from which those who answered "no" were redirected to the end of the survey.

On block 2 – Understanding the Drivers of Chocolate Consumption – they were asked how often they did they buy chocolate (for own consumption, family, or friends), which they could choose an option between rarely, occasionally, frequently, or very frequently, and under which circumstances did they usually buy chocolate (for own consumption, for consumption with family and friends and/or for special occasions/to offer as a gift).

Block 3 – Randomization and Attribution of One Stimulus – started by introducing a real-life situation in which the respondents had to picture themselves at the supermarket with the intention of buying a chocolate bar and a random stimulus was presented. On block 3.1 – Manipulation Check – respondents were asked what was the type of product edition presented before and were given the options of LE, SEAE, SE, or RE, which were randomized inside the block. Following this, on block 3.2 – PE – it was asked to classify to what extent did they agree with the following statements, using a rating scale ranging from 1 (strongly disagree) to 7 (strongly agree): (1) it is good to be among a very few people owning a truly exclusive product; (2) I would buy an exclusive good to make myself stand out; (3) once a product becomes mass-produced, it is not exclusive anymore; (4) some editions are bought because they are exclusive (le Monkhouse et al., 2012). On block 3.3 – WTP – participants were asked to consider the type of product they were presented before, and to choose the prices in € they would be willing to pay concerning these statements: (1) above which price would you definitely not buy the product, because you can't afford it or because you didn't think it was worth the money?; (2) below which price would you say you would not buy the product because you would start to suspect the quality? (Breidert et al., 2006).

In block 4 – Demographics – participants were asked to select their gender, age, nationality, highest degree achieved, current occupation and monthly gross income.

3.2.3.4 Measurement/Indicators

From the revision of past literature on WTP (dependent variable), PE (mediator) and SM (independent variable), it was possible to find suitable measures for the constructs.

Regarding WTP, two items were measured through a quantitative scale: (1) above which price would you definitely not buy the product, because you can't afford it or because you didn't think it was worth the money?; (2) below which price would you say you would not buy the product because you would start to suspect the quality? (Breidert et al., 2006). Since these are numeric questions, both Cronbach's Alpha and its corresponding quality were not applicable.

To measure PE, four items were considered according to (le Monkhouse et al., 2012): (1) it is good to be among a very few people owning a truly exclusive product; (2) I would buy an exclusive good to make myself stand out; (3) once a product becomes mass-produced, it is not exclusive anymore; (4) some editions are bought because they are exclusive. For this purpose, a Seven-Point Likert Scale on agreement was used, ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's Alpha of this construct was 0.85, which is considered "Good".

Lastly, SM was measured through four stimuli.

Operational Model

Variable	Construct	Literature	Scale	Number of Items	Cronbach's α	Quality
Dependent Variable	Willigness to Pay	(Breidert et al., 2006)	Numeric Question	2	na	na
Mediator	Perceived Exclusivity	(Le Monkhouse et al., 2012)	Seven-Point Likert Scale	4	0.85	Good
Independent Variable	Scarcity Messages	na	na	Stimuli	na	na

Table 1: Operational Model

3.2.3.5 Data Analysis

Since Qualtrics was the main platform to create and distribute the online survey, it allowed to import all the quantitative data directly to IBM SPSS Statistics, the main statistical software platform used for data analysis. The chapter on these results is subdivided into descriptive statistics - data cleaning, sample characterization, key variable means, min., max. and st. deviation, construct's measure reliability and manipulation check - and inference statistics - assumptions and the hypotheses test, which includes the full model test.

According to (Hayes & Preacher, 2014), there is a simple mediation model which illustrates the indirect effect of X on Y through the mediator M and is similar to other simple mediation models in psychological science (Bearden et al., 2012; Johnson & Fujita, 2012).

In this case, X would be the independent variable SM, Y would be the dependent variable WTP, and M the mediator PE. Through Figure 14, SM (X) will have an effect on PE (M), which will then propagate to WTP (Y). The Hayes & Preacher model also indicates that there is a direct effect of SM (X) on WTP (Y), regardless of the impact of SM (X) on PE (M).

Statistical Mediation Analysis with a Multicategorical Independent Variable

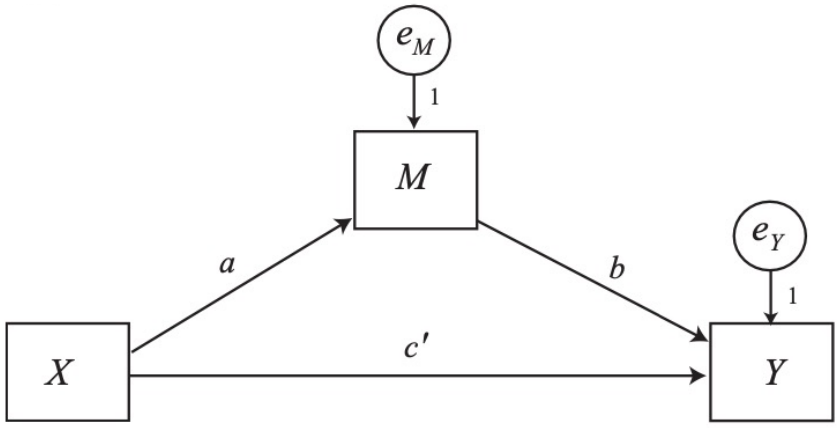

Figure 14: Hayes & Preacher Model – Statistical Mediation Analysis with a Multicategorical Independent Variable

CHAPTER 4: RESULTS AND DISCUSSION

The following chapter aims to present a quantitative analysis and results found from the online survey. This chapter is introduced by descriptive statistics, in which data cleaning, sample characterization, key variables' means, minimums, maximums and standard deviations, constructs' measure reliability and manipulation check will be presented in detail. Then, the section of inference statistics will approach assumptions and the hypotheses test, which also includes the full model test.

4.1 Descriptive Statistics

4.1.1 Data Cleaning

The online questionnaire was closed with a total of 239 responses. The initial step of data cleaning consisted of discounting the number of participants who did not finish the questionnaire, which corresponded to 39. From this number, the 10 people who answered "no" to the screening question and were redirected to the end of the survey were already included, resulting in a total number of valid responses of 200.

Regarding the manipulation check, 61 responses were additionally excluded from the sample not to affect the statistical power of the data (Hauser et al., 2018), since participants were not able to correctly associate the type of product edition to the corresponding stimulus.

With the aim of removing outliers from the dataset, the Mahalanobis Distance was calculated. It was concluded that no outliers needed to be removed, taking into consideration that there were no values of the new "outliers" variable inferior to 0,001, being the lowest one found 0,0325.

By the end of the data cleaning stage, a total of 139 valid responses was considered to proceed with the investigation, distributed as shown in Table 2: S1 – SE; S2 – SEAE; S3 – LE; and S4 – RE.

Valid Responses Distribution

Block 1	Block 2	Block 3				Block 4
		S1	S2	S3	S4	
139	139	39	31	34	35	139

Table 2: Valid Responses Distribution

4.1.2 Sample Characterization

After the performance of data cleaning, 139 responses were considered valid to proceed and be used in this investigation.

Through the analysis of demographic details (Appendix 6), most respondents answering the questionnaire were female (65,5%), followed by male (33,8%) and non-binary (0,7%), with ages mostly comprehended between 18 – 24 (48,9%), 25 – 34 (18%) and 45 – 54 (13,7%). The nationality with the highest percentage was Portuguese (88,5%), which is the most relevant compared to other (5%), German (4,3%) and Italian (2,2%). In terms of current occupation, most participants were employed (43,9%), students (30,2%), or student-workers (17,3%), with the highest degree completed being the bachelor's degree (54%), high school graduate or equivalent (22,3%) and master's degree/MBA (19,4%), with a monthly gross income of less than 500 € (25,2%), 500 € - 999 € (23%) and 1500 € - 1999 € (15,8%).

Through the online survey, the drivers of chocolate consumption were analyzed in terms of the frequency and reasons for chocolate purchase. The results showed that most respondents occasionally (2 - 3 times a month) buy chocolate (43,2%), followed by rarely (once a month or less) (30,9%) and frequently (1 – 3 times a week) (22,3%), especially due to personal consumption (74,8%), consumption with friends and family (41,7%) and for special occasions/to offer as a gift (29,5%).

4.1.3 Key variables Means, Min., Max., St. Deviation

The key variables of this investigation are SM (independent variable) and WTP (dependent variable). Although PE is the mediator within this research, it is also relevant to be analyzed in terms of mean, minimum, maximum and standard deviation (Appendix 8).

When comparing SM (Mean = 2,52; Min = 1; Max = 4; SD = 1,125) and WTP (Mean = 2,8990; Min = 0,76; Max = 8,08; SD = 1,45965), WTP presented the highest mean and the highest standard deviation. Since SM was measured through the four different stimuli (LE, SE, SEAE and RE), the maximum and minimum ranged from 1 – 4. Bearing in mind that WTP was measured through two different items examining the maximum price and the minimum price the respondent was willing to pay for a certain type of product edition, the minimum was considered to be 0,76 € and the maximum 8,08 € on a scale from 0 – 10 (€).

The mediator of PE (Mean = 4,6511; Min = 2,00; Max = 7,00; SD = 1,14312) presented the highest mean compared to SM and WTP and a standard deviation higher than SM and lower than WTP. Since the responses were measured through a Seven-Point Likert Scale of agreement ranging from 1 – 7, the minimum registered was 2 (disagree) and the maximum 7 (strongly agree).

4.1.4 Constructs' Measure Reliability

The constructs on which this investigation is focused have already been studied and measured in terms of reliability and internal consistency through past research, being previously classified according to (George & Mallery, 2003). Despite this fact, it is relevant to perform the reliability analysis specifically for WTP and PE, since SM was measured through the stimuli.

Table 3 shows that the Cronbach Alpha for WTP is 0,548, which is considered poor, and for PE is 0,669, which is considered questionable. Although the results on quality are not the desired, the analysis will continue and possible reasons will be included in Chapter 5.

Cronbach Alpha for Each Construct

Variable	Construct	Number of Items	Cronbach's α	Quality
Dependent Variable	Willigness to Pay	2	0,548	Poor
Mediator	Perceived Exclusivity	4	0,669	Questionable

Table 3: Cronbach Alpha for Each Construct

4.1.5 Manipulation Check

The manipulation check was performed to understand if participants were able to correctly associate the stimuli to the SM they individually represented. Each respondent was presented a random stimulus which they had to classify as a LE, SE, SEAE or RE.

The results show that SE were the type of SM with the highest correct responses (26,6%), while also presenting the highest mean and standard deviation (Mean = 0,2662; SD = 0,44356) compared to the other stimuli. The second-best result belonged to both LE (25,2%) and RE (25,2%), with equal means and standard deviations (Mean = 0,2518; SD = 0,43562). This may be due to the fact that scarcity messages were grouped into 0 and 1, with 1 representing the type of product edition the respondent chose and 0 all the other three that were not chosen. LE and RE differed very slightly in terms of correct answers. Lastly, SEAE products registered the lowest perception levels (23%), mean and standard deviation (Mean = 0,2302; SD = 0,42249).

In addition, to understand if the manipulation was successful through the confirmation of statistical difference between the SM, the independence of the samples was assured, followed by the performance of tests of normality. Since all types of SM failed the test of normality of Shapiro Wilk (Appendices 19,22,25,28), non-parametric tests were performed, specifically the Mann-Whitney test for every possible relationship between them: LE vs SE; LE vs SEAE; LE vs RE; SE vs SEAE; SE vs RE; and SEAE vs RE. Since all Sig. were below $\alpha = 0.05$ (each relationship: sig. = < 0,001) (Appendix 11), there is statistical evidence to affirm that the null hypothesis should be rejected, meaning that SM is statistically different, which translates into a successful outcome from the manipulation check.

4.2 Inference Statistics

4.2.1 Assumptions

With the purpose of understanding the type of tests that need to be performed, parametric or non-parametric, and to test the hypotheses, there are three assumptions that need to be followed. The first one concerns the independence of the samples, in which participants of each sample need to be independent of each other (Gerald, 2018), the second whether the samples come from populations, or a population, with a normal distribution and the third the homogeneity of the population variances. In the next section, the tests performed regarding the hypotheses followed all three assumptions.

4.2.2 Hypotheses Test

With the aim of testing the hypotheses formulated in Chapter 2, various statistical tests were applied with a significant level of 0,05 (P-Value). A statistical test was performed by also including the respondents who answered incorrectly on the manipulation check question (n = 200), but since there were no significant differences between the results, the analysis proceeded by considering only the valid sample (n = 139).

4.2.2.1 Hypothesis 1

H1a: The presence of scarcity messages increases consumers' willingness to pay.

The first hypothesis (H1a) consists of understanding the effect that SM may have on the WTP of consumers. Since both variables follow the first assumption of being independent of each other, the analysis proceeded to perform the test of normality to understand if the dependent variable had a normal distribution. The test of Shapiro Wilk was performed since $30 < n \leq 50$ (LE: df = 35; SEAE: df = 32; SE: df = 37; RE: df = 35) (Appendix 12) and its output was interpreted instead of Kolmogorov-Smirnov's (n > 50).

Since all Sig. related to each type of SM (LE: sig. = 0,011; SEAE: sig. = 0,002; SE: sig. = < 0,001; RE: sig. = 0,002) (Appendix 13) were inferior to $\alpha = 0.05$, it was concluded that the overall sig. of SM followed the same reasoning (Sig. SM < $\alpha = 0.05$) and that the null hypothesis of the normality test should be rejected. Additionally, the level of severity of this result was tested through the study of the asymmetry of the distribution by the asymmetry coefficient (Skewness/Std. Error of Skewness), in which each type of SM presented a value outside the interval of $]-1,96; 1,96[$ if $\lambda = 0,95$ (LE: As = 2,85; SEAE: As = 3,37; SE: As = 4,00; RE: As = 3,25) (Appendix 12), leading to the conclusion that there is no statistical evidence to affirm that SM follow a normal distribution with WTP, so the Central Limit Theorem (CLT) cannot be invoked and parametric tests cannot be performed.

The following step consisted of performing the non-parametric test of Mann-Whitney to compare two means, from which it was concluded that the null hypothesis should not be rejected (Asymp. Sig. = 0,317 > $\alpha = 0.05$) (Appendix 14). Thus, there is statistical evidence to state that the presence of scarcity messages increases consumers' willingness to pay, hence hypothesis H1a should be accepted.

H1b: The presence of scarcity messages increases a product's perceived exclusivity

The first hypothesis (H1b) aims to understand the effect that SM may have on PE. It was confirmed that both the variable and mediator follow the first assumption of being independent of each other, which enabled the analysis to proceed to the performance of the test of normality. Similarly to hypothesis H1a), the test of Shapiro Wilk was performed since $30 < n \leq 50$ (LE: df = 35; SEAE: df = 32; SE: df = 37; RE: df = 35) (Appendix 15) and its output was interpreted instead of Kolmogorov-Smirnov's ($n > 50$).

The Sig. of each type of SM (LE: sig. = 0,850; SEAE: sig. = 0,243; SE: sig. = 0,145; RE: sig. = 0,161) (Appendix 16) were superior to $\alpha = 0.05$, which concluded that the overall sig. of SM could follow the same reasoning (Sig. SM > $\alpha = 0.05$), and that the null hypothesis of the normality test should not be rejected.

The following step consisted of testing the homogeneity of variances through Levene's Test, which enabled us to conclude that the null hypothesis should not be rejected, since sig. = 0,461 > $\alpha = 0.05$ (Appendix 17). Therefore, one can assume that the variances are homogeneous, which enables the ANOVA Test to be performed. The results showed that the null hypothesis should not be rejected since sig. = 0,484 > $\alpha = 0.05$ (Appendix 17), which translates into statistical evidence to affirm that the presence of scarcity messages increases a product's perceived exclusivity. Therefore, hypothesis H1b should be accepted.

4.2.2.2 Hypothesis 2

H2a: Limited editions have the highest impact on willingness to pay compared to special, seasonal and regular editions.

Hypothesis H2a seeks to understand whether the impact of LE products is the highest on WTP compared to SE, SEAE and RE. Firstly, the assumption of independence between LE and WTP was checked, enabling the analysis to proceed to the test of normality. The output of Shapiro Wilk was interpreted since $30 < n \leq 50$ (LE: df = 35) (Appendix 18) instead of Kolmogorov-Smirnov's ($n > 50$).

Since the Sig. of LE was inferior to 0,05 (Sig. LE = 0,011 < $\alpha = 0.05$) (Appendix 19), the null hypothesis of the normality test should be rejected. As a consequence, the level of severity of this result was measured through the asymmetry test, in which LE presented a value outside the interval of] – 1,96; 1,96 [if $\lambda = 0,95$ (LE: As = 2,85) (Appendix 18). Hence, there

is no statistical evidence to affirm that LE follows a normal distribution with WTP, so the CLT cannot be invoked and parametric tests cannot be performed.

After this step, the non-parametric test of Mann-Whitney was performed to compare two means, from which it was concluded that the null hypothesis should not be rejected (Asymp. Sig. = 0,392 > α = 0.05) (Appendix 20). Therefore, there is statistical evidence to conclude that LE have the highest impact on WTP compared to RE, SE and SEAE, since Mean Rank LE = 75,04 > Mean Rank RE = 69,40 > Mean Rank SE = 68,11 > Mean Rank SEAE = 67,33. Ergo, hypothesis H2a should be accepted (Figure 15).

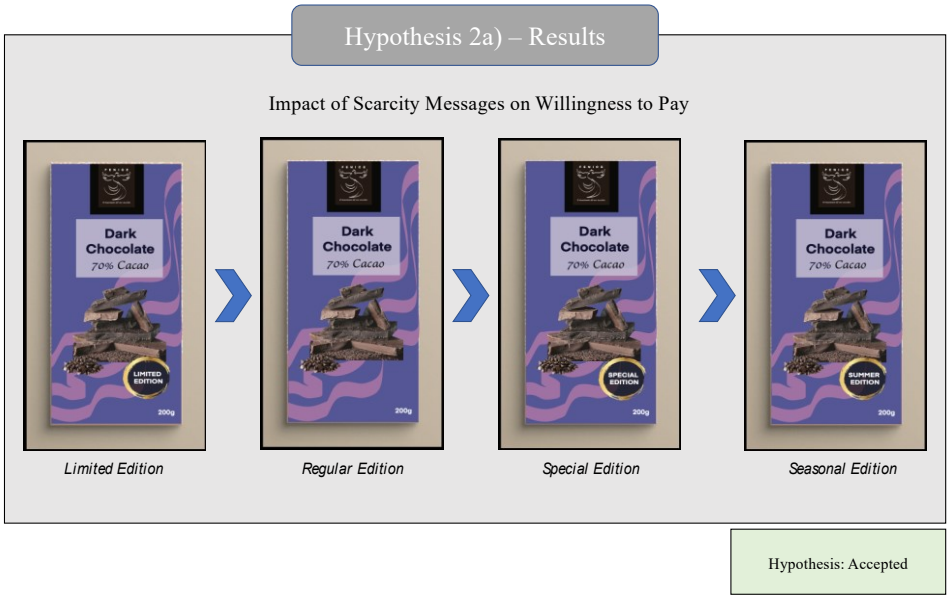

Figure 15: Hypothesis 2a) - Results

H2b: Willingness to pay is lower for special editions compared to limited editions.

Hypothesis H2b aims to analyze whether the impact of SE is lower on WTP compared to LE. Similarly to the previous hypothesis testing, the assumption of independence between SE products and WTP was ensured, enabling the analysis to proceed to the test of normality. The output of Shapiro Wilk was interpreted since 30 < n ≤ 50 (SE: df = 37) (Appendix 21) instead of Kolmogorov-Smirnov's (n > 50).

Since the Sig. of SE was inferior to 0,05 (Sig. SE = < 0,001 < α = 0.05) (Appendix 22), the null hypothesis of the normality test should be rejected. Consequently, the level of severity of this result was analyzed through the asymmetry test, in which SE presented a value outside the interval of] – 1,96; 1,96 [if λ = 0,95 (SE: As = 4,00) (Appendix 21), allowing to affirm

that there is no statistical evidence supporting SE following a normal distribution with WTP, hence the CLT cannot be invoked and parametric tests cannot be performed.

The non-parametric test of Mann-Whitney was performed, leading to the conclusion that the null hypothesis should not be rejected (Asymp. Sig. = 0,739 > α = 0.05) (Appendix 23). Accordingly, there is statistical evidence to confirm that SE has a lower impact on WTP compared to LE since Mean Rank SE = 68,11 < Mean Rank LE = 75,04. Having this said, hypothesis H2b should be accepted (Figure 16).

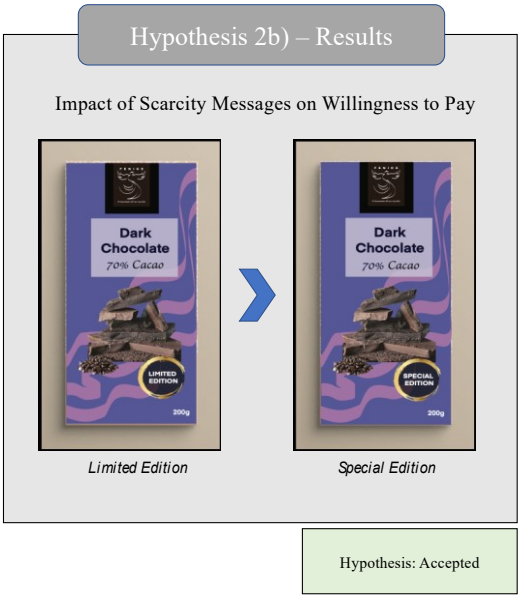

Figure 16: Hypothesis 2b) - Results

H2c: Willingness to pay is higher for seasonal editions compared to regular editions.

Hypothesis H2c aims to compare the effect of SEAE and RE products on WTP, assuming that SEAE will have the highest impact. Following the same reasoning as hypotheses H2a and H2b, the assumption of independence between SEAE and WTP was ensured, enabling the analysis to proceed to the test of normality of Shapiro Wilk since 30 < n ≤ 50 (SEAE: df = 32) (Appendix 24) instead of Kolmogorov-Smirnov's (n > 50).

The SEAE's Sig. was inferior to 0,05 (Sig. SEAE = 0,002 < α = 0.05) (Appendix 25), which means that the null hypothesis of the normality test should be rejected. Thusly, the level of severity of this result was checked through the asymmetry test, in which SEAE presented a value outside the interval of] – 1,96; 1,96 [if λ = 0,95 (SEAE: As = 3,37) (Appendix 24). As

such, there is no statistical evidence to state that SEAE follows a normal distribution with WTP, so the CLT cannot be invoked and parametric tests cannot be performed.

This way, the non-parametric test of Mann-Whitney was performed, from which the results showed that the null hypothesis should not be rejected (Asymp. Sig. = 0,669 > α = 0.05) (Appendix 26). Taking this into consideration, there is statistical evidence to conclude that SEAE has a lower impact on WTP compared to RE since Mean Rank RE = 69,40 > Mean Rank SEAE = 67,33. Hence, hypothesis H2c should be rejected (Figure 17).

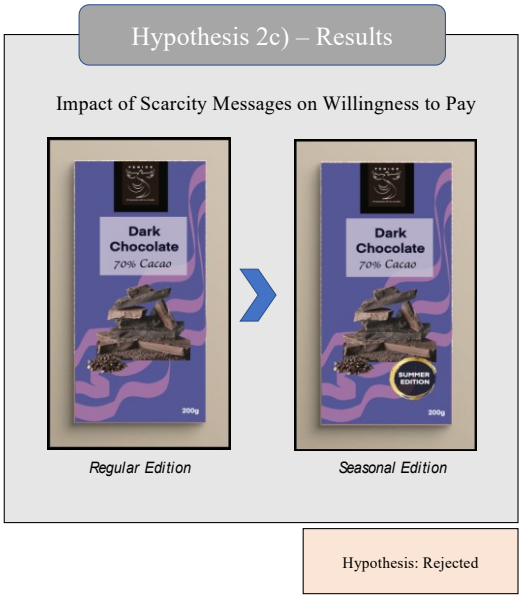

Figure 17: Hypothesis 2c) - Results

H2d: Regular editions have the lowest impact on willingness to pay compared to limited, special and seasonal editions.

Hypothesis H2d has the goal of understanding whether the impact of RE is lower on WTP compared to LE, SE and SEAE. Following the same reasoning as in hypotheses H2a, H2b and H2c, the assumption of independence between RE and WTP was assured, enabling the analysis to proceed to the test of normality of Shapiro Wilk, whose output should be interpreted since $30 < n \leq 50$ (RE: df = 35) (Appendix 27) instead of Kolmogorov-Smirnov's (n > 50).

Due to the Sig. of RE products being inferior to 0,05 (Sig. RE = 0,002 < α = 0.05) (Appendix 28), the null hypothesis of the normality test should be rejected. Therefore, the level of severity of this result was examined through the asymmetry test, in which RE presented a value outside the interval of] – 1,96; 1,96 [if λ = 0,95 (RE: As = 3,25) (Appendix 27), allowing

to state that there is statistical evidence supporting RE following a normal distribution with WTP, hence the CLT cannot be invoked and parametric tests cannot be performed.

Bearing this in mind, the non-parametric test of Mann-Whitney was performed, leading to the conclusion that the null hypothesis should not be rejected (Asymp. Sig. = 0,919 > α = 0.05) (Appendix 29). Thereupon, there is statistical evidence to affirm that, on the one hand, RE has a lower impact on WTP when compared to LE (Mean Rank LE = 75,04 > Mean Rank RE = 69,40), but, on the other hand, RE has a higher impact on WTP when compared to SE and SEAE (Mean Rank RE = 69,40 > Mean Rank SE = 68,11 > Mean Rank SEAE = 67,33). Consequently, hypothesis H2d should be rejected (Figure 18).

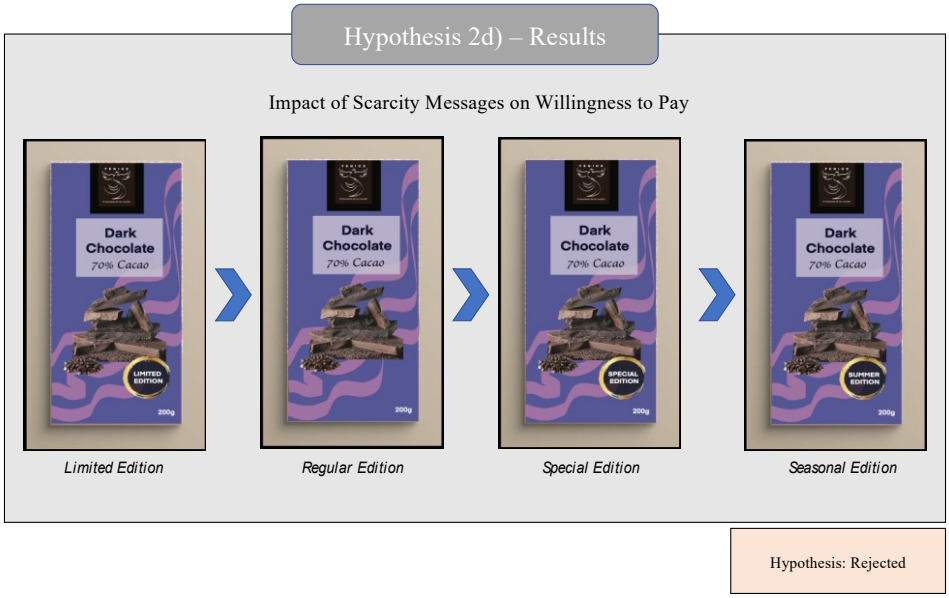

Figure 18: Hypothesis 2d) - Results

4.2.2.3 Hypothesis 3 and Full Model Test – Model 4

H3: The effect of scarcity messages on consumers' willingness to pay is mediated by perceived exclusivity.

With the aim of analyzing the conceptual framework in its entirety, the mediation model of Hayes & Preacher, 2014 was applied, specifically to understand the indirect effect of X (SM) on Y (WTP), through the mediator M (PE), as well as the direct effect of X on Y. The results showed that the model is not statistically significant (P-value = 0,4839), with a low percentage of the variance of WTP being explained by SM (R-sq = 0,0179) (Appendix 30). Since SM are a multi-categorical variable, three indirect effects must be taken into consideration, specifically LE in relation to RE, SE in relation to RE and SEAE in relation to RE.

As it was expected, different types of SM have different PE, as shown by path $\alpha 1$ (0,0241) for LE, $\alpha 2$ (0,1550) for SEAE, and $\alpha 3$ (0,3857) for SE. All three SM are not statistically significant (LE: P-value = 0,9315; SEAE: P-value = 0,5669; SE: P-value = 0,1612), and the impact of PE on WTP is given by b = 0,2835. Hence, the indirect effects of each type of SM can be calculated: LE: 0,007 ($\alpha 1b$ = 0,0241*0,2835); SEAE: 0,044 ($\alpha 2b$ = 0,1550*0,2835); and SE: 0,11 ($\alpha 3b$ = 0,3857*0,2835). Considering RE as the reference group, the WTP for LE increases by 0,007, for SEAE by 0,044, and for SE by 0,11. Ergo, since there is statistical evidence to affirm that the indirect effects are different from 0, we can conclude that consumers' willingness to pay for scarcity messages is moderated by perceived exclusivity.

The Hayes & Preacher model also indicates that there is a direct effect of SM (X) on WTP (Y), despite the impact of SM (X) on PE (M). Bearing this in mind, the direct effect of LE ($c'1$ = - 0,0756), SEAE ($c'2$ = - 0,1775) and SE ($c'3$ = - 0,1584) on WTP can be considered as negative, although all three are not statistically significant (LE: P-value = 0,8308; SEAE: P-value = 0,6035; SE: P-value = 0,6495). Therefore, since perceived exclusivity can be fully responsible for the positive impact on willingness to pay, hypothesis 3 should be accepted (Figure 19).

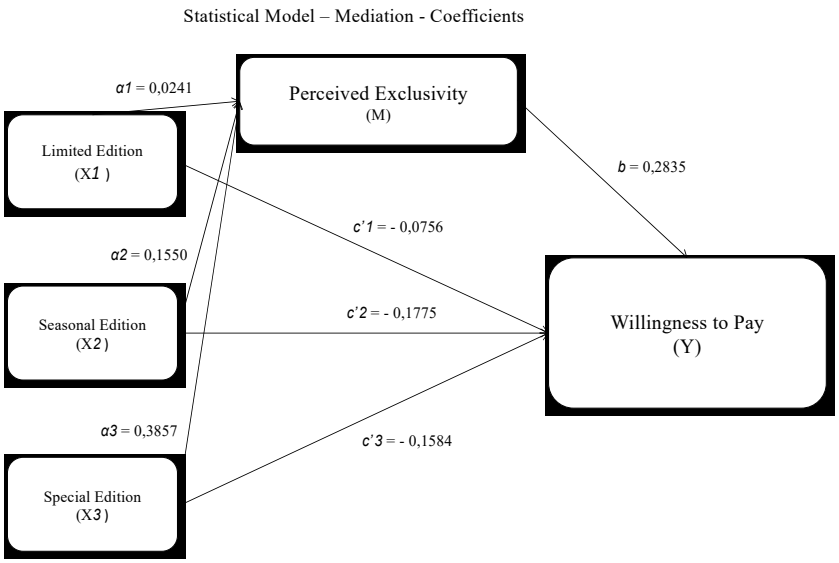

Figure 19: Hayes & Preacher Model – Statistical Mediation - Coefficients

CHAPTER 5: CONCLUSIONS AND LIMITATIONS

The following chapter has the aim of presenting the main findings and conclusions drawn from this investigation, while also approaching the managerial and academic implications, as well as the dissertation's limitations and suggestions for further research.

5.1 Main Findings & Conclusions

Taking into consideration the problem statement of this investigation, each research question will be individually addressed and related to the results of the analysis of the qualitative and quantitative data.

RQ1: *What is the impact of scarcity messages on consumers' willingness to pay?*

Past literature defends that consumers have a tendency to choose products that are presented in a scarce scenario over products available in an abundant way and that they are willing to pay higher prices for them (Mittone & Savadori, 2009), as was exemplified by (Jung & Kellaris, 2004) in a study with wine.

On the one hand, the results from the first hypothesis test (H1a) support the conclusion that SM increases WTP. On the other hand, considering the online survey, these statements were not possible to be confirmed. Through the Hayes & Preacher model it was possible to understand that there is a direct negative effect of SM on WTP, with SEAE having the highest negative impact, followed by SE and LE, despite not being statistically significant. In some way, since LE is normally the type of SM that has the highest impact on WTP (Aggarwal et al., 2011; L. Wu & Lee, 2016), in this case they have the lowest negative impact, which, in other words, is a positive aspect when compared to the other stronger negative effects from SEAE and SE.

At the same time, this result is surprising since it has been proven through past literature that SM increases WTP.

RQ2: *Which type of scarcity message has the highest impact on consumers' willingness to pay?*

The results showed that the four types of SM have different impacts on the WTP, with the highest effect being from LE, as expected through the conclusions of (Aggarwal et al., 2011; L. Wu & Lee, 2016), in which the authors state that LQS have higher impacts than LTS.

Surprisingly, the second-best result belonged to RE and its impact on WTP, which was higher than SE and SEAE, despite the results being slightly different. A possible explanation for this was the equal results for the perception levels of LE and RE on the manipulation check, which were positioned in second and third places, since the highest edition product correctly perceived was SE.

This result raises an interesting aspect regarding the perception of LE, which was expected to be identified more easily since the stimuli were designed to have the due labels for each specific type of SM and were additionally confirmed through the semi-structured interviews. As SE showed a better performance in terms of perception levels, this may be possibly justified by the fact that there is some degree of difficulty in identifying the differences between SE, LE and SEAE (time vs. quantity), which may lead to LE and SEAE being wrongly perceived as SE. This was a conclusion drawn from the stimuli, which may have affected this result.

RQ3: *What effect does perceived exclusivity have on the relationship between scarcity messages and consumers' willingness to pay?*

Considering that SM increases WTP (Mittone & Savadori, 2009), it is important to understand the role of PE in this relationship. According to (Dodds et al., 1991; Rao & Monroe, 1989; Zeithaml, 1988), price is an indication of quality, especially regarding limited offering, and it translates into more attractive products and services (Erickson & Johansson, 1985; Lichtenstein et al., 1988; Rao & Monroe, 1989). Hence, as consumers seek a hedonic feeling after acquiring an exclusive product, in their minds, the higher prices are justified by this outcome (Smith & Colgate, 2007).

As shown from the results derived from the data analysis, it is possible to conclude that PE has a positive effect on the relationship between SM and WTP. In the presence of PE, WTP for SE increases the most, followed by an increase for SEAE and, lastly, for LE. These effects

show that the three types of SM with different PE have different positive impacts on WTP, which is the conclusion the problem statement aimed to reach.

This result is also surprising since LE usually has the highest PE, mainly to the link to the luxury industry and, consequently, the highest impact on WTP. Similarly to the explanation presented in RQ2, this may be due to the fact that participants in the online survey misinterpreted LE and SEAE stimuli for SE, which is a common error since there is some difficulty in distinguishing the three types of SM.

5.2 Managerial / Academic Implications

Concerning academic implications, this investigation elucidates the fact that there is limited research regarding the differentiation of SM, which was confirmed through consumers' perceptions of LE, SE and SEAE. As there are scientific papers on LQS and LTS, there is a lack of focus on SEAE as marketing strategies, as well as the impact that they may have on WTP. Furthermore, future academic research may bring clarification on these topics, which may result in more accurate studies related to the impact of SM on consumers' WTP, with the mediated effect of PE.

In terms of managerial relevance, this research considers only four specific types of SM, whose PE differs from each other. As marketing strategies, there are other scarce cues that could be explored in more depth, as well as their relationships with WTP, which will also vary depending on the impact of PE. With the advancement in technology and the increasing presence of consumers in online channels, marketing managers need to adopt strategies that walk hand in hand with tendencies and, consequently, SM need to adapt and evolve with them.

Through the conclusions taken from past literature and this investigation, LE is the type of scarcity cue that has the highest impact on consumers' minds, influencing their acceptance towards higher prices since they perceive these products as more exclusive (Smith & Colgate, 2007). This is an important finding to marketing and sales managers as it can contribute to pricing decisions that will lead to an increase in the company's sales and consequent profits.

5.3 Limitations and Further Research

Regarding this investigation, several limitations can be identified and some suggestions on further research will be given regarding Chapter 2, Chapter 3 and Chapter 4.

In Chapter 2 - Literature Review and Conceptual Framework – the concepts of WTP, SM (LE, SE and SEAE) and PE could have been explored in further detail through existing relevant papers. While searching for the definitions of these terms and for key scientific literature, various marketing and consumer research journals contained paid articles, which were not possible to be acquired due to budget constraints. This is a limitation of the literature review chapter since there was a lot of information more specific to the FMCG industry, as well as some relationships between variables, that could not be accessed, resulting in a less enriching exploration of the concepts. The terms of LE, SE and SEAE were found to be difficult to define besides their difference in terms of time and quantity, especially SEAE, which were considered to be a junction of the two. This was also a conclusion drawn from the focus group and semi-structured interviews since participants had some difficulties when identifying each type of SM, apart from the labels on each one. Since this was an important factor, the stimuli were created with special attention to highlighting the labels. A suggestion to further research would be having a higher budget that enables access to more relevant papers and books, which will contribute to a deeper understanding of the variables being studied.

Secondly, in Chapter 3 – Methodology – the primary data gathered for this investigation also had some limitations. Concerning the choice of the type of product, in the focus group participants were presented two surveys to answer before proceeding with the discussion amongst them. In the first survey, related to their perceptions on SM, the last question was semi-open-ended and not closed-ended, which did not facilitate the analysis of the data, as the associations were concluded based on the frequency that they were mentioned. This may lead to some errors in the investigation which should be avoided in further research. During this step, close-ended questions should be implemented.

In Chapter 4 – Results and Discussion – there are several aspects that should be pointed out.

Firstly, regarding the constructs' measure reliability, the results were not the desired. A possible explanation for the low Cronbach Alphas of WTP (poor) and PE (questionable) was the low sample with which they were tested, as well as the alterations made in their items. In the mediator of PE, the statements were changed in terms of replacing "luxury goods" for "exclusive products", which may decrease the initial Cronbach Alpha from (le Monkhouse et al., 2012), considered as "Good". Additionally, with the aim of increasing the reliability of the analysis an item was taken, however the opposite effect occurred. As such, for future research it is advised to perform the reliability tests with a large and significant sample and avoid making numerous alterations to the items.

Secondly, the results on the manipulation check were equally unexpected, since the stimuli were confirmed to have the desired perceptions from the semi-structured interviews' participants, but had different outcomes from the online questionnaire, as the respondents characterized LE and SEAE as SE, hence the highest results. This may be due to the same factor that was explained before, which is the difficulty of differentiating the types of SM. Since the labels created on the stimuli were the pivotal factor for identifying each scarcity cue, it would be advised for further research to highlight, even more, the terms on the product's packaging. Additionally, it is important to take into consideration that there are other scarcity cues besides labels that can be used to test these perceptions, such as the packaging's colors, shape, etc.

Thirdly, regarding the results of the investigation's hypotheses, only H2c) and H2d) should be rejected. Concerning H2c), the results show that RE have the highest impact on WTP compared to SEAE, which does not correspond to the findings of past literature. Similarly, in H2d) RE have the highest impact on WTP compared to SE and SEAE, which is also not aligned with the findings of past scientific papers. This undesired outcome may be a result of a low sample size, consequently influencing the manipulation check results, which, per se, determined the undesired outcomes of these hypotheses. Hence, future research should consider a larger sample size to ensure a higher variety of responses, which may increase the level of accuracy on the manipulation check.

Lastly, the findings of hypothesis 3 show that there is a negative direct effect of each type of SM on WTP, which is not accurate to what has been studied previously. Past literature has found that SM increase WTP (Mittone & Savadori, 2009) and, considering this, a positive effect was expected. Ergo, as for future research regarding H3, the suggestions of H2c) and H2d) should be applied.

REFERENCE LIST

Aggarwal, P. (2011). Scarcity messages: A consumer competition perspective. *Article in Journal of Advertising*. https://doi.org/10.2307/23048691

Aggarwal, P., Jun, S. Y., & Huh, J. H. (2011). Scarcity messages. *Journal of Advertising*, *40*(3), 19–30.

Ancarani, F., & Shankar, V. (2004). Price levels and price dispersion within and across multiple retailer types: Further evidence and extension. *Journal of the Academy of Marketing Science*, *32*(2), 176–187.

Anderson, E. W. (1996). Customer satisfaction and price tolerance. *Marketing Letters*, *7*(3), 265–274.

Anderson, J. C., Jain, D., & Chintagunta, P. K. (1993). Understanding customer value in business markets: Methods of customer value assessment. *Journal of Business-to-Business Marketing*, *1*(1), 3–30.

Atwal, G., & Williams, A. (2017). Luxury brand marketing–the experience is everything! In *Advances in luxury brand management* (pp. 43–57). Springer.

Bae, Y., & Lee, S. (2005). The effect of scarcity message on consumer's purchase intention in the internet shopping mall. *ACR Asia-Pacific Advances*.

Balderjahn, I. (2003). Erfassung der preisbereitschaft. In *Handbuch Preispolitik* (pp. 387–404). Springer.

Bearden, D. J., Feinstein, A., & Cohen, L. L. (2012). The influence of parent preprocedural anxiety on child procedural pain: Mediation by child procedural anxiety. *Journal of Pediatric Psychology*, *37*(6), 680–686.

Bolton, R. N., & Shankar, V. (2003). An empirically derived taxonomy of retailer pricing and promotion strategies. *Journal of Retailing*, *79*(4), 213–224.

Boyce, C., & Neale, P. (2006). *Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input*.

Breidert, C., Hahsler, M., & Reutterer, T. (2006). A review of methods for measuring willingness-to-pay. *Innovative Marketing*, *2*(4), 8–32.

Brock, T. C. (1968). Implications of commodity theory for value change. In *Psychological foundations of attitudes* (pp. 243–275). Elsevier.

Brock, T. C., & Mazzocco, P. J. (2004). Responses to scarcity: A commodity theory perspective on reactance and rumination. *Motivational Analyses of Social Behavior: Building on Jack Brehm's Contributions to Psychology*, 129–148.

Brown, S. (2001). Torment your customers (they'll love it). *Harvard Business Review*, *79*(9), 82–88.

Brown, T. C., Champ, P. A., Bishop, R. C., & McCollum, D. W. (1996). Which response format reveals the truth about donations to a public good? *Land Economics*, 152–166.

Cameron, J. (2005). Focusing on the focus group. *Qualitative Research Methods in Human Geography*, *2*(8), 116–132.

Carpenter, G. S., Glazer, R., & Nakamoto, K. (1994). Meaningful brands from meaningless differentiation: The dependence on irrelevant attributes. *Journal of Marketing Research*, *31*(3), 339–350.

Cialdini, R. B. (1987). *Influence* (Vol. 3). A. Michel Port Harcourt.

Cialdini, R. B., & James, L. (2009). *Influence: Science and practice* (Vol. 4). Pearson education Boston, MA.

Cremer, S. (2018). The impact of scarcity messages on the online sales of physical information goods. *Proceedings of the 51st Hawaii International Conference on System Sciences*.

Creswell, J. W. (2009). Research design: Qualitative and mixed methods approaches. *London and Thousand Oaks: Sage Publications*.

Crow, G., & Wiles, R. (2008). *Managing anonymity and confidentiality in social research: the case of visual data in Community research*.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, *28*(3), 307–319.

Erickson, G. M., & Johansson, J. K. (1985). The role of price in multi-attribute product evaluations. *Journal of Consumer Research*, *12*(2), 195–199.

Esch, F.-R., & Winter, K. (2010a). Evaluation and feedback effects of limited editions in FMCG categories. In *Advances in Advertising Research (Vol. 1)* (pp. 21–36). Springer.

Esch, F.-R., & Winter, K. (2010b). Evaluation and feedback effects of limited editions in FMCG categories. In *Advances in Advertising Research (Vol. 1)* (pp. 21–36). Springer.

George, D., & Mallery, P. (2003). *SPSS for Windoas step bʁ step: A Simple Guide and Reference*. Boston: Update, Allyn & Bacon.

Gerald, B. (2018). A brief review of independent, dependent and one sample t-test. *International Journal of Applied Mathematics and Theoretical Physics*, *4*(2), 50–54.

Gierl, H., & Huettl, V. (2010a). Are scarce products always more attractive? The interaction of different types of scarcity signals with products' suitability for conspicuous consumption. *International Journal of Research in Marketing*, *27*(3), 225–235.

Gierl, H., & Huettl, V. (2010b). Are scarce products always more attractive? The interaction of different types of scarcity signals with products' suitability for conspicuous consumption. *International Journal of Research in Marketing*, *27*(3), 225–235.

Gierl, H., Plantsch, M., & Schweidler, J. (2008). Scarcity effects on sales volume in retail. *The International Review of Retail, Distribution and Consumer Research*, *18*(1), 45–61.

Gravetter, F. J., Wallnau, L. B., Forzano, L.-A. B., & Witnauer, J. E. (2020). *Essentials of statistics for the behavioral sciences*. Cengage Learning.

Griskevicius, V., Goldstein, N. J., Mortensen, C. R., Sundie, J. M., Cialdini, R. B., & Kenrick, D. T. (2009). Fear and loving in Las Vegas: Evolution, emotion, and persuasion. *Journal of Marketing Research*, *46*(3), 384–395.

Hanna, N., & Dodge, H. R. (2017). *Pricing: policies and procedures*. Macmillan International Higher Education.

Hauser, D. J., Ellsworth, P. C., & Gonzalez, R. (2018). Are manipulation checks necessary? *Frontiers in Psychology*, *9*, 998.

Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology*, *67*(3), 451–470.

Hennigs, N., Wiedmann, K.-P., & Klarmann, C. (2012). Luxury brands in the digital age–exclusivity versus ubiquity. *Marketing Review St. Gallen*, *29*(1), 30–35.

Holmqvist, J., Ruiz, C. D., & Peñaloza, L. (2020). Moments of luxury: Hedonic escapism as a luxury experience. *Journal of Business Research*, *116*, 503–513.

Homburg, C., Koschate, N., & Hoyer, W. D. (2005). Do Satisfied Customers Really Pay More? A Study of the Relationship Between Customer Satisfaction and Willingness to Pay. In *Journal of Marketing* (Vol. 84).

Huang, H., Liu, S. Q., Kandampully, J., & Bujisic, M. (2020). Consumer responses to scarcity appeals in online booking. *Annals of Tourism Research*, *80*, 102800.

Hudders, L. (2012). Why the devil wears Prada: Consumers' purchase motives for luxuries. *Journal of Brand Management*, *19*(7), 609–622.

Jang, W. E., Ko, Y. J., Morris, J. D., & Chang, Y. (2015). Scarcity message effects on consumption behavior: Limited edition product considerations. *Psychology & Marketing*, *32*(10), 989–1001.

Johnson, I. R., & Fujita, K. (2012). Change we can believe in: Using perceptions of changeability to promote system-change motives over system-justification motives in information search. *Psychological Science*, *23*(2), 133–140.

Jung, J. M., & Kellaris, J. J. (2004). Cross-national differences in proneness to scarcity effects: The moderating roles of familiarity, uncertainty avoidance, and need for cognitive closure. *Psychology & Marketing*, *21*(9), 739–753.

Kalish, S., & Nelson, P. (1991). A comparison of ranking, rating and reservation price measurement in conjoint analysis. *Marketing Letters*, *2*(4), 327–335.

Kaushik, M., & Guleria, N. (2020). The impact of pandemic COVID-19 in workplace. *European Journal of Business and Management*, *12*(15), 1–10.

Kepferer, J. N., & Bastien, V. (2009). *The luxury strategy: break the rules of marketing to build luxury brandes*. London: Kogan Page Publishers.

Kohli, R., & Mahajan, V. (1991). A reservation-price model for optimal pricing of multiattribute products in conjoint analysis. *Journal of Marketing Research*, *28*(3), 347–354.

Krishna, A., Wagner, M., Yoon, C., & Adaval, R. (2006). Effects of extreme-priced products on consumer reservation prices. *Journal of Consumer Psychology*, *16*(2), 176–190.

Kristensen, H., & Gärling, T. (1997). Determinants of buyers' aspiration and reservation price. *Journal of Economic Psychology*, *18*(5), 487–503.

Ku, H., Kuo, C., & Kuo, T. (2012). The effect of scarcity on the purchase intentions of prevention and promotion motivated consumers. *Psychology & Marketing*, *29*(8), 541–548.

le Gall-Ely, M. (2009). Definition, measurement and determinants of the consumer's willingness to pay: a critical synthesis and avenues for further research. *Recherche et Applications En Marketing (English Edition)*, *24*(2), 91–112.

le Monkhouse, L., Barnes, B. R., & Stephan, U. (2012). The influence of face and group orientation on the perception of luxury goods: A four market study of East Asian consumers. *International Marketing Review*.

Lee, E. M., Jeon, J. O., Li, Q., & Park, H. H. (2015). The differential effectiveness of scarcity message type on impulse buying: A cross-cultural study. *Journal of Global Scholars of Marketing Science*, *25*(2), 142–152.

Lichtenstein, D. R., Bloch, P. H., & Black, W. C. (1988). Correlates of price acceptability. *Journal of Consumer Research*, *15*(2), 243–252.

Longhurst, R. (2003). Semi-structured interviews and focus groups. *Key Methods in Geography*, *3*(2), 143–156.

Lynn, M. (1991). Scarcity effects on value: A quantitative review of the commodity theory literature. *Psychology & Marketing*, *8*(1), 43–57.

Lynn, M. (1992). The psychology of unavailability: Explaining scarcity and cost effects on value. *Basic and Applied Social Psychology*, *13*(1), 3–7.

Lynn, M., & Bogert, P. (1996). The effect of scarcity on anticipated price appreciation. *Journal of Applied Social Psychology*, *26*(22), 1978–1984.

Malhotra, D. (2010). The desire to win: The effects of competitive arousal on motivation and behavior. *Organizational Behavior and Human Decision Processes*, *111*(2), 139–146.

Malhotra, N., Hall, J., Shaw, M., & Oppenheim, P. (2006). *Marketing research: An applied orientation*. Pearson Education Australia.

Marbeau, Y. (1987a). What value pricing research today. *Journal of the Market Research Society*, *29*(2), 153–182.

Marbeau, Y. (1987b). What value pricing research today. *Journal of the Market Research Society*, *29*(2), 153–182.

Marn, M. v, Roegner, E. v, & Zawada, C. C. (2003). Pricing new products. *McKinsey Quarterly*, *3*, 40–49.

Mittone, L., & Savadori, L. (2009). The scarcity bias. *Applied Psychology*, *58*(3), 453–468.

Morgan, D. L. (1996). *Focus groups as qualitative research* (Vol. 16). Sage publications.

Nagle, T. T., & Reed, H. (2002). *Strategy and Tactics of Pricing: A Guide to Profitable Decision Making, 3/E (Стратегия и тактика ценообразования: руководство по принятию решений, приносящих прибыль)*.

Nichols, B. S. (2012). The development, validation, and implications of a measure of consumer competitive arousal (CCAr). *Journal of Economic Psychology*, *33*(1), 192–205.

Noone, B. M., & Lin, M. S. (2020). Scarcity-Based Price Promotions: How Effective are they in a Revenue Management Environment? *Journal of Hospitality & Tourism Research*, *44*(6), 883–907.

Nunan, D., Malhotra, N. K., & Birks, D. F. (2020). *Marketing Research: Applied Insight*. Pearson UK.

Okonkwo, U. (2009). Sustaining the luxury brand on the Internet. *Journal of Brand Management*, *16*(5), 302–310.

Okonkwo, U. (2010). *Luxury online: Styles, systems, strategies*. Springer.

Parker, J. R., & Lehmann, D. R. (2011). When shelf-based scarcity impacts consumer preferences. *Journal of Retailing*, *87*(2), 142–155.

Pechmann, C., & Ratneshwar, S. (1992). Consumer covariation judgments: Theory or data driven? *Journal of Consumer Research*, *19*(3), 373–386.

Phau, I., & Prendergast, G. (2000). Consuming luxury brands: the relevance of the 'rarity principle.' *Journal of Brand Management*, *8*(2), 122–138.

QueenmaryXM, & ShivanyS. (2019). *MARKETING STRATEGIES FOR THE SEASONAL OFFERS AT MANNAR RETAIL STORES* (Vol. 25).

Rao, A. R., & Monroe, K. B. (1989). The effect of price, brand name, and store name on buyers' perceptions of product quality: An integrative review. *Journal of Marketing Research*, *26*(3), 351–357.

Rita Dörnyei, K. (n.d.). *Summary Brief Drivers and Characteristics of Limited Edition Packages*.

Robinson, S. G., Brady, M. K., Lemon, K. N., & Giebelhausen, M. (2016). Less of this one? I'll take it: New insights on the influence of shelf-based scarcity. *International Journal of Research in Marketing*, *33*(4), 961–965.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.

Schoormans, J. P. L., & Robben, H. S. J. (1997). The effect of new package design on product attention, categorization and evaluation. *Journal of Economic Psychology*, *18*(2–3), 271–287.

Silayoi, P., & Speece, M. (2004). Packaging and purchase decisions: An exploratory study on the impact of involvement level and time pressure. *British Food Journal*.

Smith, J. B., & Colgate, M. (2007). Customer value creation: a practical framework. *Journal of Marketing Theory and Practice*, *15*(1), 7–23.

Song, M., Choi, S., & Moon, J. (2021). Limited time or limited quantity? The impact of other consumer existence and perceived competition on the scarcity messaging - Purchase intention relation. *Journal of Hospitality and Tourism Management*, *47*, 167–175. https://doi.org/10.1016/j.jhtm.2021.03.012

Song, M., Lee, W. S., & Moon, J. (2019). Exploring effective price presentation format to reduce decision difficulty and increase decision satisfaction. *Tourism Management Perspectives*, *32*, 100572.

Song, M., Noone, B. M., & Han, R. J. (2019). An examination of the role of booking lead time in consumers' reactions to online scarcity messages. *International Journal of Hospitality Management*, *77*, 483–491.

Sorescu, A., Frambach, R. T., Singh, J., Rangaswamy, A., & Bridges, C. (2011). Innovations in retail business models. *Journal of Retailing*, *87*, S3–S16.

Ståhlberg, M., & Ville Maila Maila, V. M. (2010). *SHOPPER MARKETING SHOPPER MARKETING*.

Stoetzel, J. (1954). In PL Reynaud (Ed.), La Psychologie Economique, chapter “Le Prix Comme Limite.” *Paris: PL Reynaud*.

Suri, R., Kohli, C., & Monroe, K. B. (2007). The effects of perceived scarcity on consumers’ processing of price information. *Journal of the Academy of Marketing Science*, *35*(1), 89–100.

Tynan, C., McKechnie, S., & Chhuon, C. (2010). Co-creating value for luxury brands. *Journal of Business Research*, *63*(11), 1156–1163.

Upshaw, D., Amyx, D., & Hardy, M. (2017). The nature of exclusivity. *Journal of Marketing Development and Competitiveness*, *11*(2), 46–63.

Valentine, G. (2005). Tell me about…: using interviews as a research methodology. *Methods in Human Geography: A Guide for Students Doing a Research Project*, *2*, 110–127.

Vickrey, W. (1961). Counterspeculation, auctions, and competitive sealed tenders. *The Journal of Finance*, *16*(1), 8–37.

Vigneron, F., & Johnson, L. W. (1999). A review and a conceptual framework of prestige-seeking consumer behavior. *Academy of Marketing Science Review*, *1*(1), 1–15.

Wertenbroch, K., & Skiera, B. (2002). Measuring consumers’ willingness to pay at the point of purchase. *Journal of Marketing Research*, *39*(2), 228–241.

Worchel, S., Lee, J., & Adewole, A. (1975). Effects of supply and demand on ratings of object value. *Journal of Personality and Social Psychology*, *32*(5), 906.

Wu, L., & Lee, C. (2016). Limited edition for me and best seller for you: The impact of scarcity versus popularity cues on self versus other-purchase behavior. *Journal of Retailing*, *92*(4), 486–499.

Wu, W., Lu, H., Wu, Y., & Fu, C. (2012). The effects of product scarcity and consumers’ need for uniqueness on purchase intention. *International Journal of Consumer Studies*, *36*(3), 263–274.

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, *52*(3), 2–22.

APPENDICES

Appendix 1: Focus Group – Demographics of the Participants

Appendix 1: Focus Group – Demographics of the Participants

Focus Group

Demographics

#	Gender	Age	Nationality	Education Level
1	Female	24	Portuguese	Bachelor's Degree
2	Female	23	Angolan	Bachelor's Degree
3	Female	23	Ucranian	Bachelor's Degree
4	Female	24	Brazilian Portuguese	Bachelor's Degree
5	Female	23	Portuguese	Master's Degree
6	Female	22	Portuguese	Bachelor's Degree
7	Female	22	Portuguese	Bachelor's Degree
8	Male	23	Portuguese	Bachelor's Degree
9	Male	22	Portuguese	Bachelor's Degree
10	Male	24	Brazilian	Bachelor's Degree
11	Male	19	Portuguese	High School
12	Male	24	Belgian	Master's Degree

Appendix 2: Focus Group – Guide of the Session

Appendix 2: Focus Group – Guide of the Session

First Part - Introduction	
Greetings and Introduction	○ The researcher started by presenting herself and thanked everyone for taking the time to participate in the focus group ○ Then, proceeded to explain that the goal of the focus group was to understand the perceptions of the participants regarding scarcity messages
Information on Guidelines and Rules	○ The researcher informed that the session would last between 45 minutes and 1 hour maximum ○ Regarding the code of conduct, she explained that the participants were expected to speak one at a time, that there were no right or wrong answers, and asked for their honest opinions ○ Following this, the moderator asked for the participant's permission to voice record the session, and highlighted that the data gathered would be treated with confidentiality and anonimity, only for the study's purpose ○ Finally, she presented herself and aked the participants to say their name, age, nationality, and highest education level
Second Part – Individual Assessment	
Introduction to Activity 1	○ The moderator introduced the first activitivy of the session, on understanding the participants' initial perceptions on scarcity messages ○ She then shared the link for a qualtrics survey, where participants had to answer two questions: (1) To what extent are you familiar with this type of scarcity message?; (2) When you think about this type of scarcity message, which products come to your mind?
Introduction to Activity 2	○ Activity 2 on imagery association was presented by the researcher, to understand if participants were able to correctly associate each type of scarcity message to their corresponding image ○ A link for qualtrics was shared, which was divided into three sections of different types of products: chocolate, coffee, and drinks

Third Part – Role Play	
Introduction to Activity 3	○ The researcher explained that four different scenarios were going to be presented, of real situations that usually happen on a day to day basis, in wich the participants, as a group, needed to decide on the type of scarcity message that was more appropriated for each of them. ○ Scenario 1: After a curfew of several months due to the pandemic, the first time that António and his mother are going to meet in person is at Mother's Day in Portugal. This way, António wants to buy a special gift for his mother, to finally celebrate this day together. What type of product edition should António buy? ○ Scenario 2: Luís is going to meet with his best friend Margarida in June, when she comes to Portugal to visit him. Margarida is currently studying fashion in Milan, and she is someone who likes to feel excentric and unique, and, when she can, she buys products that are not usually accessible to everyone. What type of product edition should Luís consider? ○ Scenario 3: The EuroCup is occurring in June, and the portuguese team is going to play with Germany. Vasco, Tomás, and Catarina are going to meet at Gonçalo's house to watch the game, and they are thinking about going to the supermarket to buy a pack of beers. What type of product edition should they consider? ○ Scenario 4: Today October begins and the exam season of Bernardo is about to start. As Bernardo is a student-worker, sometimes he does not have the time to study during the day, so he usually studies at night. Since from 7pm onwards he starts to feel tired, he drinks an energy drink to be productive. As he goes to the kitchen, he understands that he doesn't have any, and decides to go to the supermarket to buy some. Which type of product edition should Bernardo consider?
Fourth Part – Q&A and Closure	
Q&A and Final Remarks	○ The moderator informs the participants that they have reached the end of the focus group, and thanks them once again for their time. ○ She asks if there are any remaining questions and clarifies final doubts.

Appendix 3: Semi-Structured Interviews – Demographics of the Participants

Appendix 3: Semi-Structured Interviews – Demographics of the Participants

Semi-Structured Interviews

Demographics

#	Gender	Age	Nationality	Education Level
1	Female	24	Portuguese	Bachelor's Degree
2	Female	23	Angolan	Bachelor's Degree
3	Female	59	Portuguese	Bachelor's Degree
4	Female	23	Ucranian	Bachelor's Degree
5	Female	62	Portuguese	Master's Degree
6	Female	22	Portuguese	Bachelor's Degree
7	Female	22	Portuguese	Bachelor's Degree
8	Male	62	Portuguese	Master's Degree
9	Male	62	Portuguese	High School
10	Male	24	Brazilian	Bachelor's Degree
11	Male	19	Portuguese	High School
12	Male	24	Belgian	Master's Degree

Appendix 4: Main Study – Online Survey

Appendix 4: Main Study – Online Survey

CATÓLICA LISBON
BUSINESS & ECONOMICS

Introduction

Eng:

Dear respondent,

Firstly, I would like to thank you for taking the time to participate in this survey. My name is Carolina and I am currently doing my master's dissertation at Católica Lisbon School of Business and Economics. I would kindly ask you to be as truthful and authentic as possible when answering the questions.

The questionnaire will take approximately 4 minutes to be completed, and there are no right or wrong answers. It is also important to mention that anonymity is ensured, since the data gathered will be exclusively used with the purpose of this master's dissertation.

For further questions or observations, please send an email to: carolinapardal7@hotmail.com (Carolina Pardal Monteiro).

Once again, thank you for your time!

Pt:

Caro(a) participante,

Em primeiro lugar, gostaria de lhe agradecer por se disponibilizar a responder a este questionário. O meu nome é Carolina e estou neste momento a fazer a dissertação de mestrado na Católica Lisbon School of Business and Economics. Peço-lhe que seja o mais verdadeiro(a) e autêntico(a) possível ao responder às perguntas.

O questionário levará aproximadamente 4 minutos para ser completado, e não há respostas certas ou erradas. A confidencialidade é garantida, uma vez que os dados recolhidos serão utilizados exclusivamente para fins desta dissertação de mestrado.

Para quaisquer dúvidas ou observações, por favor envie um e-mail para: carolinapardal7@hotmail.com (Carolina Pardal Monteiro).

Mais uma vez, obrigada pelo seu tempo!

Block 1 – Screening Questions

Q1: Did you buy chocolate in the last year? | Comprou chocolate no último ano?

- Yes | Sim
- No | Não

If the participant answers "No", skips to the end of the survey

Block 2 – Understanding the Drivers of Chocolate Consumption

Q2: How often do you buy chocolate? (For you, family, or friends) | Com que frequência costuma comprar chocolate? (Para si, família ou amigos)

- Rarely (once a month or less) | Raramente (uma vez por mês ou menos)
- Occasionally (2-3 times a month) | Ocasionalmente (2-3 vezes por mês)
- Frequently (1-3 times a week) | Frequentemente (1-3 vezes por semana)
- Very frequently (4 times a week or more) | Muito frequentemente (4 vezes por semana ou mais)

Q3: Under which circumstances do you usually buy chocolate? (Please select all that apply) | Por que motivos costuma comprar chocolate? (Por favor selecione todas as opções aplicáveis)

- For personal consumption | Para consumo pessoal
- For consumption with friends and family | Para consumo com amigos e família
- For special occasions/to offer as a gift | Para ocasiões especiais / para oferecer como um presente

Block 3 – Randomization and Presentation of One Stimulus

Eng:
Imagine that you are at the supermarket with the intention to buy a chocolate bar. While you are looking at the shelves on the chocolate's specific section, the product presented below catches your attention.
After carefully analyzing this packaging, please answer the following questions.

Pt:
Imagine que vai ao supermercado com a intenção de comprar uma barra de chocolate. Enquanto olha para as prateleiras na secção dos chocolates, o seguinte produto chama a sua atenção.

Depois de analisar cuidadosamente esta embalagem, por favor responda às perguntas que se seguem.

Block 3.1 – Manipulation Check

Q4: What is the type of product edition presented before? Please select the one that applies. | Qual é o tipo de edição do produto apresentado anteriormente? Selecione a opção aplicável.

- Limited Edition | Edição Limitada
- Seasonal Edition | Edição Sazonal
- Special Edition | Edição Especial
- Regular Edition | Edição Regular

Block 3.2 – Perceived Exclusivity

Q5: Please classify to what extent do you agree with each statement, using a rating scale, ranging from 1 (Strongly disagree), to 7 (Strongly agree). | Classifique até que ponto concorda com cada afirmação, usando uma escala que varia entre 1 (Discordo totalmente) e 7 (Concordo totalmente).

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
It is good to be among a very few people owning a truly exclusive product.							
I would buy an exclusive good to make myself stand out.							
Once a product becomes mass-produced, it is not exclusive anymore.							
Some editions are bought because they are exclusive.							

	Discordo totalmente (1)	Discordo (2)	Discordo parcialmente (3)	Nem concordo nem discordo (4)	Concordo parcialmente (5)	Concordo (6)	Concordo totalmente (7)
É bom estar entre as poucas pessoas que possuem um produto verdadeiramente exclusivo.							
Compraria um produto exclusivo para me destacar.							
Uma vez que um produto é produzido em massa, não é mais exclusivo.							
Algumas edições são compradas por serem exclusivas.							

Block 3.3 – Willingness to Pay

Q6: Please consider the type of product edition you saw previously, and answer the following questions. | Considere o tipo de edição do produto que viu anteriormente e responda às seguintes questões.

	Price in €										
	0	1	2	3	4	5	6	7	8	9	10
Above which price would you definitely not buy the product, because you can't afford it or because you didn't think it was worth the money?											
Below which price would you say you would not buy the product because you would start to suspect the quality?											

	Preço em €										
	0	1	2	3	4	5	6	7	8	9	10
Acima de que preço definitivamente não compraria o produto, porque não o consegue pagar ou porque considera que não vale esse dinheiro?											
Abaixo de que preço não compraria o produto porque começaria a suspeitar da sua qualidade?											

Block 4 – Demographics

Q7: What is your gender? | Qual é o seu género?

- Male | Masculino
- Female | Feminino
- Non-binary / third gender | Não binário / terceiro género
- Prefer not to say | Prefiro não dizer

Q8: What is your age? | Qual é a sua idade?

- Under 18 | Menor de 18
- 18 - 24
- 25 - 34
- 35 – 44
- 45 – 54
- 55 – 64
- 65 – 74
- 75 – 84
- 85 or older | 85 ou mais velho

Q9: What is your nationality? | Qual é a sua nacionalidade?

- Portuguese | Portuguesa
- German | Alemã
- Italian | Italiana
- Spanish | Espanhola
- French | Francesa
- Dutch | Holandesa
- Other | Outra

Q10: What is the highest degree you have completed? | Qual é o grau mais alto de educação que concluiu?

- Less than high school | Menor que o ensino médio
- High school graduate or equivalent | Ensino médio ou equivalente
- Bachelor's degree | Licenciatura
- Master's degree / MBA | Mestrado / MBA
- PhD / Post-Doctoral Degree | Doutoramento
- Other | Outro

Q11: What is your current occupation? | Qual é a sua ocupação atual?

- Student | Estudante
- Student and Worker | Estudante e trabalhador
- Employed | Empregado (a)
- Unemployed | Desempregado (a)
- Retired | Reformado (a)
- Other | Outra

Q12: What is your monthly gross income? | Qual é o seu rendimento bruto mensal?

- Less than 500€ | Menos de 500 €
- 500€ - 999€

- 1000€ - 1499€
- 1500€ - 1999€
- 2000€ - 2499€
- 2500€ - 2999€
- 3000€ - 3499€
- 3500€ - 4000€
- More than 4000€ | Mais de 4000€

Block 5 – End of Survey

Eng:

We thank you for your time spent taking this survey.

Your response has been recorded.

Pt:

Obrigada por ter dedicado o seu tempo a responder a este questionário.

As suas respostas foram guardadas.

Appendix 5: Operational Model Details

Appendix 5: Operational Model Details

Construct	Literature	Journal	Number of Items	Description
Willigness to Pay	(Breidert et al., 2006)	Innovative Marketing	2	1 - Above which price would you definitely not buy the product, because you can't afford it or because you didn't think it was worth the money? 2 - Below which price would you say you would not buy the product because you would start to suspect the quality?
Perceived Exclusivity	(Le Monkhouse et al., 2012)	International Marketing Review	4	1 - It is good to be among a very few people owning a truly exclusive product 2 - I would buy an exclusive good to make myself stand out 3 - Once a product becomes mass-produced, it is not exclusive anymore 4 - some editions are bought because they are exclusive

Appendix 6: Demographics Details

Appendix 6: Demographics Details

Demographic Details – Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	47	33,8	33,8	33,8
	Female	91	65,5	65,5	99,3
	Non-binary / third gender	1	,7	,7	100,0
	Total	139	100,0	100,0	

Demographic Details – Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 18	1	,7	,7	,7
	18 – 24	68	48,9	48,9	49,6
	25 – 34	25	18,0	18,0	67,6
	35 – 44	11	7,9	7,9	75,5
	45 – 54	19	13,7	13,7	89,2
	55 – 64	11	7,9	7,9	97,1
	65 – 74	2	1,4	1,4	98,6
	85 or older	2	1,4	1,4	100,0
	Total	139	100,0	100,0	

Demographic Details – Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Portuguese	123	88,5	88,5	88,5
	German	6	4,3	4,3	92,8
	Italian	3	2,2	2,2	95,0
	Other	7	5,0	5,0	100,0
	Total	139	100,0	100,0	

Demographic Details – Highest Degree Completed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than high school	3	2,2	2,2	2,2
	High school graduate or equivalent	31	22,3	22,3	24,5
	Bachelor's degree	75	54,0	54,0	78,4
	Master's degree/MBA	27	19,4	19,4	97,8
	PhD/Post-Doctoral Degree	2	1,4	1,4	99,3
	Other	1	,7	,7	100,0
	Total	139	100,0	100,0	

Demographic Details – Current Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	42	30,2	30,2	30,2
	Student and Worker	24	17,3	17,3	47,5
	Employed	61	43,9	43,9	91,4
	Unemployed	4	2,9	2,9	94,2
	Retired	3	2,2	2,2	96,4
	Other	5	3,6	3,6	100,0
	Total	139	100,0	100,0	

Demographic Details – Monthly Gross Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 500€	35	25,2	25,2	25,2
	500€ - 999€	32	23,0	23,0	48,2
	1000€ - 1499€	15	10,8	10,8	59,0
	1500€ - 1999€	22	15,8	15,8	74,8
	2000€ - 2499€	13	9,4	9,4	84,2
	2500€ - 2999€	6	4,3	4,3	88,5
	3000€ - 3499€	7	5,0	5,0	93,5
	More than 4000€	9	6,5	6,5	100,0
	Total	139	100,0	100,0	

Appendix 7: Understanding the Drivers of Chocolate Consumption

Appendix 7: Understanding the Drivers of Chocolate Consumption

Drivers of Chocolate Consumption – Frequency of Chocolate Purchase

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rarely (once a month or less)	43	30,9	30,9	30,9
	Occasionally (2–3 times a month)	60	43,2	43,2	74,1
	Frequently (1–3 times a week)	31	22,3	22,3	96,4
	Very frequently (4 times a week or more)	5	3,6	3,6	100,0
	Total	139	100,0	100,0	

Drivers of Chocolate Consumption – Reason For Purchase – Personal Consumption

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	For personal consumption	104	74,8	100,0	100,0
Missing	System	35	25,2		
Total		139	100,0		

Drivers of Chocolate Consumption – Reason For Purchase – Consumption w/ Friends and Family

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	For consumption with friends and family	58	41,7	100,0	100,0
Missing	System	81	58,3		
Total		139	100,0		

Drivers of Chocolate Consumption – Reason For Purchase – Special Occasions/To Offer as a Gift

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	For special occasions/to offer as a gift	41	29,5	100,0	100,0
Missing	System	98	70,5		
Total		139	100,0		

Appendix 8: Key Variables Means, Min., Max., St. Deviation

Appendix 8: Key Variables Means, Min., Max., St. Deviation

Statistics – Scarcity Messages

Scarcity Messages

N	Valid	139
	Missing	0
Mean		2,52
Std. Error of Mean		,095
Median		3,00
Mode		3
Std. Deviation		1,125
Variance		1,266
Skewness		-,045
Std. Error of Skewness		,206
Kurtosis		-1,371
Std. Error of Kurtosis		,408
Range		3
Minimum		1
Maximum		4
Sum		350
Percentiles	25	1,00
	50	3,00
	75	4,00

Statistics – WTP

WillingnessToPay

N	Valid	139
	Missing	0
Mean		2,8990
Std. Error of Mean		,12381
Median		2,5900
Mode		1,18[a]
Std. Deviation		1,45965
Variance		2,131
Skewness		1,314
Std. Error of Skewness		,206
Kurtosis		1,682
Std. Error of Kurtosis		,408
Range		7,33
Minimum		,76
Maximum		8,08
Sum		402,96
Percentiles	25	1,9200
	50	2,5900
	75	3,4900

a. Multiple modes exist. The smallest value is shown

Statistics – Perceived Exclusivity

PerceivedExclusivity

N	Valid	139
	Missing	0
Mean		4,6511
Std. Error of Mean		,09696
Median		4,5000
Mode		4,50
Std. Deviation		1,14312
Variance		1,307
Skewness		-,064
Std. Error of Skewness		,206
Kurtosis		-,630
Std. Error of Kurtosis		,408
Range		5,00
Minimum		2,00
Maximum		7,00
Sum		646,50
Percentiles	25	3,7500
	50	4,5000
	75	5,5000

Appendix 9: Analysis of Cronbach Alpha

Appendix 9: Analysis of Cronbach Alpha

Reliability Statistics – WTP

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,548	,589	2

Reliability Statistics – Perceived Exclusivity

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,669	,660	4

Appendix 10: Manipulation Check – Descriptive Statistics

Appendix 10: Manipulation Check – Descriptive Statistics

Statistics – Manipulation Check

		LimitedEdition	SeasonalEdition	SpecialEdition	RegularEdition
N	Valid	139	139	139	139
	Missing	0	0	0	0
Mean		,2518	,2302	,2662	,2518
Std. Error of Mean		,03695	,03584	,03762	,03695
Median		,0000	,0000	,0000	,0000
Mode		,00	,00	,00	,00
Std. Deviation		,43562	,42249	,44356	,43562
Variance		,190	,179	,197	,190
Skewness		1,156	1,296	1,070	1,156
Std. Error of Skewness		,206	,206	,206	,206
Kurtosis		-,673	-,326	-,869	-,673
Std. Error of Kurtosis		,408	,408	,408	,408
Range		1,00	1,00	1,00	1,00
Minimum		,00	,00	,00	,00
Maximum		1,00	1,00	1,00	1,00
Sum		35,00	32,00	37,00	35,00
Percentiles	25	,0000	,0000	,0000	,0000
	50	,0000	,0000	,0000	,0000
	75	1,0000	,0000	1,0000	1,0000

LimitedEdition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	104	74,8	74,8	74,8
	1,00	35	25,2	25,2	100,0
	Total	139	100,0	100,0	

SeasonalEdition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	107	77,0	77,0	77,0
	1,00	32	23,0	23,0	100,0
	Total	139	100,0	100,0	

SpecialEdition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	102	73,4	73,4	73,4
	1,00	37	26,6	26,6	100,0
	Total	139	100,0	100,0	

RegularEdition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	104	74,8	74,8	74,8
	1,00	35	25,2	25,2	100,0
	Total	139	100,0	100,0	

Appendix 11: Manipulation Check – Mann-Whitney Tests

Appendix 11: Manipulation Check – Mann-Whitney Tests

Limited vs Special[a]

	LimitedEdition
Mann-Whitney U	1239,500
Wilcoxon W	1942,500
Z	-4,104
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: SpecialEdition

Limited vs Seasonal[a]

	LimitedEdition
Mann-Whitney U	1152,000
Wilcoxon W	1680,000
Z	-3,727
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: SeasonalEdition

Limited vs Regular[a]

	LimitedEdition
Mann-Whitney U	1207,500
Wilcoxon W	1837,500
Z	-3,953
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: RegularEdition

Special vs Seasonal[a]

	SpecialEdition
Mann-Whitney U	1120,000
Wilcoxon W	1648,000
Z	-3,869
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: SeasonalEdition

Special vs Regular[a]

	SpecialEdition
Mann-Whitney U	1172,500
Wilcoxon W	1802,500
Z	-4,104
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: RegularEdition

Regular vs Seasonal[a]

	SeasonalEdition
Mann-Whitney U	1260,000
Wilcoxon W	1890,000
Z	-3,727
Asymp. Sig. (2-tailed)	<,001

a. Grouping Variable: RegularEdition

Appendix 12: Hypothesis 1a) – Summary, Descriptives

Appendix 12: Hypothesis 1a) – Summary, Descriptives

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Scarcity Messages	N	Percent	N	Percent	N	Percent
WillingnessToPay	Limited Edition	35	100,0%	0	0,0%	35	100,0%
	Seasonal Edition	32	100,0%	0	0,0%	32	100,0%
	Special Edition	37	100,0%	0	0,0%	37	100,0%
	Regular Edition	35	100,0%	0	0,0%	35	100,0%

Descriptives

	Scarcity Messages			Statistic	Std. Error
WillingnessToPay	Limited Edition	Mean		2,9627	,22820
		95% Confidence Interval for Mean	Lower Bound	2,4989	
			Upper Bound	3,4265	
		5% Trimmed Mean		2,8820	
		Median		2,6400	
		Variance		1,823	
		Std. Deviation		1,35007	
		Minimum		,78	
		Maximum		7,09	
		Range		6,31	
		Interquartile Range		1,52	
		Skewness		1,133	,398
		Kurtosis		1,606	,778
	Seasonal Edition	Mean		2,8939	,28694
		95% Confidence Interval for Mean	Lower Bound	2,3087	
			Upper Bound	3,4791	
		5% Trimmed Mean		2,7518	
		Median		2,5300	
		Variance		2,635	
		Std. Deviation		1,62318	
		Minimum		,99	
		Maximum		8,08	
		Range		7,10	
		Interquartile Range		1,92	
		Skewness		1,396	,414
		Kurtosis		2,214	,809
	Special Edition	Mean		2,8292	,22521
		95% Confidence Interval for Mean	Lower Bound	2,3724	
			Upper Bound	3,2859	
		5% Trimmed Mean		2,6934	
		Median		2,5900	
		Variance		1,877	
		Std. Deviation		1,36990	
		Minimum		1,19	
		Maximum		7,00	
		Range		5,81	
		Interquartile Range		1,45	
		Skewness		1,553	,388
		Kurtosis		2,214	,759
	Regular Edition	Mean		2,9137	,26327
		95% Confidence Interval for Mean	Lower Bound	2,3787	
			Upper Bound	3,4488	
		5% Trimmed Mean		2,7931	
		Median		2,7700	
		Variance		2,426	
		Std. Deviation		1,55755	
		Minimum		,76	
		Maximum		7,65	
		Range		6,90	
		Interquartile Range		1,54	
		Skewness		1,295	,398
		Kurtosis		1,623	,778

Appendix 13: Hypothesis 1a) – Tests of Normality – Shapiro-Wilk

Appendix 13: Hypothesis 1a) – Tests of Normality – Shapiro-Wilk

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Scarcity Messages	Statistic	df	Sig.	Statistic	df	Sig.
WillingnessToPay	Limited Edition	,162	35	,021	,916	35	,011
	Seasonal Edition	,188	32	,006	,880	32	,002
	Special Edition	,188	37	,002	,839	37	<,001
	Regular Edition	,164	35	,019	,892	35	,002

a. Lilliefors Significance Correction

Appendix 14: Hypothesis 1a) – Mann-Whitney Test

Appendix 14: Hypothesis 1a) – Mann-Whitney Test

Ranks

	WillingnessToPay	N	Mean Rank	Sum of Ranks
Scarcity Messages	1,00	1	2,00	2,00
	2,00	1	1,00	1,00
	Total	2		

Test Statistics[a]

	Scarcity Messages
Mann-Whitney U	,000
Wilcoxon W	1,000
Z	-1,000
Asymp. Sig. (2-tailed)	,317
Exact Sig. [2*(1-tailed Sig.)]	1,000[b]

a. Grouping Variable: WillingnessToPay

b. Not corrected for ties.

Appendix 15: Hypothesis 1b) – Summary, Descriptives

Appendix 15: Hypothesis 1b) – Summary, Descriptives

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Scarcity Messages	N	Percent	N	Percent	N	Percent
PerceivedExclusivity	Limited Edition	35	100,0%	0	0,0%	35	100,0%
	Seasonal Edition	32	100,0%	0	0,0%	32	100,0%
	Special Edition	37	100,0%	0	0,0%	37	100,0%
	Regular Edition	35	100,0%	0	0,0%	35	100,0%

Descriptives

	Scarcity Messages			Statistic	Std. Error
PerceivedExclusivity	Limited Edition	Mean		4,5071	,19513
		95% Confidence Interval for Mean	Lower Bound	4,1106	
			Upper Bound	4,9037	
		5% Trimmed Mean		4,5000	
		Median		4,5000	
		Variance		1,333	
		Std. Deviation		1,15441	
		Minimum		2,25	
		Maximum		7,00	
		Range		4,75	
		Interquartile Range		1,50	
		Skewness		,192	,398
		Kurtosis		-,313	,778
	Seasonal Edition	Mean		4,5313	,23885
		95% Confidence Interval for Mean	Lower Bound	4,0441	
			Upper Bound	5,0184	
		5% Trimmed Mean		4,5538	
		Median		4,5000	
		Variance		1,826	
		Std. Deviation		1,35115	
		Minimum		2,00	
		Maximum		6,75	
		Range		4,75	
		Interquartile Range		2,19	
		Skewness		-,268	,414
		Kurtosis		-,803	,809
	Special Edition	Mean		4,6622	,16389
		95% Confidence Interval for Mean	Lower Bound	4,3298	
			Upper Bound	4,9945	
		5% Trimmed Mean		4,6460	
		Median		4,5000	
		Variance		,994	
		Std. Deviation		,99690	
		Minimum		3,00	
		Maximum		6,50	
		Range		3,50	
		Interquartile Range		1,88	
		Skewness		,069	,388
		Kurtosis		-1,043	,759
	Regular Edition	Mean		4,8929	,18198
		95% Confidence Interval for Mean	Lower Bound	4,5230	
			Upper Bound	5,2627	
		5% Trimmed Mean		4,8730	
		Median		4,7500	
		Variance		1,159	
		Std. Deviation		1,07663	
		Minimum		3,25	
		Maximum		7,00	
		Range		3,75	
		Interquartile Range		1,75	
		Skewness		,106	,398
		Kurtosis		-1,032	,778

Appendix 16: Hypothesis 1b) – Tests of Normality – Shapiro-Wilk

Appendix 16: Hypothesis 1b) – Tests of Normality – Shapiro-Wilk

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Scarcity Messages	Statistic	df	Sig.	Statistic	df	Sig.
PerceivedExclusivity	Limited Edition	,078	35	,200*	,983	35	,850
	Seasonal Edition	,105	32	,200*	,958	32	,243
	Special Edition	,121	37	,186	,955	37	,145
	Regular Edition	,130	35	,144	,955	35	,161

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Appendix 17: Hypothesis 1b) – Levene's Test and ANOVA

Appendix 17: Hypothesis 1b) – Levene's Test and ANOVA

Descriptives

PerceivedExclusivity

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Limited Edition	35	4,5071	1,15441	,19513	4,1106	4,9037	2,25	7,00
Seasonal Edition	32	4,5313	1,35115	,23885	4,0441	5,0184	2,00	6,75
Special Edition	37	4,6622	,99690	,16389	4,3298	4,9945	3,00	6,50
Regular Edition	35	4,8929	1,07663	,18198	4,5230	5,2627	3,25	7,00
Total	139	4,6511	1,14312	,09696	4,4594	4,8428	2,00	7,00

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
PerceivedExclusivity	Based on Mean	,866	3	135	,461
	Based on Median	,824	3	135	,483
	Based on Median and with adjusted df	,824	3	123,069	,483
	Based on trimmed mean	,893	3	135	,447

ANOVA

PerceivedExclusivity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,235	3	1,078	,822	,484
Within Groups	177,092	135	1,312		
Total	180,327	138			

Appendix 18: Hypothesis 2a) – Summary, Descriptives

Appendix 18: Hypothesis 2a) – Summary, Descriptives

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	LimitedEdition	N	Percent	N	Percent	N	Percent
WillingnessToPay	,00	104	100,0%	0	0,0%	104	100,0%
	1,00	35	100,0%	0	0,0%	35	100,0%

Descriptives

	LimitedEdition			Statistic	Std. Error
WillingnessToPay	,00	Mean		2,8775	,14712
		95% Confidence Interval for Mean	Lower Bound	2,5858	
			Upper Bound	3,1693	
		5% Trimmed Mean		2,7476	
		Median		2,5650	
		Variance		2,251	
		Std. Deviation		1,50035	
		Minimum		,76	
		Maximum		8,08	
		Range		7,33	
		Interquartile Range		1,55	
		Skewness		1,376	,237
		Kurtosis		1,786	,469
	1,00	Mean		2,9627	,22820
		95% Confidence Interval for Mean	Lower Bound	2,4989	
			Upper Bound	3,4265	
		5% Trimmed Mean		2,8820	
		Median		2,6400	
		Variance		1,823	
		Std. Deviation		1,35007	
		Minimum		,78	
		Maximum		7,09	
		Range		6,31	
		Interquartile Range		1,52	
		Skewness		1,133	,398
		Kurtosis		1,606	,778

Appendix 19: Hypothesis 2a) – Tests of Normality – Shapiro-Wilk

Appendix 19: Hypothesis 2a) – Tests of Normality – Shapiro-Wilk

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	LimitedEdition	Statistic	df	Sig.	Statistic	df	Sig.
WillingnessToPay	,00	,172	104	<,001	,879	104	<,001
	1,00	,162	35	,021	,916	35	,011

a. Lilliefors Significance Correction

Appendix 20: Hypothesis 2a) – Mann-Whitney Test

Appendix 20: Hypothesis 2a) –Mann-Whitney Test

Ranks

	LimitedEdition	N	Mean Rank	Sum of Ranks
WillingnessToPay	,00	104	68,30	7103,50
	1,00	35	75,04	2626,50
	Total	139		

Test Statistics[a]

	WillingnessToPay
Mann-Whitney U	1643,500
Wilcoxon W	7103,500
Z	-,856
Asymp. Sig. (2-tailed)	,392

a. Grouping Variable: LimitedEdition

Appendix 21: Hypothesis 2b) – Summary, Descriptives

Appendix 21: Hypothesis 2b) – Summary, Descriptives

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	SpecialEdition	N	Percent	N	Percent	N	Percent
WillingnessToPay	,00	102	100,0%	0	0,0%	102	100,0%
	1,00	37	100,0%	0	0,0%	37	100,0%

Descriptives

	SpecialEdition			Statistic	Std. Error
WillingnessToPay	,00	Mean		2,9243	,14818
		95% Confidence Interval for Mean	Lower Bound	2,6304	
			Upper Bound	3,2183	
		5% Trimmed Mean		2,8067	
		Median		2,5900	
		Variance		2,240	
		Std. Deviation		1,49658	
		Minimum		,76	
		Maximum		8,08	
		Range		7,33	
		Interquartile Range		1,55	
		Skewness		1,256	,239
		Kurtosis		1,627	,474
	1,00	Mean		2,8292	,22521
		95% Confidence Interval for Mean	Lower Bound	2,3724	
			Upper Bound	3,2859	
		5% Trimmed Mean		2,6934	
		Median		2,5900	
		Variance		1,877	
		Std. Deviation		1,36990	
		Minimum		1,19	
		Maximum		7,00	
		Range		5,81	
		Interquartile Range		1,45	
		Skewness		1,553	,388
		Kurtosis		2,214	,759

Appendix 22: Hypothesis 2b) – Tests of Normality – Shapiro-Wilk

Appendix 22: Hypothesis 2b) – Tests of Normality – Shapiro-Wilk

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	SpecialEdition	Statistic	df	Sig.	Statistic	df	Sig.
WillingnessToPay	,00	,133	102	<,001	,903	102	<,001
	1,00	,188	37	,002	,839	37	<,001

a. Lilliefors Significance Correction

Appendix 23: Hypothesis 2b) – Mann-Whitney Test

Appendix 23: Hypothesis 2b) – Mann-Whitney Test

Ranks

	SpecialEdition	N	Mean Rank	Sum of Ranks
WillingnessToPay	,00	102	70,69	7210,00
	1,00	37	68,11	2520,00
	Total	139		

Test Statistics[a]

	WillingnessToPay
Mann-Whitney U	1817,000
Wilcoxon W	2520,000
Z	-,334
Asymp. Sig. (2-tailed)	,739

a. Grouping Variable: SpecialEdition

Appendix 24: Hypothesis 2c) – Summary, Descriptives

Appendix 24: Hypothesis 2c) – Summary, Descriptives

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	SeasonalEdition	N	Percent	N	Percent	N	Percent
WillingnessToPay	,00	107	100,0%	0	0,0%	107	100,0%
	1,00	32	100,0%	0	0,0%	32	100,0%

Descriptives

	SeasonalEdition			Statistic	Std. Error
WillingnessToPay	,00	Mean		2,9005	,13683
		95% Confidence Interval for Mean	Lower Bound	2,6292	
			Upper Bound	3,1718	
		5% Trimmed Mean		2,7863	
		Median		2,6400	
		Variance		2,003	
		Std. Deviation		1,41536	
		Minimum		,76	
		Maximum		7,65	
		Range		6,90	
		Interquartile Range		1,54	
		Skewness		1,297	,234
		Kurtosis		1,564	,463
	1,00	Mean		2,8939	,28694
		95% Confidence Interval for Mean	Lower Bound	2,3087	
			Upper Bound	3,4791	
		5% Trimmed Mean		2,7518	
		Median		2,5300	
		Variance		2,635	
		Std. Deviation		1,62318	
		Minimum		,99	
		Maximum		8,08	
		Range		7,10	
		Interquartile Range		1,92	
		Skewness		1,396	,414
		Kurtosis		2,214	,809

Appendix 25: Hypothesis 2c) – Tests of Normality – Shapiro-Wilk

Appendix 25: Hypothesis 2c) – Tests of Normality – Shapiro-Wilk

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	SeasonalEdition	Statistic	df	Sig.	Statistic	df	Sig.
WillingnessToPay	,00	,134	107	<,001	,891	107	<,001
	1,00	,188	32	,006	,880	32	,002

a. Lilliefors Significance Correction

Appendix 26: Hypothesis 2c) – Mann-Whitney Test

Appendix 26: Hypothesis 2c) – Mann-Whitney Test

Ranks

	SeasonalEdition	N	Mean Rank	Sum of Ranks
WillingnessToPay	,00	107	70,80	7575,50
	1,00	32	67,33	2154,50
	Total	139		

Test Statistics[a]

	WillingnessToPay
Mann-Whitney U	1626,500
Wilcoxon W	2154,500
Z	-,428
Asymp. Sig. (2-tailed)	,669

a. Grouping Variable: SeasonalEdition

Appendix 27: Hypothesis 2d) – Summary, Descriptives

Appendix 27: Hypothesis 2d) – Summary, Descriptives

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	RegularEdition	N	Percent	N	Percent	N	Percent
WillingnessToPay	,00	104	100,0%	0	0,0%	104	100,0%
	1,00	35	100,0%	0	0,0%	35	100,0%

Descriptives

	RegularEdition			Statistic	Std. Error
WillingnessToPay	,00	Mean		2,8940	,14052
		95% Confidence Interval for Mean	Lower Bound	2,6153	
			Upper Bound	3,1727	
		5% Trimmed Mean		2,7743	
		Median		2,5650	
		Variance		2,054	
		Std. Deviation		1,43306	
		Minimum		,78	
		Maximum		8,08	
		Range		7,30	
		Interquartile Range		1,62	
		Skewness		1,340	,237
		Kurtosis		1,849	,469
	1,00	Mean		2,9137	,26327
		95% Confidence Interval for Mean	Lower Bound	2,3787	
			Upper Bound	3,4488	
		5% Trimmed Mean		2,7931	
		Median		2,7700	
		Variance		2,426	
		Std. Deviation		1,55755	
		Minimum		,76	
		Maximum		7,65	
		Range		6,90	
		Interquartile Range		1,54	
		Skewness		1,295	,398
		Kurtosis		1,623	,778

Appendix 28: Hypothesis 2d) – Tests of Normality – Shapiro-Wilk

Appendix 28: Hypothesis 2d) – Tests of Normality – Shapiro-Wilk

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	RegularEdition	Statistic	df	Sig.	Statistic	df	Sig.
WillingnessToPay	,00	,138	104	<,001	,891	104	<,001
	1,00	,164	35	,019	,892	35	,002

a. Lilliefors Significance Correction

Appendix 29: Hypothesis 2d) – Mann-Whitney Test

Appendix 29: Hypothesis 2d) – Mann-Whitney Test

Ranks

	RegularEdition	N	Mean Rank	Sum of Ranks
WillingnessToPay	,00	104	70,20	7301,00
	1,00	35	69,40	2429,00
	Total	139		

Test Statistics[a]

	WillingnessToPay
Mann-Whitney U	1799,000
Wilcoxon W	2429,000
Z	-,102
Asymp. Sig. (2-tailed)	,919

a. Grouping Variable: RegularEdition

Appendix 30: Hypothesis 3) – Mediation Effect and Full Model test

Appendix 30: Hypothesis 3) – Mediation Effect and Full Model Test

Matrix

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

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

**************************************************************************
Model  : 4
    Y  : WTP
    X  : Q4
    M  : PE

Sample
Size:  139

Coding of categorical X variable for analysis:
     Q4     X1     X2     X3
  1,000   ,000   ,000   ,000
  2,000  1,000   ,000   ,000
  3,000   ,000  1,000   ,000
  4,000   ,000   ,000  1,000

**************************************************************************
OUTCOME VARIABLE:
 PE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1339      ,0179     1,3118      ,8221     3,0000   135,0000      ,4839


Model
              coeff         se          t          p       LLCI       ULCI
constant     4,5071      ,1936    23,2810      ,0000     4,1243     4,8900
X1            ,0241      ,2801      ,0861      ,9315     -,5299      ,5781
X2            ,1550      ,2701      ,5740      ,5669     -,3791      ,6891
X3            ,3857      ,2738     1,4088      ,1612     -,1558      ,9272

Standardized coefficients
        coeff
X1      ,0211
X2      ,1356
X3      ,3374

Covariance matrix of regression parameter estimates:
           constant         X1         X2         X3
constant      ,0375     -,0375     -,0375     -,0375
X1           -,0375      ,0785      ,0375      ,0375
X2           -,0375      ,0375      ,0729      ,0375
X3           -,0375      ,0375      ,0375      ,0750

**************************************************************************
OUTCOME VARIABLE:
 WTP

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,2226      ,0496     2,0855     1,7465     4,0000   134,0000      ,1435
```

Model

	coeff	se	t	p	LLCI	ULCI
constant	1,6847	,5466	3,0820	,0025	,6036	2,7659
X1	−,0756	,3532	−,2142	,8308	−,7742	,6230
X2	−,1775	,3409	−,5206	,6035	−,8518	,4968
X3	−,1584	,3477	−,4554	,6495	−,8461	,5294
PE	,2835	,1085	2,6129	,0100	,0689	,4982

Standardized coefficients

	coeff
X1	−,0518
X2	−,1216
X3	−,1085
PE	,2221

Covariance matrix of regression parameter estimates:

	constant	X1	X2	X3	PE
constant	,2988	−,0583	−,0514	−,0391	−,0531
X1	−,0583	,1248	,0596	,0597	−,0003
X2	−,0514	,0596	,1162	,0603	−,0018
X3	−,0391	,0597	,0603	,1209	−,0045
PE	−,0531	−,0003	−,0018	−,0045	,0118

Test(s) of X by M interaction:

F	df1	df2	p
1,2789	3,0000	131,0000	,2844

********** TOTAL EFFECT MODEL **********
OUTCOME VARIABLE:
WTP

Model Summary

R	R-sq	MSE	F	df1	df2	p
,0335	,0011	2,1755	,0507	3,0000	135,0000	,9849

Model

	coeff	se	t	p	LLCI	ULCI
constant	2,9627	,2493	11,8836	,0000	2,4697	3,4558
X1	−,0688	,3607	−,1907	,8490	−,7823	,6446
X2	−,1335	,3478	−,3839	,7016	−,8213	,5543
X3	−,0490	,3526	−,1390	,8897	−,7463	,6483

Standardized coefficients

	coeff
X1	−,0471
X2	−,0915
X3	−,0336

Covariance matrix of regression parameter estimates:

	constant	X1	X2	X3
constant	,0622	−,0622	−,0622	−,0622
X1	−,0622	,1301	,0622	,0622
X2	−,0622	,0622	,1210	,0622
X3	−,0622	,0622	,0622	,1243

********** CORRELATIONS BETWEEN MODEL RESIDUALS **********

	PE	WTP
PE	1,0000	,0000
WTP	,0000	1,0000

```
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Relative total effects of X on Y:
       Effect         se          t          p       LLCI       ULCI       c_ps
X1     -,0688      ,3607     -,1907      ,8490     -,7823      ,6446     -,0471
X2     -,1335      ,3478     -,3839      ,7016     -,8213      ,5543     -,0915
X3     -,0490      ,3526     -,1390      ,8897     -,7463      ,6483     -,0336

Omnibus test of total effect of X on Y:
    R2-chng          F        df1        df2          p
      ,0011      ,0507     3,0000   135,0000      ,9849
----------

Relative direct effects of X on Y
       Effect         se          t          p       LLCI       ULCI      c'_ps
X1     -,0756      ,3532     -,2142      ,8308     -,7742      ,6230     -,0518
X2     -,1775      ,3409     -,5206      ,6035     -,8518      ,4968     -,1216
X3     -,1584      ,3477     -,4554      ,6495     -,8461      ,5294     -,1085

Omnibus test of direct effect of X on Y:
    R2-chng          F        df1        df2          p
      ,0024      ,1120     3,0000   134,0000      ,9530
----------

Relative indirect effects of X on Y

 Q4          ->    PE          ->    WTP

       Effect     BootSE   BootLLCI   BootULCI
X1      ,0068      ,0915     -,1860      ,1875
X2      ,0440      ,0800     -,1036      ,2255
X3      ,1094      ,0883     -,0372      ,3064


 Partially standardized relative indirect effect(s) of X on Y:

  Q4          ->    PE          ->    WTP

        Effect     BootSE   BootLLCI   BootULCI
 X1      ,0047      ,0622     -,1271      ,1258
 X2      ,0301      ,0541     -,0715      ,1515
 X3      ,0749      ,0588     -,0270      ,2041

 ************************ 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

 NOTE: Standardized coefficients for dichotomous or multicategorical X are in
       partially standardized form.

 NOTE: The contrast option is not available with a multicategorical X.

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

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	SM, PE[b]	.	Enter

a. Dependent Variable: WTP

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,222[a]	,049	,035	1,43376

a. Predictors: (Constant), SM, PE

b. Dependent Variable: WTP

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14,449	2	7,224	3,514	,032[b]
	Residual	279,571	136	2,056		
	Total	294,020	138			

a. Dependent Variable: WTP

b. Predictors: (Constant), SM, PE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1,722	,554		3,111	,002
	PE	,285	,108	,223	2,644	,009
	SM	-,058	,109	-,045	-,531	,596

a. Dependent Variable: WTP

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2,1748	3,6555	2,8990	,32357	139
Std. Predicted Value	-2,238	2,338	,000	1,000	139
Standard Error of Predicted Value	,132	,342	,205	,048	139
Adjusted Predicted Value	2,2005	3,7724	2,8999	,32835	139
Residual	-2,65511	4,76711	,00000	1,42333	139
Std. Residual	-1,852	3,325	,000	,993	139
Stud. Residual	-1,890	3,359	,000	1,003	139
Deleted Residual	-2,76662	4,86448	-,00089	1,45367	139
Stud. Deleted Residual	-1,909	3,494	,004	1,017	139
Mahal. Distance	,185	6,850	1,986	1,368	139
Cook's Distance	,000	,085	,007	,014	139
Centered Leverage Value	,001	,050	,014	,010	139

a. Dependent Variable: WTP