National Brands versus Store Brands: A Study on Perceived Value, Brand Equity, and Willingness to Pay

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Dissertation written under the supervision of Prof. Paulo Romeiro.

Dissertation submitted in partial fulfillment of requirements for the MSc in International Management with a Specialization in Marketing at the Universidade Católica Portuguesa, 01.06.2023.

ABSTRACT

Title: National Brands versus Store Brands: A Study on Perceived Value, Brand Equity, and Willingness to Pay

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Global instability due to the COVID-19 pandemic and ongoing international conflicts, along with high inflation rates, have impacted prices and led to increased price sensitivity among consumers. Store brands now account for 37% of European grocery sales, posing a challenge to national brands. Thus, this dissertation investigates the consumers' willingness to pay for national versus store brands and the mediating role of perceived value and brand equity.

In specific, two product categories were explored, namely chocolate and toilet paper, which possess more hedonic and utilitarian attributes, respectively. Therefore, a 2x4 factorial design with two independent variables, one with two levels (hedonic, utilitarian) and one with four levels (National Brand, Continente, Pingo Doce, Lidl), was set up. The stimuli were applied to an online survey and randomly presented to 289 respondents.

Findings suggest no significant difference in willingness to pay between national and store brands. Although national brands have a higher perceived value, store brands have developed brand equity over time. However, both variables, perceived value and brand equity, do not mediate the relationship between brand type and willingness to pay. Furthermore, product type moderates two of the three above-described relationships.

This thesis contributes to filling the gap in the literature regarding the competition between national and store brands by having a deeper look at the factors under investigation and providing a current perspective on the topic. From a managerial viewpoint, this research helps to identify consumer preferences, refine brand positioning, and create focused marketing strategies for greater profitability.

Keywords: National brand, store brand, private label, perceived value, brand equity, willingness to pay, grocery, supermarkets, retailing, competition, fast-moving consumer goods

SUMÁRIO

Título: Marcas Nacionais versus Marcas Próprias: Um estudo sobre o valor percebido, o valor da marca e a disponibilidade para pagar

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A instabilidade global devido à COVID-19 e aos conflitos internacionais em curso, juntamente com elevada inflação, tiveram impacto nos preços e conduziram a maior suscetibilidade nos consumidores. As marcas próprias representam atualmente 37% das vendas de retalho na Europa, constituindo um desafio para as marcas nacionais. Esta dissertação investiga a disponibilidade dos consumidores para pagar por marcas nacionais versus marcas próprias e o papel mediador do valor percebido e valor de marca.

Foram analisadas duas categorias de produtos, chocolate e papel higiénico, com atributos hedonistas e utilitários respetivamente. Criou-se um design fatorial 2x4 com duas variáveis independentes, uma com dois níveis (hedónica, utilitária) e outra com quatro níveis (Marca Nacional, Continente, Pingo Doce, Lidl). Os estímulos foram aplicados num inquérito e apresentados aleatoriamente a 289 respondentes.

Não se verificou uma diferença significativa na disponibilidade para pagar entre os dois tipos de marca. Embora as marcas nacionais tenham um valor percebido mais elevado, as marcas próprias conseguiram desenvolver o valor de marca. No entanto, ambas as variáveis, não medeiam a relação entre tipo de marca e disponibilidade para pagar. Para além disso, o tipo de produto modera duas das três relações acima descritas.

Esta tese contribui para preencher a lacuna na literatura relativa à concorrência entre marcas nacionais e marcas próprias, aprofundando os fatores em estudo e fornecendo uma perspetiva atual. Do ponto de vista da gestão, esta investigação ajuda a identificar preferências dos consumidores, melhorar o posicionamento da marca e criar estratégias de marketing direcionadas para maiores lucros.

Palavras-chave: Marca nacional, marca de loja, marca própria, valor percebido, valor da marca, disponibilidade para pagar, mercearia, supermercados, retalho, concorrência, bens de consumo rápido

ACKNOWLEDGEMENTS

I am filled with profound gratitude and a swirl of emotions as I come to the end of my academic journey and the completion of my Master's Thesis. This milestone would not have been possible without the support, encouragement, and love of the remarkable individuals who have been by my side throughout this experience.

First and foremost, I would like to express my deepest gratitude to my family, who has always been there for me and provided me with every opportunity in life. Thanks for believing in me, supporting me, loving me unconditionally, and allowing me to pursue my dreams.

Second, I would like to show my appreciation to my supervisor, Professor Paulo Romeiro, for providing me with invaluable guidance and expertise throughout this research project as well as to my classmates, who have also provided insightful feedback and advice.

I would also like to thank my dear friends – whether met in Germany, Mexico, or Portugal, for being a constant source of motivation, laughter, and support. Your words of encouragement, late-night study sessions, and shared moments of celebration have made this adventure even more meaningful and one I will never forget.

Lastly, to everyone else who has been part of this journey – whether mentioned or not – I thank you for your support, encouragement, and belief in me.

As I embark on the next chapter of my journey, I carry with me the lessons learned, the memories cherished, and the relationships nurtured. I am excited about what the future holds for me. Thank you.

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GLOSSARY

BE	Brand Equity
BT	Brand Type
CBBE	Customer-Based Brand Equity
DV	Dependent Variable
IV	Independent Variable
PEM	Perceived Emotional Value
PQ	Perceived Quality
PSM	Price Sensitivity Meter
PSV	Perceived Social Value
PT	Product Type
PV	Perceived Value
PVM	Perceived Value for Money
WTP	Willingness to Pay

CHAPTER 1: INTRODUCTION

1.1 Background

The global COVID-19 pandemic and ongoing conflicts, such as the Ukraine war, have led to increased uncertainty and instability in the global economy, resulting in rising inflation rates. Food prices have been particularly affected, placing a significant burden on household budgets. This has led to consumers becoming more price-sensitive and value-conscious in their shopping behaviors, prioritizing price-quality performance as a critical factor in their purchasing decisions (Schils, 2022). Simultaneously, store brands are steadily growing, posing a challenge to national brands. According to recent statistics from PLMA and NielsenIQ, the private-label market in Europe's grocery sector reached €302 billion in 2022, and the value share of store brands has increased by 1.2%. Moreover, private labels now account for 37% of sales in the European grocery channel. Specifically, Portugal has one of the highest private-label growth rates (2.9%) and one of the most significant private-label shares (39%) (Wynne-Jones, 2023). While some authors see the shift from national to store brands as temporary (e.g., Lamey et al., 2007), others argue that this trend will persist (e.g., Steenkamp et al., 2010).

Thus, the competition between national and store brands is an ongoing subject of interest and research in the fields of marketing and consumer behavior, with a particular focus on understanding consumers' perceptions, preferences, and willingness to pay (WTP). According to the literature, the latter seems to be influenced, among other factors, by brand equity (BE) and perceived value (PV) (Keller, 1993, 2001; Ruan et al., 2020). Aaker (1991) describes BE as a construct that encompasses both positive and negative associations with a brand that contribute to the value that a product or service gives to a company and its customers. Even though national brands are perceived to have a higher BE (De Wulf et al., 2005), store brands seem to have developed BE throughout the years (Cuneo et al., 2012). PV, referring to the tradeoff of what is given and what is received (Zeithaml, 1988), is not only a driver of WTP but also of BE. Thus, it is essential to investigate this variable further in this study's context.

The shift towards private labels is not uniform across categories, with certain categories displaying higher levels of price sensitivity than others (Schweizer, 2022). Thus, two distinct product categories will be explored, namely chocolate and toilet paper, which possess more hedonic and utilitarian characteristics, respectively.

Therefore, this research aims to fill the gap in the literature regarding the competition between national brands and store brands by having a deeper look at the factors under consideration and providing a contemporary perspective on the topic.

1.2 Problem Statement

The purpose of this dissertation is to investigate consumers' perceptions of national versus store brands as well as the mediating role of the PV and BE in, directly and indirectly, influencing the consumers' WTP. Moreover, product type (PT) (hedonic versus utilitarian) will be considered a moderator. Hence, the problem statement that guides this study is: "National Brands Versus Store Brands: A Study on Perceived Value, Brand Equity and Willingness to Pay", which is explored through the following research questions:

RQ1: What is the impact of brand type on the consumers' willingness to pay?

RQ2: How do consumers perceive store brands regarding perceived value and brand equity in comparison to national brands? And how do these concepts influence the willingness to pay of customers?

RQ3: How do these effects vary for hedonic and utilitarian products?

1.3 Relevance

Studying the competition between national and store brands has always been a complex and intriguing topic for both academics and marketers. However, in today's business landscape, it has become more relevant than ever before. Hence, both researchers and managers must understand the variables of PV, BE, and WTP in the context of national versus store brands. From an academic viewpoint, this study can provide a better comprehension of the factors contributing to shifts in the market shares for each brand type (BT). This could be useful for academics seeking to uncover new insights about consumer preferences and behavior. From a managerial perspective, it can help managers identify the key drivers of consumer choices, enabling them to position their brands more effectively and develop targeted pricing and marketing strategies to maximize their profitability.
As the competition between national and store brands intensifies, it is necessary to have a deeper look into the topic under investigation to gain a more modern outlook on the matter.

1.4 Research Methods

The research methodology for this dissertation consists of several approaches. First, a literature review was performed to provide an understanding of the existing academic knowledge on the research topic. The information was collected from prior studies, academic journals, papers, and books that focus on WTP, PV, and BE not only in general but also in the context of this research. The outcome is a conceptual framework that serves as a foundation for this study – allowing for the development of an operational model containing details on the variables to be assessed and the measurement scales to be used. This model formed the basis for the online survey, which measured the relationship between BT and consumers' WTP, including the effects of PV, BE, and PT. This research utilized a 2x4 factorial design and the sample size included 518 respondents. IBM's statistical software SPSS was used to analyze the gathered data. Of significance is that the statistical tests most suitable for the data and the research hypothesis were Simple Linear Regressions, Independent-Samples T-Tests, Mann-Whitney U Test, Kruskal-Wallis H Tests, and the PROCESS Models 1, 4, 6, and 85 from Hayes (2018).

1.5 Dissertation Outline

The present dissertation is structured in a total of five chapters, starting with this introductory chapter, where the problem statement and research questions are presented. The following chapter offers an extensive literature review that furnishes an in-depth understanding of the current scholarly knowledge on the research topic and presents the conceptual framework as well as the hypothesis that this dissertation seeks to address. The third chapter presents the research methodology for this investigation. In the fourth chapter, the analysis and results of the gathered data are presented to evaluate the legitimacy of each hypothesis. The fifth and final chapter comprises conclusions that address the main findings, limitations, and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

This chapter consists of a theoretical framework on the subjects related to the main research questions and study purpose. Here, the existing knowledge about the research topics is summarized, compared, and critically analyzed, allowing the development of hypotheses. The first part of the literature review mainly focuses on defining national and store brands. Subsequently, the WTP literature is discussed. Afterward, the topics of PV and BE are addressed. This is followed by the definition of PT as the moderator of the relationship between BT and other variables, such as PV, BE, and WTP. Finally, the conceptual framework is presented, summarizing the relationships between variables.

2.1 Brand Type

As the emergence and importance of store brands continue to increase, a closer look at the rising competition between national and store brands is critical. Therefore, this study differentiates national and store brands at the BT level. Store brands are a BT owned, controlled, and exclusively sold by retailers (Sethuraman, 1995). Historically, store labels offer lower or acceptable quality for lower prices (Burt, 2000; Parker et al., 1997). In comparison, national brands are a BT owned and controlled by manufacturers and sold to retailers, which traditionally offer excellent quality for high prices (Martenson, 2007). However, an evolution from private-label goods as low-quality, lower-priced alternatives to store brands offering a good-quality product alternative while still providing lower prices compared to national brands has been identified (Boyle et al., 2021; Burt, 2000; De Wulf et al., 2005). The empirical study of Steenkamp et al. (2010) suggests that the quality advantage of national brands has declined over the years. As private labels attain maturity, the willingness to pay a price premium for national brands decreases. This can be seen as a signal that store brands have acquired expertise in competing on quality against national brands over the years (Kadirov, 2015). The fading of the "quality gap" between national and store brands can also be seen when conducting blind taste tests (Rossi et al., 2015).

It is a fact that the market share of store brands expands when the economy is in distress and contracts when the economy is booming (Lamey et al., 2007). Furthermore, the probability of consumers switching back to national brands in recovery from an economic crisis is rather low – resulting in a permanent boost of the market share of store brands over the years and in customer loyalty towards private labels (Chandra Mandal, 2016; Steenkamp et al., 2010). To compensate for declining sales volumes, national brands have implemented robust pricing strategies to retain or even grow their profits (Steenkamp et al., 2010). Therefore, one success factor of store brands is the price differential between them and national brands (Sethuraman, 1995). However, as consumers are becoming price sensitive, this strategy could end up driving consumers to buy even more private-label goods (Chandra Mandal, 2016; Steenkamp et al., 2010). Some researchers have suggested that national brands should focus less on price reductions and more on other aspects, such as the improvement of quality, new product innovations, advertising, distinctive packaging, active procurement of copycat violators, improvement of communication on the difficulty of producing good quality products as well as the increase of the personal relevance of the product category (Gielens, 2012; Kadirov, 2015; Steenkamp et al., 2010). On the other hand, strategies for the further success of store brands have also been suggested. Store brands should not only focus on ensuring that private-label goods are available at low prices. New positioning and branding strategies should be introduced, such as the alteration of consumer's perceptions about private-label goods, investment in building a strong brand, introduction of product promotion stands at the point-of-sale, continuous optimization of shelf space as well as the development of advertising and promotion campaigns (Albayrak & Aslan, 2009; Dolekoglu et al., 2008; Rossi et al., 2015).

2.2 Willingness to Pay

The accurate determination of a consumer's WTP for a product or a service is of critical importance in many areas of marketing management, such as pricing strategies, demand estimations, and new product development (Breidert et al., 2006; Wertenbroch & Skiera, 2002). In general, WTP represents the highest price a buyer is prepared to pay for a precise quantity of a service or a product. When encountered with a set of competing alternatives, the consumer will purchase a good when the WTP exceeds the purchase price the most (Wertenbroch & Skiera, 2002). However, to fully understand and measure WTP, individuals must consider other factors, such as the costs of the product as well as its advantages and disadvantages (Ajzen & Driver, 1992).

Numerous methods to measure WTP with distinct implications and foundations have been presented in the relevant literature (Breidert et al., 2006). In the following, four common methods for measuring WTP will be introduced. These methods vary on whether WTP is measured in a hypothetical or actual context, with direct or indirect measurement techniques (Miller et al., 2011; Schmidt & Bijmolt, 2020).

Figure 1: Methods for Measuring Consumers' Willingness to Pay (Miller et al., 2011)

	Measurement	
Context	*Direct*	*Indirect*
Hypothetical WTP	OE question format	CBC analysis
Actual WTP	BDM mechanism	ICBC analysis

Hypothetical WTP, as the name implies, is a theoretical measure of WTP, meaning that the individual does not have to live with any financial consequences. Here, the participant only must indicate their desired payment amount. Actual WTP differentiates from Hypothetical WTP as the participant must pay the stated WTP for the product (Schmidt & Bijmolt, 2020). When measuring Hypothetical WTP, some authors prefer a direct approach where individuals are asked to directly state their WTP through open-ended questions (Abrams, 1964; Ajzen & Driver, 1992; Cameron et al., 1989). Other researchers prefer an indirect approach called Choice-Based Conjoint analysis, where the calculation of the WTP is based on a choice between a set of alternatives and its attributes (Louviere & Woodworth, 1983). It should be noted that these methods generate a hypothetical bias given the hypothetical context (Harrison & Rutstrom, 2008). Regarding measuring Actual WTP, a direct method commonly used is Becker, DeGroot, and Marschak's method (Becker et al., 1964), in which the participant is required to buy a good if the price drawn from a lottery is equal to or lower than the expressed WTP (Wertenbroch & Skiera, 2002). Lastly, the indirect approach for measuring Actual WTP is the Incentive-Aligned Choice-Based Conjoint analysis (Ding, 2007), where consumers are forced to purchase a product or a service based on the WTP deduced from their disclosed preference, utilizing the Becker, DeGroot, and Marschak's technique (Miller et al., 2011). Each measurement method has its benefits and limitations – depending on the academic or managerial task as well as on the available resources, the most suitable method must be chosen (Breidert et al., 2006).

The historical role of national brands as the category default brand has led to the belief that the WTP for national brands is higher regardless of the product-quality judgment (Boyle et al., 2021). In sum, consumers are willing to pay more for national brands in frequently purchased categories, in categories that provide high enjoyment in consumption, and if their price-quality inference is high (Sethuraman & Cole, 1999). Nonetheless, researchers argue that the WTP of consumers for national brands decreases as store brands mature (Steenkamp et al., 2010). The question arises whether consumers' WTP continues to be higher for national brands over store brands. Thus, this research hypothesizes:

H1: National brands will generate a higher willingness to pay than store brands.

2.3 Perceived Value

PV is often regarded as a critical factor to long-term success (Sweeney & Soutar, 2001). Understanding the customer's PV is not only viewed as a pricing or a market research technique but rather as a strategic tool to clarify a company's position (Ulaga & Chacour, 2001). As consumers become more demanding and value-driven, PV should be seen as a strategic source of competitive advantage (Robertson, 2009; Woodruff, 1997). Zeithaml (1988) defines PV as "the consumers' overall assessment of the utility of a product based on perceptions of what is received and what is given". What is received is subjective and diverges across customers, and what is given differs across the dimensions of money, time, or effort. Therefore, value represents a tradeoff between what is given and what is received (Zeithaml, 1988). The most ordinary conceptualization of value is the ratio between price and quality (e.g., Monroe, 1990). However, some authors consider this to be too superficial and not generable (e.g., Zeithaml, 1988).

Thus, the 19-item PERVAL scale by Sweeney & Soutar (2001), which takes four different, value dimensions into account, is used in the present study. PQ is the perceived utility of the functional performance of a product. Perceived Value for Money (PVM) can be described as the perceived utility gained from a product due to reduced costs (Sweeney & Soutar, 2001). Perceived Emotional Value (PEV) is the perceived utility obtained from a product's ability to generate affective states or feelings. Perceived Social Value (PSV) is defined as the perceived utility extracted from a product's capacity to enhance or diminish social self-concept through the association with positive or negative stereotypes (Sheth. et al., 1991; Sweeney & Soutar, 2001). Unlike other measures of PV, the construct of Sweeney & Soutar (2001) takes utilitarian components as well as hedonistic components into account. Wang's study (2010) on whether PV enhances brand preference and, therefore, the purchase intention of consumers, was implemented using the above-described PERVAL scale by Sweeney & Soutar (2001). The results of this research have shown that all dimensions of value are significant in the formation of preferences, purchase intentions, and, hence, one's WTP (Wang, 2010). Other authors have similar findings regarding the strong positive relationship between PV and purchase intention (e.g., Zeithaml, 1988).

However, apart from a qualitative study by González-Benito et al. (2015) – which did not consider the role of PVM – little research has been done on the comparison of the PV of store brands to that of national brands. Research has instead focused on the single components of PV (Beneke et al., 2013; Nugroho et al., 2009; Rossi et al., 2015). Overall, national brands' PV is superior to that of store brands (González-Benito et al., 2015). However, given the fact that store brands are priced lower than national brands, store brands are believed to offer better PVM (Nugroho et al., 2009).

In terms of how WTP is affected by PV, research argues that this concept is one of the determinants of purchase intention and, ergo, one's WTP (Wang, 2010). If the consumer's PV of a good is relatively high, the probability of the consumer making a purchase is likely to increase (Zeithaml, 1988). While little research has addressed the mediating effect of PV on the WTP where BT represents the IV, some authors have analyzed the relationship between PV and the purchase intention or willingness to buy goods in the fast-moving consumer goods (FMCG) industry (e.g., Beneke et al., 2013; Wang, 2010). These studies found that PV has a significant positive effect on the WTP. Therefore, this study hypothesizes that:

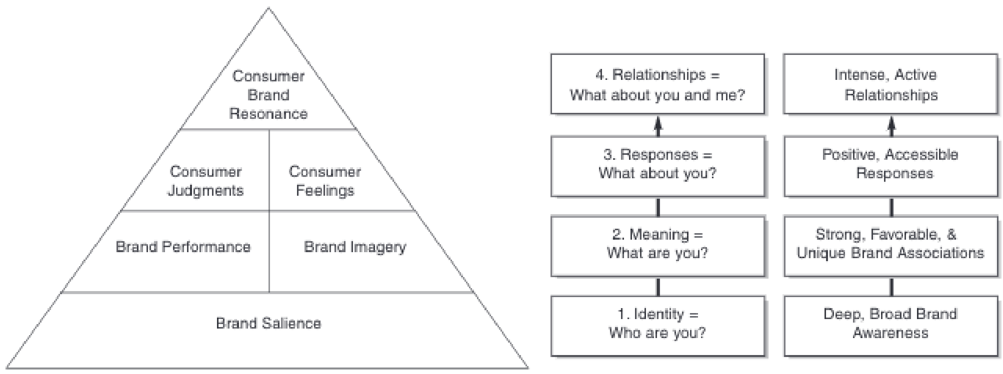
H2: Perceived value mediates the relationship between brand type and willingness to pay.
H2a: National brands have a higher perceived value than store brands.
H2b: Perceived value has a positive impact on willingness to pay.

2.4 Brand Equity

The concept of BE has garnered substantial attention in the past, and it has been viewed from various perspectives (e.g., Aaker, 1991; Farquhar, 1989; Keller, 1993; Yoo et al., 2000). Generally, there are two motivations for studying and measuring BE. The first reason is more financially based, where BE is used to estimate the financial value of a brand for mergers and acquisition or accounting purposes. The second reason is more strategy based, where BE is of key relevance to understanding the consumer and accordingly making better strategic decisions (Keller, 1993). In this study, we will look at BE from a strategic, customer-based perspective. Customer-based BE (CBBE) – a conceptual model of BE from the consumer's perspective by Keller (1993) – is defined as "the differential effect of brand knowledge on consumer response to the marketing of the brand". Thus, a brand has positive BE when customers react better to a component of the marketing mix for a brand than they do to an imaginary version of the brand – meaning that the power of a brand resides in the consumers' minds (Keller, 1993). It is necessary to look at this concept as a sequence of four steps, in which each step is dependent on the completion of the preceding step, to build a strong brand and to successfully measure CBBE: (1) brand identity, (2) brand meaning, (3) brand responses, and (4) brand relationships

(Keller, 2001). To simplify and provide structure to this complex and challenging process of measuring BE, Keller (2001) created the CBBE Pyramid with six "brand-building blocks" (see Figure 2). Only when reaching the pinnacle of the pyramid, a strong BE is created (Keller, 2001). Therefore, to achieve significant BE, a consumer must be familiar with the brand; have strong, favorable, and unique associations with the brand; have a positive brand response; and finally, the customer must be in sync with the brand by having an intimate relationship with it (Keller, 1993, 2001). It is noteworthy that positive CBBE leads to a more favorable customer response to price changes, greater profits as well as enhanced revenue, which in turn means a higher WTP (Keller, 1993, 2001).

Figure 2: CBBE Pyramid (Keller, 2001)



While most academic studies measure the BE of national brands (e.g., Lassar et al., 1995), store brands can also enjoy BE. Overall, store brands seem to have developed BE throughout the years (Cuneo et al., 2012). However, the BE of national brands is perceived as higher by consumers in comparison to store brands (De Wulf et al., 2005; González-Benito et al., 2015). It should be noted that even though consumers perceive and judge store and national brands in a similar way, the way store and national brands build their BE is significantly different. Store brands sell a service to shoppers. In contrast, national brands sell products to consumers. Therefore, retailers focus more on experience marketing to help build the store brand, while national brands invest more in traditional mass marketing as the products are the priority of their marketing efforts (De Wulf et al., 2005). Based on the discussion above, the following hypotheses have been proposed:

H3: Brand equity mediates the relationship between brand type and willingness to pay.
H3a: National brands will have higher brand equity than store brands.

H3b: Brand equity positively impacts willingness to pay.

Other concepts of CBBE define BE as a composition of five major determinants: commitment, performance, social image, trust, and value (Lassar et al., 1995; Qiao et al., 2022). Consequently, one of the key aspects leading to CBBE is PV. The value offered to the consumers by brands can either have a positive or negative impact on BE – if the customers' PV is high, BE will increase (Ruan et al., 2020). The results of a study carried out in China confirm that the three dimensions of PV (PQ, PEV, and PVM) have a positive impact on BE (Yan, 2019). Therefore, two mediators – PV and BE – sequentially intervene between the IV and the DV, resulting in a third mediation path. Hence, the following pair of hypotheses can be concluded:

H4: Perceived value and brand equity sequentially mediate the relationship between brand type and willingness to pay.
H4a: Perceived value has a positive impact on brand equity.

2.5 Product Type

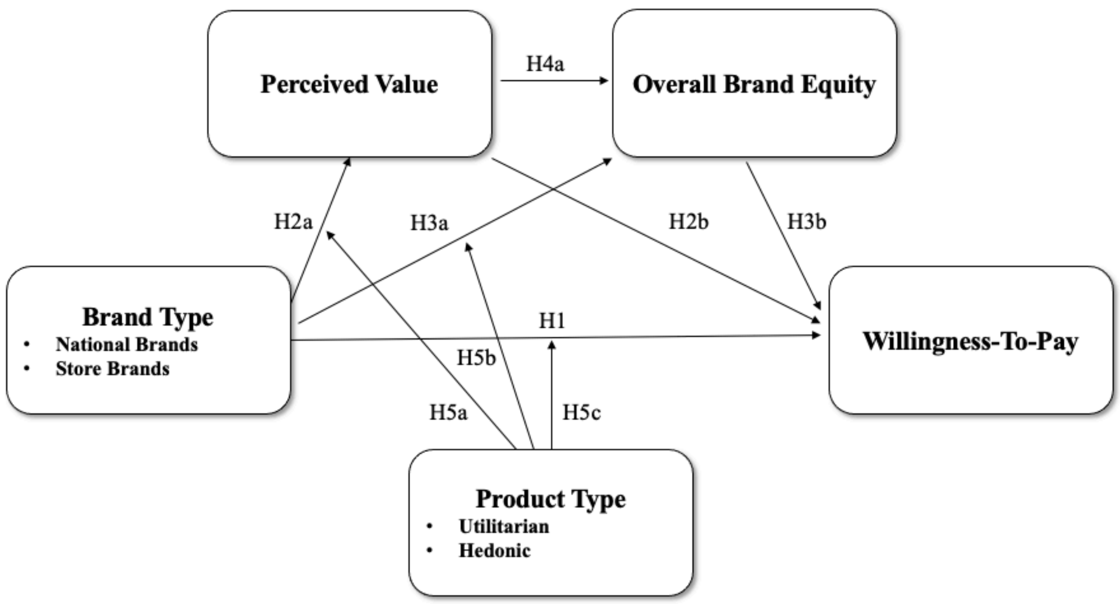
Consumer purchases are not only driven by utilitarian attributes but also by hedonic considerations. In sum, there are two different reasons for the purchase of a service or a product: affective and functional gratification (Batra & Ahtola, 1990). Products which are primarily more hedonic provide more experiential consumption, sensory, fun, pleasure, emotions, fantasy, and excitement, whereas products which classify as being principally utilitarian are more rational, non-sensory, and instrumental (Batra & Ahtola, 1990; Hirschman & Holbrook, 1982). In other words, hedonism derives from affections and sensations resulting from the experience of using products and utilitarianism comes from the functions executed by goods (Voss et al., 2003). Similar constructs to hedonism and utilitarianism have been suggested in previous research: the "wants" and the "shoulds". The "wants" can be compared to hedonic goods and are conceptualized as vices. Whereas the "shoulds" can be compared to utilitarian goods and are conceptualized as virtues (Bazerman et al., 1998). Vices are negatively connotated and virtues are positively connotated (Wertenbroch, 1998). Nevertheless, it should be noted that there is no superior choice between both PTs as these deliver different benefits to the consumer (Batra & Ahtola, 1990; Hirschman & Holbrook, 1982; Okada, 2005). Furthermore, hedonism and utilitarianism are not two ends of a one-dimensional scale, they should rather be seen as two distinct scales. Therefore, different goods can be high or low in both hedonic and utilitarian characteristics (Crowley et al., 1992; Voss et al., 2003). This study characterizes hedonic alternatives as being primarily or relatively more hedonic and vice-versa and will investigate the moderating role of this concept on the relationship between BT and the variables PV, OBE, and WTP. Thus, the following hypotheses are proposed:

H5a: Product type moderates the relationship between the brand type and perceived value.
H5b: Product type moderates the relationship between the brand type and overall brand equity.
H5c: Product type moderates the relationship between brand type and willingness to pay.

2.6 Conceptual Framework

The conceptual framework below summarizes the relationships between the IVs and the DV. An empirical study explores the impact of BT on WTP. PV and OBE are introduced as further IVs that mediate the above-described relationship. In addition, a fourth IV is included in the model, which examines the moderating role of PT for both national and store brands.

Figure 3: Conceptual Framework



CHAPTER 3: METHODOLOGY

This chapter presents and explains the methodology used to study the research problem as well as the research questions of this dissertation and demonstrates how the formulated hypotheses from chapter two are addressed. Firstly, the research approach will be defined, followed by a summary of what type of data was used for the study. Lastly, information about data measurement and stimuli identification will be provided.

3.1 Research Approach

The main objective of this dissertation is to understand the relationship between BT and WTP, having PV and BE as mediators. Furthermore, this study analyses the impact of the moderator PT on the relations mentioned above. To achieve the goal of answering the research questions formulated in chapter two and to test the validity of the proposed hypotheses, different research methods and approaches have been employed.

Saunders et al. (2009) theorize about the existence of three research methods: exploratory, descriptive, and explanatory. This study focused merely on two methods, namely exploratory and explanatory research. First, the exploratory approach was used in the form of an in-depth review of the relevant, existing literature to seek insights, determine suitable variables, clarify concepts, and establish the hypotheses. Then, the explanatory method was used to test the composed hypotheses as well as to explain the relationships between the variables to be investigated. Regarding research approaches, Creswell (2009) proposes three types: quantitative, qualitative, and mixed. This study will solely concentrate on a quantitative approach which was used to gather data on the variables to validate or contradict the hypotheses as well as to statistically analyze the relationships between variables to reach conclusions.

3.2 Primary Data

Primary data was collected to be able to successfully answer the proposed research questions. On this account, quantitative research in the form of an online survey was used. The usage of surveys may lead to advantages but also disadvantages for the overall study. Some of the strengths include the fact that online surveys involve lower costs, are convenient and flexible, and are easy and quick to prepare, distribute and analyze, allowing for a high speed of response and enabling the researcher to reach a great number of participants. On the other hand, web-based surveys are related to sampling, privacy, and security problems. They are known for being a rather impersonal approach with low response rates and little control over non-representative respondents (Evans & Mathur, 2005; Kothari, 2004).

The online questionnaire consisted of a survey with 24 questions, including control questions, manipulation check questions as well as demographic questions. All 24 questions can be divided into four topics: questions about consumers' grocery shopping behavior, questions concerning how consumers perceive the different BTs when it comes to PV and BE as well as questions about their WTP. And finally, demographic questions were posed. Before the distribution of the survey, a pilot study was conducted with nine people with the goal of ensuring the validity of the survey and understanding whether the questions and the language of the survey were comprehensible. Afterward, the final survey was distributed via various social media platforms from April 7th to April 25th, 2023. The complete questionnaire in English can be found in Appendix 1.

3.2.1 Data Collection

The main goal of this study was to evaluate the perceptions of consumers regarding national and store brands to predict their WTP. The chosen categories to investigate this were chocolate (hedonic) and toilet paper (utilitarian).

The target sample for the questionnaire was anyone who regularly does grocery shopping and lives or has lived in Portugal before. To guarantee that participants would meet these criteria, three control questions were asked: one concerning current residency in Portugal, one concerning previous residency in Portugal, and one regarding grocery shopping regularity. It should be noted that only those respondents who answered positively to these control questions would move on to the respective questionnaire.

Overall, data was collected through a non-probability sampling technique, namely convenience and snowball techniques. Even though these techniques allow for biased results, such as the non-representativeness of the population, they were considered to be reasonable given the time and financial constraints of the researcher (Kothari, 2004).

The questionnaire was created using the experience management software Qualtrics and was closed with a total of 518 responses. The target sample size no less than 60 answers per DV breakout, the equivalent of 240 for the hedonic and 240 for the utilitarian PT. Out of the 518 responses, only 289 were considered valid. This is mainly due to missing values and not passing the control or manipulation check questions.

3.2.2 Measurement

The following section describes the critical measurements for the constructs and the rationale for the stimuli identification taking BT and PT into consideration.

Willingness to Pay

As already mentioned in the literature review, the research presents numerous frameworks to measure the consumers' WTP. In this study, a direct approach will be used called Van Westendorp's Price Sensitivity Meter (PSM) (Van Westendorp, 1976). Although direct approaches have been immensely criticized since the respondents do not actually have to buy the product and therefore have limited incentives to reveal their real WTP (Wertenbroch & Skiera, 2002), literature also shows that, for lower-priced, frequently purchased, and non-durable products, this approach leads to acceptable results (Miller et al., 2011). Respondents will be asked to indicate four different price points for the individual stimuli (Kloss & Kunter, 2016; Van Westendorp, 1976):

1. At what price do you consider the product to become inexpensive, but you would still consider it to be a bargain? (Cheap)
2. At what price do you consider the product to become expensive, but you would still consider buying it? (Expensive)
3. Above what price would the product become too expensive so that you would not consider buying it? (Too expensive)
4. Below what price would the product become so inexpensive that you would doubt its quality and not consider buying it? (Too cheap)

Perceived Value

To measure the consumers' PV, respondents were exposed to 19 statements which can be divided into four value dimensions: PQ, PVM, PEM, and PSV. This measure is also known as the 19-item PERVAL scale by Sweeney & Soutar (2001) – which is based on previous value perception research (e.g., Sheth. et al., 1991). The items were measured on a 7-point Likert scale anchoring from "strongly disagree" to "strongly agree".

Brand Equity

A pre-existing construct was considered to measure the BE of the national and store brands. Keller's (2001) conceptualization of BE is regarded as one of the most understandable (Vukasovič, 2015). The fact that Keller´s paper has been cited over 3500 times underlines the fact that this scale is recognized as an effective way to obtain acceptable results (Google Scholar, 2023). Overall, the construct includes 72 items reflecting his proposed six dimensions of BE (Keller, 2001). Despite that, the utilization of such a large number of questions was considered unacceptable in this study, especially given the survey design. As data quality can be compromised in terms of response biases and higher dropout rates if the survey is too long (>20 minutes) and if no monetary incentives are offered, it was necessary to use a different measurement scale for the present work (Deutskens et al., 2004; Revilla & Ochoa, 2017). As a result, grocery shoppers were asked to rate four 7-point semantic differential scales to measure the overall BE (OBE) of the different stimuli. The construct was developed by Yoo & Donthu (2000) and adapted from 5-point items to be consistent with the rest of the survey. This scale is reliable for both store and national brands (Reinders & Bartels, 2017).

Product Type

As already previously mentioned, hedonism comes from affections and sensations resulting from the experience of using goods and utilitarianism comes from the functions performed by products (Voss et al., 2003). Chocolate has been identified as a product with a high hedonic character (Laurent & Kapferer, 1985; Steinhart et al., 2013; Strahilevitz, 1999). In addition, chocolate bars are considered an interesting product category for a "store versus national brands" study (Lybeck et al., 2006). At the other extreme, toilet paper has been classified as a product with a low hedonic character and therefore high utilitarian character (Steinhart et al., 2013; Strahilevitz, 1999). Therefore, this study will focus on these two products: chocolate (hedonic) and toilet paper (utilitarian).

Brand Type

In total, eight store brands were identified in the Portuguese market: Auchan, Lidl, Aldi, Mini Preço, Pingo Doce, Continente, Intermaché, and Mercadona. In 1984, Auchan was the first supermarket chain to launch a store brand in Portugal. This has resulted in the fact that one out of every three products in their customer's shopping baskets is a store-brand product. Lidl is the supermarket chain with the largest store brand share in its assortment – offering more than 2000 individual products present in all categories, which represent 80% of sales. The focus on private labels is also a characteristic of Aldi which has more than 60 different store brands in the most varied product categories. Mini Preço has been giving more and more prominence to the offer of its brands, the store brand "DIA" represents nowadays around 44% of its total sales. Pingo Doce was the first company worldwide to obtain certification for developing private-label products, and its store brand represents 34% of its sales. Pingo Doce is closely followed by Continente, which offers around 4000 private-label products – accounting for 33% of its sales. The assortment of Intermaché comprises 3700 private-label products, representing 25% of its sales. Finally, Mercadona, a more recent supermarket chain in the Portuguese market, is beginning to threaten the existing store brands with a considerable assortment as well as competitive prices (Cardoso & Lima, 2019). The main criteria for the selection of retailers were that they are popular, have the highest market shares across Portugal, and are known for having their own store brand. Due to inherent limitations, this study only tested three grocery retailers in Portugal. Thus, out of the eight retailers previously identified, the top three grocery retailers in Portugal were chosen accordingly: Continente, Pingo Doce, and Lidl (Consumer Guidance Institute Portugal, 2022; Pekic, 2020).

Concerning national brands, this study merely tested one national brand per category in Portugal. The main criterion for the choice of national brands is the footprint of these brands in the respective Portuguese markets. In this research, the annual global report of most chosen brands, Kantar's Brand Footprint, which measures how many times FMCG brands are purchased, considering how many households bought each brand and how many times they did so during a year (CRP – Consumer Reach Points), serves as an indicator for the above-mentioned criteria (Kantar Group and Affiliates, 2022). In the Portuguese tissue paper products segment, the most chosen brand is Renova, with a CRP of 13. It is worth bearing in mind that Renova is the most chosen non-food brand in Portugal (Kantar Group and Affiliates, 2021). Renova is a Portuguese brand of consumer products in the tissue paper products segment, which has always been a leading brand and develops a strategy of constant innovation (Renova, 2023). As for the chocolate segment in Portugal, Milka is the most chosen brand, with a CRP of 7 (Kantar Group and Affiliates, 2021). Milka is a chocolate brand owned by the US-based company Mondelēz International – one of the world leaders in the food industry. Thanks to Milka, they are the number one in the chocolate category in the Portuguese market (Mondelēz International, 2023). In addition, Marktest's TGI study quantifies in 5.282 million participants the number of individuals who consumed chocolate in the last 12 months and shows that Milka is the brand of chocolate bars most mentioned by Portuguese consumers (Grupo Marktest, 2019).

The table below summarizes the operational model:

Table 1: Operational Model

Framework	Measure	Items	Scale	Reference	Cronbach α
IV	Brand Type	Stimuli	*na*	*na*	*na*
Moderator	Product Type	Stimuli	*na*	*na*	*na*
Mediator	Perceived Value	19	7-Point Likert Scale	Sweeney & Soutar (2001)	0.96
Mediator	Overall Brand Equity	4	7-Point Likert Scale*	Yoo & Donthu (2000)	0.93
DV	Willingness to Pay	4	Numeric question	Van Westendorp (1976)	*na*

Note. * The scale was adapted from the original scale from 0 to 5.

3.2.3 Stimuli Identification

The stimuli identification was based on the common denominator of characteristics between the store and national brands (see Appendix 2). For chocolate bars, the flavor of milk and the weight of 100g were decisive. Toilet paper needed to be sold in a pack of 12 units with three foils.

The research set up a statistical experimental survey design with a 2x4 factorial design with two IVs, one with two levels (hedonic, utilitarian) and one with four (National Brand, Continente, Pingo Doce, Lidl). The survey randomly and evenly assigned the respondents to one of the eight groups. The table below shows the eight different conditions:

Table 2: Summary of Stimuli

	National Brand	Continente	Pingo Doce	Lidl
Chocolate Tablet				
Toilet Paper				

CHAPTER 4: RESULTS

All quantitative data collected and gathered from the online survey were analyzed using IBM's statistical software SPSS. Initially, the dataset was prepared for analysis. To characterize and get a first overview of the sample of this study, descriptive statistics and frequencies were generated. In addition, various statistical tests were carried out to test the previously formulated hypothesis. To study the possible mediation and moderation effects of this study, Models 1, 4, 6, and 85 of the Hayes' PROCESS Macro in SPSS were used (Hayes, 2018). Lastly, to gain a deeper understanding of the effect of BT and PT, further statistical analyses were performed with the aim of gathering insights that could be of importance when formulating appropriate managerial recommendations.

4.1 Data Preparation

The data preparation process included a data cleansing, a manipulation check, an outlier analysis, and the creation of variables.

4.1.1 Data Cleansing

As already stated, a total of 518 responses were collected from April 7th to April 25th, 2023. After a thorough data check for completeness, 81.85% of responses were accepted – 94 observations were removed. As a result of the three control questions at the beginning of the survey, 72 participants were discarded from the analysis as they are not currently living in Portugal, and, or have never lived in Portugal before. Another 14 respondents were dropped as they do not go grocery shopping regularly. Moreover, a manipulation check question was introduced to determine the effectiveness of the manipulation of the IV. Correspondingly, a further 30 participants were abandoned. To ensure that a survey was not answered twice, all identical IP addresses were deleted. This led to a further decrease of 19 invalid responses. Thus, the data cleansing resulted in a total of 289 acceptable answers.

4.1.2 Outlier Analysis

Subsequently, it was necessary to analyze the data for possible multivariate outliers. According to Ghorbani (2019), outliers are those data that deviate from the behavior of most data. By performing the Mahalanobis Distance analysis, statistical errors can be avoided by removing these types of cases. With a p-value lower than 0.0001, no outliers were identified.

4.1.3 Variable Creation

All variables were edited, re-coded, and transcribed to be able to handle the data correctly. In addition, further variables were generated to categorize the individual responses into BT and PT. New variables were created – PV, PQ, PEV, PVM, PSV, and OBE – by calculating the mean of every single item of the individual constructs, resulting in six new metric variables. It is noteworthy that two items concerning PQ were reverse coded; thus, a re-coding of these items was necessary to ensure consistency with the other items of the construct. To measure WTP, a method called Van Westendorp PSM was used. As previously mentioned, this method involved asking respondents four different questions about the price of a product. The responses are prices whose frequencies are aggregated and plotted for statistical analysis. Therefore, this technique provides four price points per stimulus which were measured with the help of the spreadsheet program Excel (Kloss & Kunter, 2016; Van Westendorp, 1976) (see Appendix 3):

1. The point of marginal cheapness (PMC): the lowest price at which the product is perceived as cheap and of low quality.
2. The point of marginal expensiveness (PME): the highest price at which the product is perceived as expensive but still worth considering.
3. The optimal price point (OPP): the price at which the PV of the product equals the price.
4. The indifference price point (IPP): the price at which the product is perceived as neither cheap nor expensive but just acceptable.

The OPP will be used as a measure of WTP (WTP_{OPP}) to analyze the data in Chapter 4.

4.2 Sample Characterization

This study obtained a total sample of 289 valid responses, which were evenly divided across eight sub-groups with the help of the randomization tool in Qualtrics. The table in Appendix 4 presents the sample's characteristics.

Even though the sample is composed of 21 different nationalities – most of the respondents are of Portuguese (48.1%) and of German nationality (40.1%). In addition, there is a dominance of women (61.9%) over men (37.7%), and most participants belong to the age group ranging from 18 to 24 (56%). Most respondents hold higher education qualifications (88.6%), are students (48.2%), and have no income (21.8%) or a gross monthly income ranging between 0 to 1499€ (46.4%). Moreover, most respondents are single (53.3%) or in a relationship (38.8%) and live in a household of one to four people (93.1%). In terms of their buying habits, 92.4% of respondents have bought chocolate and 97.6% have bought toilet paper in the last 12 months.

After analyzing these characteristics across the sub-samples, one can identify that these groups are identical to each other – meaning that they share similar traits and attributes. Thus, evidence for the existence of homogeneity between the sub-samples is provided. However, it is worth noting that non-probabilistic sampling techniques were used – resulting in a relatively low representativeness of the total population.

4.3 Measure Reliability

To test the reliability and the internal consistency of the measurement scales used for this research, Cronbach's alpha coefficient, which aims to find out how strongly linked a collection of items are as a group, was utilized. Even though all the used constructs were based on previous literature, it is necessary to confirm their quality for the retrieved dataset. This coefficient varies between 0 and 1; the closer to 1, the greater the internal consistency of the items in the measurement scale. Even though there is no unanimity on the acceptable level of reliability, some authors mention values higher than 0,6 or 0,7 as being acceptable (Van Griethuijsen et al., 2015). In addition, according to George & Mallery (2003), a value above 0.90 indicates excellent quality, above 0.80 good, above 0.70 acceptable, above 0.60 questionable, above 0.50 poor, and below 0.50 unacceptable quality.

In this study, the Cronbach's alpha was measured for two scales (see Table 3). Both scales showed good to excellent reliability, OBE with an alpha of 0.886 and PV with an alpha of 0.901. Therefore, no items were deleted from the two measurement scales.

Table 3: Reliability Test for Multi-item Scales

Scale	Initial Number of Items	Cronbach α	Number of deleted items	Cronbach α if items deleted	Final Number of Items
Perceived Value	19	0.901	-	-	19
Overall Brand Equity	4	0.886	-	-	4

4.4 Results from the Hypotheses Testing

To get a better understanding of the relationships between the predictor variables (BT, PV, OBE, PT) and the outcome variable (WTP_{OPP}), several statistical tests were conducted. Due to the nature of the conceptual framework, the performed tests were Simple Linear Regressions, Independent Samples T-Tests, and One-Way ANOVAs. As some of the hypotheses aim to test the mediation and moderation effects, this analysis used the PROCESS Macro by Hayes.

To guarantee the feasibility and validity of these statistical tests, a preliminary check of their assumptions was made. Overall, the independence of observations is ensured as no respondent was exposed to more than one stimulus. Furthermore, the central limit theorem (CLT) can be applied to this analysis since the sample size is sufficiently large and $n \geq 30$ per stimulus. However, by performing the Shapiro-Wilk Test, it was found that apart from PV, all other metric variables are not approximately normally distributed. Therefore, the assumption of normality was not satisfied for these variables (see Appendix 5). To overcome the fact that these variables failed the normality assumption, nonparametric tests were employed. More precisely, Mann-Whitney U Test was the alternative to Independent-Samples T-Test and Kruskal-Wallis H Test was the replacement to One-Way ANOVA. To ensure the validity of the results of the Mann-Whitney U Test and the Kruskal-Wallis H Test, assumptions were verified beforehand. Firstly, the DVs were measured at a continuous level. Secondly, the IVs embody two categorical, independent groups as the Mann-Whitney U Test compares two groups at a time and more than two categorical, independent groups for the Kruskal-Wallis H Test. Lastly, the DVs are not normally distributed. Based on the above findings, Mann-Whitney U Test and Kruskal-Wallis H Test can adequately analyze the data. Due to the fact that the groups have different shapes, results will be presented, taking the mean ranks into consideration.

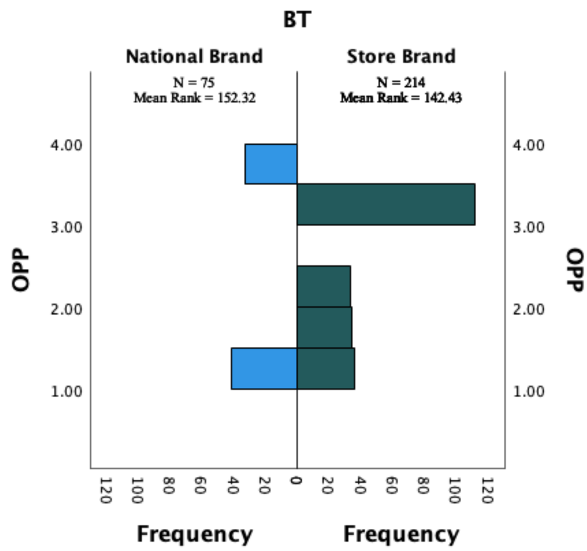
With respect to Simple Linear Regressions, CLT can also be applied. However, the results of the Simple Linear Regressions must be interpreted carefully, as the assumption of normality has not been validated (see Appendix 5). Further assumptions were tested. Firstly, the DV and the IV were measured on a continuous level. As for multicollinearity, three tests were conducted to rule out this assumption violation. It was possible to conclude that multicollinearity is absent in the correlation matrix, which included all IVs. Pearson's bivariate correlations are all less than 0.80. This can be reinforced by looking at the Variance Inflation Factor (VIF), all values are below 2, and by looking at the Collinearity Index, all values are below 15. Regarding the remaining assumptions, the residuals are linear and error terms are independent from each other. The significance level was set at $\alpha=0.05$.

4.4.1 Hypothesis 1

Hypothesis 1) National brands will generate a higher willingness to pay than store brands.

To investigate the direct effect of BT on WTP_{OPP}, a Mann-Whitney U Test has been carried out to compare the mean ranks of two independent groups (see Figure 4 and Appendix 6).

Figure 4: Effect of BT on WTP_{OPP}



The results indicate that there is no significant difference between the WTP_{OPP} of national brands (M=2.3960, SD=1.07442) and store brands (M=2.4834, SD=0.83789). The mean rank of national brands is 152.32 and of store brands is 142.43. With a p-value of 0.374, which is higher than the alpha level of 5%, and a U-value of 7476.000, we cannot reject the null hypothesis that holds that the distribution of WTP_{OPP} is the same across BT. The above result provides enough statistical evidence to reject Hypothesis 1.

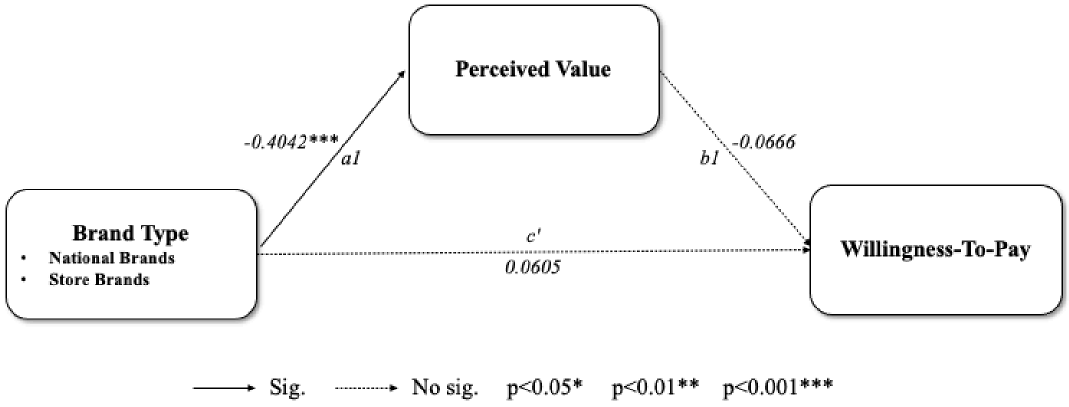
4.4.2 Hypothesis 2

Hypothesis 2) Perceived value mediates the relationship between brand type and willingness to pay.

To understand whether PV represents a mediator in the relationship between BT and WTP_{OPP}, an analysis using Model 4 of the Process Macro by Hayes was conducted. The relationship between BT and PV is described as path *a1* and the relationship between PV and WTP_{OPP} is described as path *b1*. Path *c'* is the direct effect of BT on WTP_{OPP}, while *c* is the total effect.

The indirect effect represents how WTP_{OPP} is influenced by BT through PV (see Figure 5). The results can be found in Appendix 7.

Figure 5: Effect of BT on WTP_{OPP} through PV

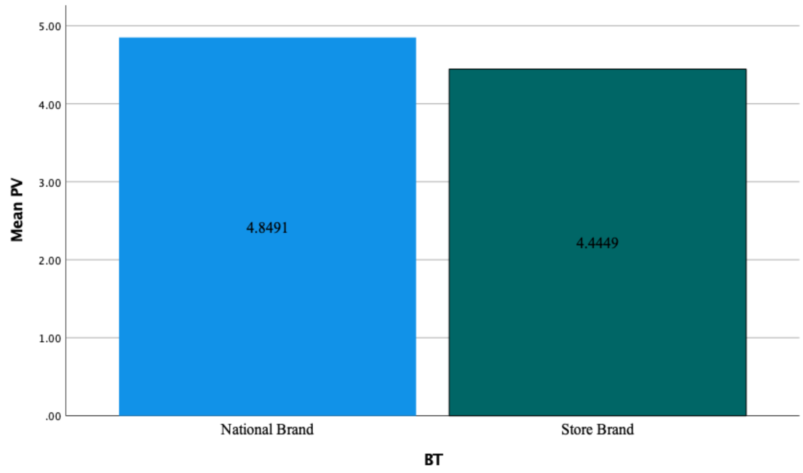


The results indicate that even though the regression of path *a1* is significant at a p-value of 0.0001 with a coefficient of -0.4042, the model appears to have low quality as it only explains circa 5% of the variation of PV. Apart from the relationship between BT and PV, all other direct effects are insignificant. This information is enough to conclude that PV is not a significant mediator. An alternative way to confirm that PV is not a significant mediator is by looking at its bootstrapping confidence interval when analyzing the indirect effect of BT on WTP_{OPP} (BootLLCI=-0.0293; BootULCI=0.0885). It is evident that it crosses the value of 0, again implying that PV does not represent a mediator in the relationship between BT and WTP_{OPP}. As a result, Hypothesis 2 needs to be rejected.

Hypothesis 2a) National brands have a higher perceived value than store brands.

In order to investigate the direct effect of BT on PV, an Independent Samples T-Test has been conducted to compare the means of two independent groups (see Figure 6 and Appendix 7).

Figure 6: Effect of BT on PV

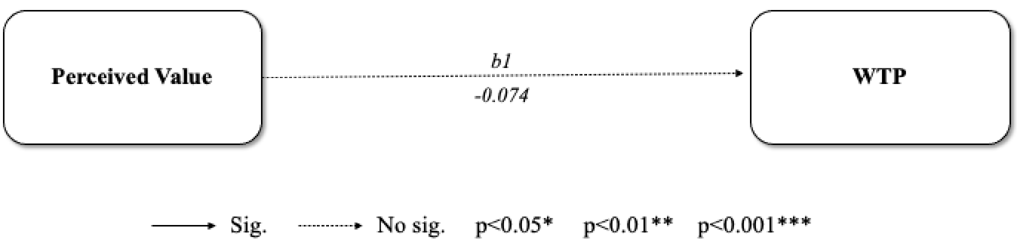


As previously mentioned, the data is normally distributed, and the independence of observations is ensured. Furthermore, Levene's Test for Equality of Variances has been carried out. With an F-value of 0.668 and a p-value of 0.415, we must accept the null hypothesis that there is no difference between the variances of the two groups. The results indicate that national brands (M=4.8491, SD=0.80401) have a significantly higher PV than store brands (M=4.4449, SD=0.76945). With a t-value of 3.869 and a one-sided p-value of 0.000, we can reject the null hypothesis that holds that there is no difference between the PV for national and store brands. Thus, Hypothesis 2a is validated.

Hypothesis 2b) Perceived value has a positive impact on willingness to pay.

To investigate the direct effect of PV on WTP_{OPP}, a Linear Regression Analysis has been conducted, where PV functions as the predictor and WTP_{OPP} as the outcome variable (see Appendix 8). This direct effect can be described by path *b1* (Figure 7).

Figure 7: The effect of PV on WTP_{OPP}



The model has extremely weak quality in predicting WTP_{OPP} from PV (R=0.065), where PV explains 0,4% of the variance of WTP_{OPP}. The results show that the interaction between PV and

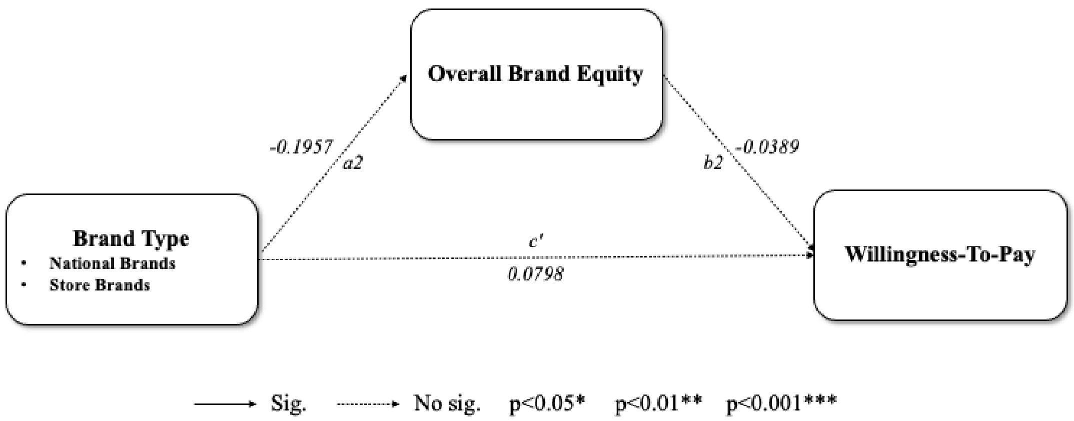
WTP_{OPP} is not statistically significant ($F=1.227$, $p>0.05$). This suggests that PV does not have an impact on WTP_{OPP}. Consequently, H2b is not validated.

4.4.3 Hypothesis 3

Hypothesis 3) Brand equity mediates the relationship between brand type and willingness to pay.

To understand whether OBE represents a mediator in the relationship between BT and WTP_{OPP}, an analysis using PROCESS Model 4 was conducted. The relationship between BT and OBE is described as path *a2* and the relationship between OBE and WTP_{OPP} is described as path *b2*. Path *c'* is the direct effect of BT on WTP_{OPP}, while *c* is the total effect. The indirect effect represents how the WTP_{OPP} is influenced by BT through OBE (see Figure 8). The results can be found in Appendix 9.

Figure 8: Effect of BT on WTP_{OPP} through OBE

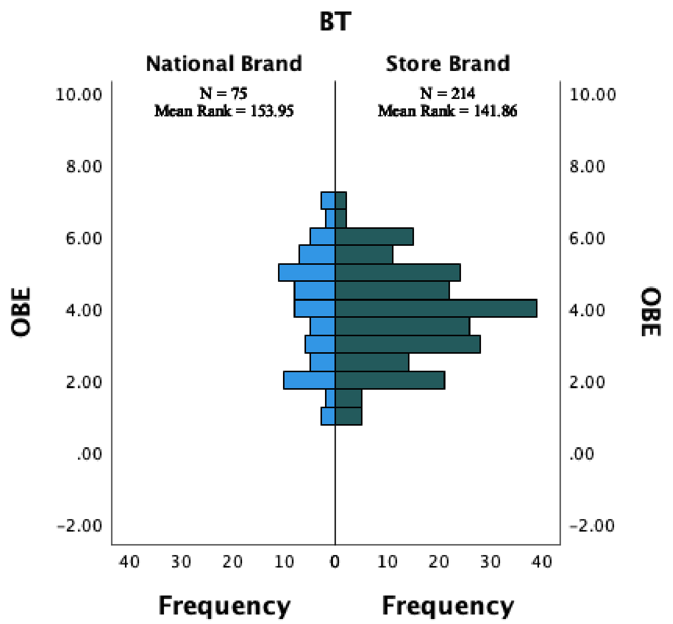


The results indicate that all direct effects are insignificant at an alpha level of 5%. This information is enough to conclude that OBE is not a significant mediator. An alternative way to confirm that OBE is not a significant mediator is by looking at its bootstrapping confidence interval when analyzing the indirect effect of BT on WTP_{OPP} (BootLLCI=-0.0166; BootULCI=0.0358). It is evident that it crosses the value of 0, which again implies that OBE does not represent a mediator in the relationship between BT and WTP_{OPP}. As a result, Hypothesis 3 can be rejected.

Hypothesis 3a) National brands will have higher brand equity than store brands.

In order to investigate the direct effect of BT on OBE, a Mann-Whitney U Test has been conducted to compare the mean ranks of two independent groups (see Figure 9 and Appendix 10).

Figure 9: Effect of BT on OBE

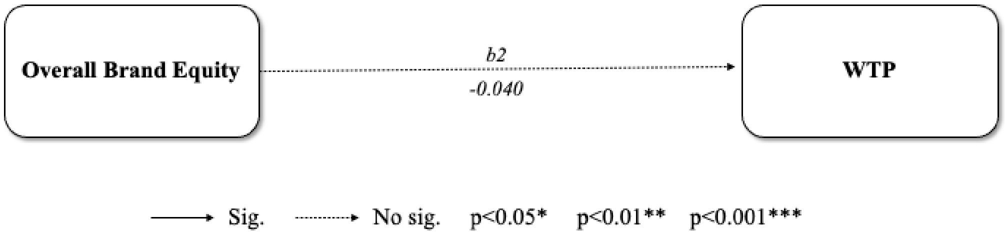


The results of the Mann-Whitney U Test indicate that there is no significant difference between the OBE of national brands (M=3.9200, SD=1.56997) and store brands (M=3.7243, SD=1.30138). The mean rank of national brands is 153.95 and of store brands is 141.86. With a p-value of 0.280 and a U-value of 7354.000, we cannot reject the null hypothesis that holds that the distribution of OBE is the same across BT. Thus, Hypothesis 3a must be rejected.

Hypothesis 3b) Brand equity positively impacts willingness to pay.

To investigate the direct effect of OBE on WTP_{OPP}, a Linear Regression Analysis has been conducted, where OBE functions as the predictor and WTP_{OPP} as the outcome variable (see Appendix 11). This direct effect can be described by path *b2* (Figure 10).

Figure 10: Effect of OBE on WTP_{OPP}



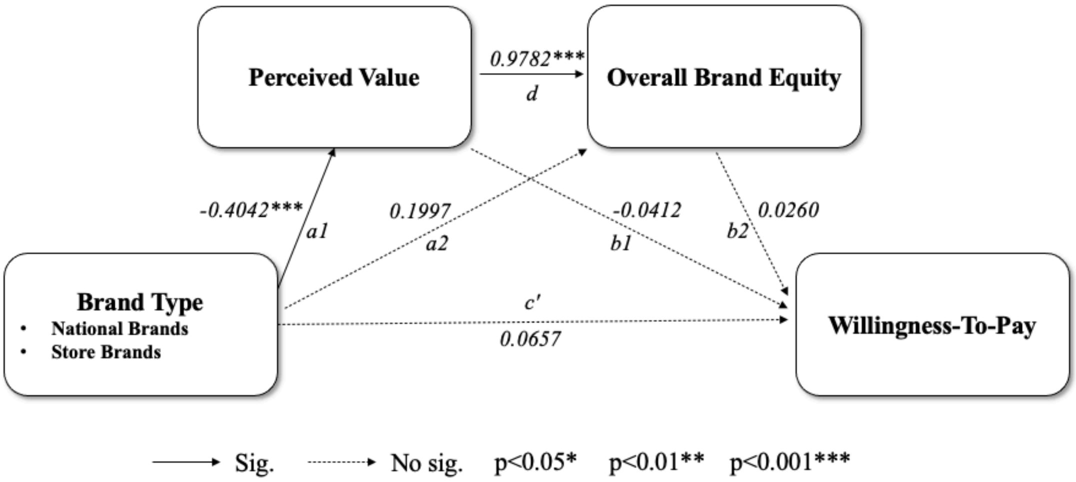
As previously mentioned, the data is not normally distributed. Thus, the following results must be interpreted carefully. Overall, the model has poor quality in predicting WTP_{OPP} from OBE (R=0.062), where OBE explains 0.4% of the variance of WTP_{OPP}. The results show that the interaction between OBE and WTP_{OPP} is not statistically significant ($F=1.093$, $p>0.05$). This suggests that OBE does not have an impact on WTP_{OPP}. Consequently, H3b is not validated.

4.4.4 Hypothesis 4

Hypothesis 4) Perceived value and brand equity sequentially mediate the relationship between brand type and willingness to pay.

To understand whether PV and OBE sequentially mediate the relationship between BT and WTP_{OPP}, an analysis using PROCESS Model 6 was conducted. The relationship between BT and PV is described as path *a1*, whereas the relationship between BT and OBE is described as path *a2*. Furthermore, the interaction between PV and WTP_{OPP} is described as path *b1* and the path between OBE and WTP_{OPP} is described as path *b2*. Path *c'* is the direct effect of BT on WTP_{OPP}, while path *d* represents the direct effect of PV on OBE. There are three indirect effects in this model: (1) BT→PV→WTP_{OPP}, (2) BT→OBE→WTP_{OPP}, and (3) BT→PV→OBE→WTP_{OPP} (see Figure 11). The results can be found in Appendix 12.

Figure 11: Effect of BT on WTP_{OPP} through OBE and PV

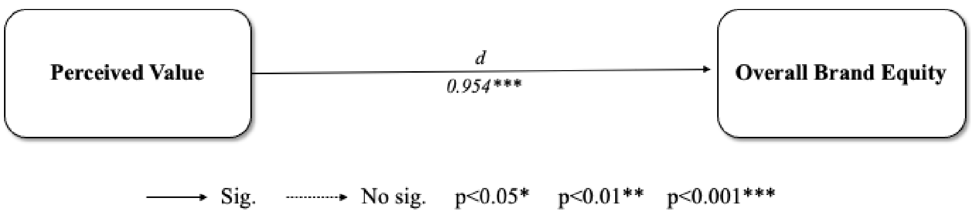


The results indicate that almost all direct effects are insignificant at an alpha level of 5%. Starting with path *a1*, the results indicate that there is a highly significant ($p<0.001$) negative effect of -0.4042. Additionally, the model provides information about the relationship between PV and OBE. This effect is highly significant ($B=0.9782$, $p<0.001$) (path *d*). Meaning that if we increase PV by one unit, OBE will increase by 0.9782. All other effects, including the direct and the total effect, are insignificant at an alpha level of 5%. As for the indirect effects, it is possible to conclude that these are also insignificant, as all the bootstrapping confidence intervals include the value of 0. Therefore, the sequential mediation is not proven by the third indirect effect (BT→PV→OBE→WTP_{OPP}). As a result, Hypothesis 4 can be rejected.

Hypothesis 4a) Perceived value has a positive impact on brand equity.

To investigate the direct effect of PV on OBE, a Linear Regression Analysis has been conducted, where PV functions as the predictor and OBE as the outcome variable (see Appendix 13). This direct effect can be described by path *d* (Figure 12).

Figure 12: Effect of PV on OBE



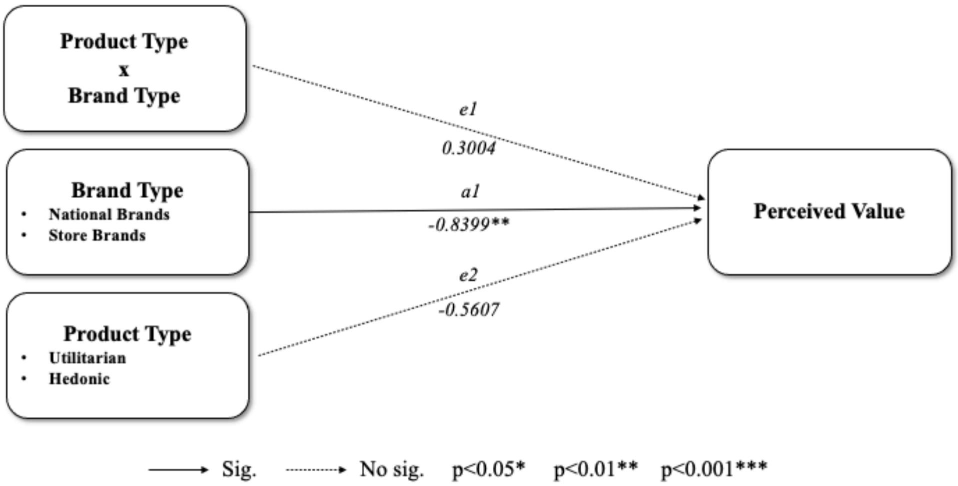
As previously mentioned, the data is not normally distributed. Thus, the following results must be interpreted carefully. Overall, the model has moderate quality in predicting OBE from PV (R=0.553), where PV explains 30,5% of the variance of OBE. The model is appropriate, has explanatory power, and is highly significant in predicting OBE (F=126.143, p<0.001). If we increase PV by one unit, then OBE increases by 0.954. Therefore, we can conclude that there is a positive relationship between PV and OBE. Thus, the proposed hypothesis can be accepted.

4.4.5 Hypothesis 5

Hypothesis 5a) Product type moderates the relationship between the brand type and perceived value.

To understand whether PT moderates the relationship between BT and PV, an analysis using PROCESS Model 1 was conducted. Again, the relationship between BT and PV is described as path *a1*. Moreover, the relationship between the interaction term (BT x PT) and PV is described as path *e1*, whereas the relationship between PT and PV is described as path *e2* (see Figure 13). The results can be found in Appendix 14.

Figure 13: Effect of BT on PV moderated by PT

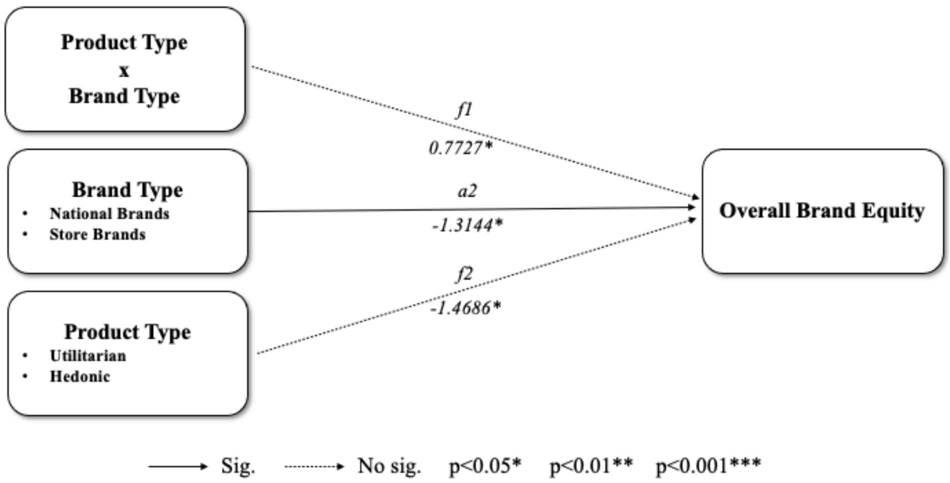


The results from the SPSS matrix procedure indicate that apart from path *a1* (p<0.05), all other direct effects are insignificant. Even though the model appears to be highly significant (p<0.001), it seems to have low quality as it only explains around 5.7% of the variation of PV. Additionally, the interaction term (BT x PT) is not significant (B=0.3004, p>0.05). This information is enough to conclude that PT is not a significant moderator. An alternative way to confirm that PT is not a significant moderator is by looking at its bootstrapping confidence interval (LLCI=-0.1130; ULCI=0.7138). It is evident that it crosses the value of 0, again implying that PT does not represent a moderator in the relationship between BT and PV. As a result, Hypothesis 5a can be rejected.

Hypothesis 5b) Product type moderates the relationship between the brand type and overall brand equity.

To understand whether PT moderates the relationship between BT and OBE, an analysis using PROCESS Model 1 was conducted. Again, the relationship between BT and OBE is described as path *a2*. Moreover, the relationship between the interaction term (BT x PT) and PV is described as path *f1*, whereas the relationship between PT and PV is described as path *f2* (see Figure 13). The results can be found in Appendix 15.

Figure 14: Effect of BT on OBE moderated by PT

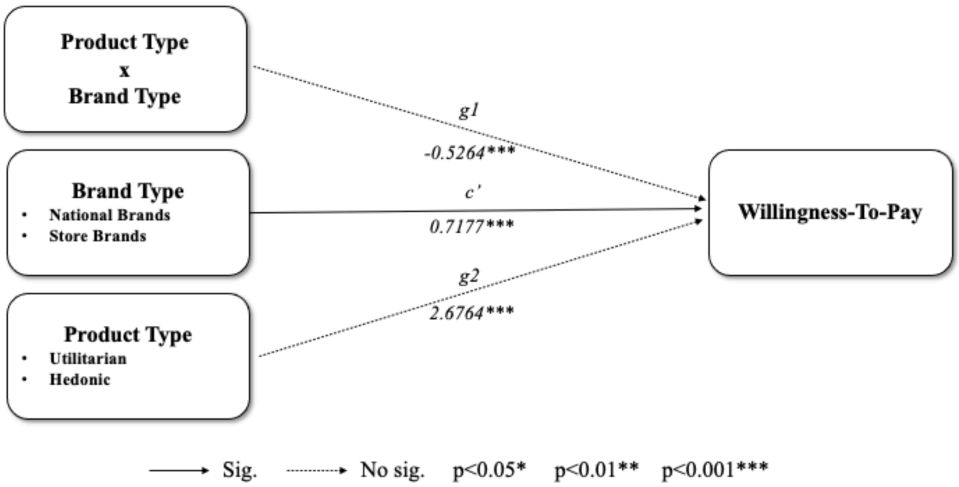


The results from the SPSS matrix procedure indicate that the overall model is not significant ($p>0.05$) and has low quality, as it only explains around 2% of the variation of OBE. However, all direct effects appear to be significant ($p<0.05$). The interaction term (BT x PT) has a positive effect on OBE with a coefficient of 0.7727. This information is enough to conclude that PT is a significant moderator in this relationship. An alternative way to confirm that PT is a significant moderator is by looking at its bootstrapping confidence interval (LLCI=0.0457; ULCI=1.4997). It is evident that it does not cross the value of 0, which again implies that PT represents a significant moderator in the relationship between BT and OBE. As a result, Hypothesis 5b can be accepted.

Hypothesis 5c) Product type moderates the relationship between brand type and willingness to pay.

To understand whether PT moderates the relationship between BT and WTP_{OPP}, an analysis using PROCESS Model 1 was conducted. Again, the relationship between BT and WTP_{OPP} is described as path *c'*. Moreover, the relationship between the interaction term (BT x PT) and WTP_{OPP} is described as path *g1*, whereas the relationship between PT and WTP_{OPP} is described as path *g2* (see Figure 15). The results can be found in Appendix 16.

Figure 15: Effect of BT on WTP_{OPP} moderated by PT

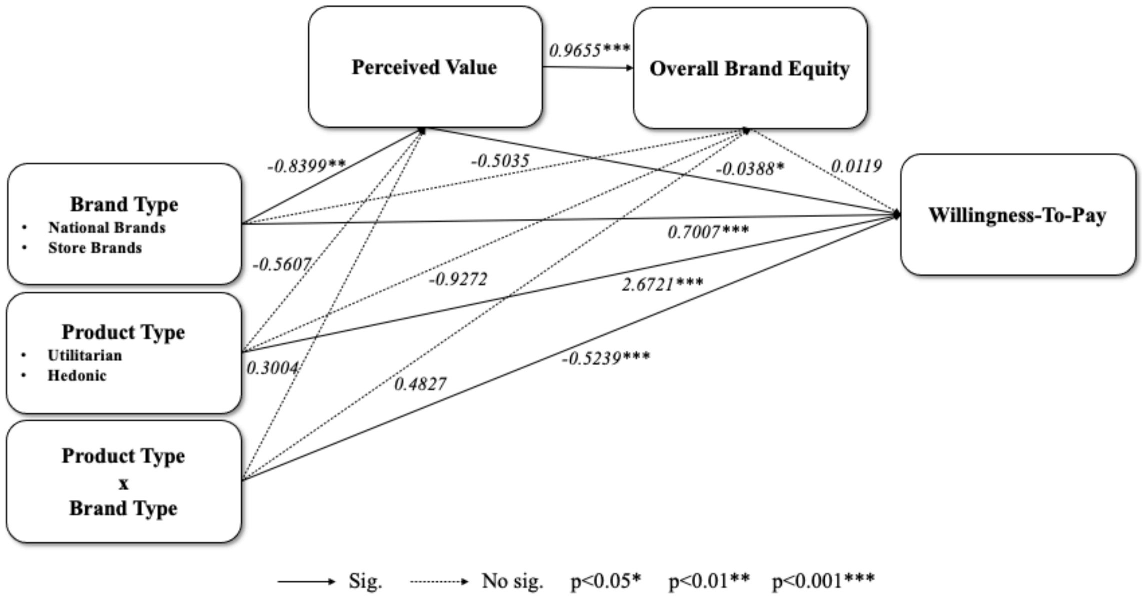


The results from the SPSS matrix procedure indicate that the overall model is highly significant ($p<0.001$); it seems to have high quality as it explains around 96.30% of the variation of WTP_{OPP}. Furthermore, all direct effects are highly significant ($p<0.001$). The interaction term (BT x PT) is also highly significant ($p<0.001$) with a coefficient of -0.5264. This information is enough to conclude that PT is a significant moderator of the relationship between BT and WTP_{OPP}. An alternative way to confirm that PT is a significant moderator is by looking at its bootstrapping confidence interval (LLCI=-0.6192; ULCI=-0.4336). It is evident that it does not cross the value of 0, which again implies that PT represents a moderator in the relationship between BT and WTP_{OPP}. As a result, Hypothesis 5c can be accepted.

4.5 Results from the Full Model Analysis

In order to test the entire model, a final Process Macro was performed. The selected model was Model 85 since it combined all the models that were previously used (see Figure 16). The results can be found in Appendix 17.

Figure 16: Full Model



The first variable outcome is PV and the result is identical to what had been tested before for H5a. Since this variable is only influenced by BT, PT, and by their interaction, the added variables do not represent a change in the significance or the coefficients. Regarding OBE, the inclusion of further variables, such as PV, leads to changes in the significance levels and the individual coefficients. Now, the model has better quality and explains around 31.6% of the variance of OBE. Apart from path *d* (B=0.9655, $p<0.001$), all other direct effects appear to be insignificant ($p>0.05$). It is noteworthy, that the interaction is not significant anymore and that the bootstrapping interval includes the value of zero now – meaning that there is no moderation. Due to the effect of several variables interacting with each other, the situation changes drastically for the outcome variable WTP_{OPP}. The overall model is highly significant ($p<0.001$) and explains around 96.38% of the variance, which is the highest R-Square so far. Firstly, BT significantly influences WTP_{OPP} (B=0.7007, $p<0.001$). This means that the WTP_{OPP} for a product varies with the BT. While the interaction between OBE and WTP_{OPP} is not significant (B=0.0119, $p>0.05$), the interaction between PV and WTP_{OPP} is significant (B=-0.038, $p<0.05$). Furthermore, PT (B=2.6721, $p<0.001$), as well as the interaction term (BT x PT) (B=0.5239, $p<0.001$), have a highly significant effect on WTP_{OPP}.

Due to the existence of both mediation and moderation, the term used by Hayes to describe this type of model is conditional process modeling (Hayes, 2018). Therefore, this model will reflect on the conditional direct and indirect effects. Starting with the conditional direct effect of BT on WTP_{OPP}, it is possible to see that the effect of the moderator is significant for both hedonic and utilitarian products ($p<0.05$, the bootstrapping interval does not include zero). If a product is hedonic, consumers will have a higher WTP_{OPP} (B=0.1768). Whereas if the product is utilitarian, consumers will have a lower WTP_{OPP} (B=-0.3471). Moving to the conditional and unconditional indirect effects of BT on WTP_{OPP}, three sections are presented: one for PV, one for OBE, and a final that includes both mediators working sequentially. Starting with PV, there is a significant effect for hedonic products but none for utilitarian products. For OBE, on the other hand, there are no significant effects. Regarding the effect of the moderator on the sequential mediation (BT→PV→OBE→WTP_{OPP}), the results suggest that, for both hedonic and utilitarian products, this effect is not significant. Overall, there is no evidence of moderated mediation for the three conditional indirect effects as the bootstrapping confidence interval includes the value of zero.

4.6 Hypothesis Testing Overview

Table 4: Results from the Hypothesis Testing

Hypothesis	Outcome Individual Tests	Outcome Full Model
H1	Not validated	Not validated
H2	Not validated	Validated
H2a	Validated	Validated
H2b	Not validated	Not validated
H3	Not validated	Not validated
H3a	Not validated	Not validated
H3b	Not validated	Not validated
H4	Not validated	Not validated
H4a	Validated	Validated
H5a	Not validated	Partially validated
H5b	Validated	Not validated
H5c	Validated	Validated

4.7 Further Results

To gain an initial understanding of the effect of BT and PT, several Kruskal-Wallis H Tests have been conducted to compare the mean ranks of the independent brands (see Appendix 18). Starting with chocolate, the results allow us to conclude that there is a statistically significant difference in WTP_{OPP} between the different brands, $\chi 2(2)=144.000$, $p<0.01$, with a mean rank WTP_{OPP} of 129.00 for Pingo Doce, 95.50 for Continente, 57.50 for Milka and 18.50 for Lidl. The WTP_{OPP} seems to be the highest for the chocolate bar of Pingo Doce (2.05€), followed by Continente (1.50€), Milka (1.45€), and Lidl (1.40€). Meaning that consumers are not willing to pay more for national brands when it comes to chocolate. Regarding toilet paper, consumers'

WTP_{OPP} is higher for national brands than store brands as the WTP_{OPP} for Renova (3.60€) is higher than that of Continente (3.20€), Pingo Doce (3.35€) and Lidl (3.25€). A Kruskal-Wallis H Test showed that there is a statistically significant difference in the WTP_{OPP} between the different brands, $\chi2(2)=143.000$, $p<0.01$, with a mean rank WTP_{OPP} of 128.00 for Renova, 94.00 for Pingo Doce, 57.00 for Lidl and 19.00 for Continente.

As no statistically significant differences concerning PV and OBE between the different brands were found per PT, this analysis opted to look more deeply into PV by analyzing PQ, PEV, PVM, and PSV. The difference in the individual PV dimensions between the individual brands has been analyzed by conducting Kruskal-Wallis H Tests. Regarding the PQ of chocolate, the results show that there is a statistically significant difference in PQ between the different brands, $\chi2(2)=31.720$, $p<0.001$, with a mean rank PQ of 102.30 for Milka, 70.35 for Lidl, 57.82 for Continente, and 54.24 for Pingo Doce. Regarding toilet paper, the results imply that Renova has the highest PQ with a mean rank of 87.2, followed by Continente (79.22), Pingo Doce (74.26), and Lidl (51.59) ($\chi2(2)=15.345$, $p<0.05$). Concerning PEV, it is noteworthy that there is only a statistically significant difference in PEV between the chocolate products ($\chi2(2)=10.791$, $p<0.05$). Milka has the highest PEV with a mean rank of 88.49, followed by Lidl (75.08), Continente (65.74), and Pingo Doce (58.50). Regarding PVM, the results show a statistically significant difference for toilet paper ($\chi2(2)=19.417$, $p<0.01$). Continente has the highest PVM with a mean rank of 90.69, followed by Pingo Doce (84.23), Renova (57.55), and Lidl (57.37). Finally, two Kruskal-Wallis H Tests have been conducted to investigate the difference in PSV between the individual brands. However, for both PTs, no statistically significant differences between the individual brands were identified.

CHAPTER 5: CONCLUSIONS AND LIMITATIONS

The following and final chapter summarizes the main findings and draws conclusions based on the collected data and previous literature review. Finally, this chapter discusses managerial and academic implications, limitations, and proposes areas for future research.

5.1 Main Findings & Conclusions

RQ1: What is the impact of brand type on the consumers' willingness to pay?

National brands are often viewed as the default option, leading to the assumption of a greater WTP (Boyle et al., 2021). In contrast, this study did not find a statistically significant difference in the WTP values of national versus store brands. By looking at the descriptive statistics, however, it becomes clear that the WTP is higher for store brands in comparison to national brands. This is supported by the full model analysis, which takes multiple variables into account. In sum, this finding is consistent with previous research that suggests that as store brands mature, the WTP for national brands will decrease (Steenkamp et al., 2010).

RQ2: How do consumers perceive store brands regarding perceived value and brand equity in comparison to national brands? And how do these concepts influence the willingness to pay of customers?

One of the main focuses of this research was to investigate which effect PV and OBE have on the consumer, particularly what impact they have on the relationship between BT and WTP. With respect to PV, there is no statistical evidence that PV has a meditating influence on the relationship between BT and WTP. Therefore, the results of this analysis are not in line with the literature regarding the fact that PV is one of the determinants of WTP, as there was no statistically significant interaction between the two variables. It should be noted that, due to the inclusion of further variables, this effect becomes statistically significant in the full model. Even in the full model analysis, these results are not in line with previous literature, as PV has a rather negative effect on WTP (Beneke et al., 2013; Wang, 2010). However, the results from an Independent Samples T-Test – which were reinforced by the mediation analysis and the full model analysis – have shown that BT has a significant effect on PV. Store brands are associated with a PV that is lower than that of national brands. These findings are in line with previous studies (González-Benito et al., 2015). As to OBE, there is no statistical proof that OBE has a meditating influence on the relationship between BT and WTP. Furthermore, the effect of BT on OBE is not significant at an alpha level of 5%. Thus, the results of this study support previous research that suggests that store brands have developed BE throughout the years (Cuneo et al., 2012). Contrary to previous studies that have reported a significant effect of OBE on WTP (Keller, 1993, 2001), these results suggest no significant relationship between these variables. Even though the sequential mediation of BT on WTP through PV and OBE has not been proven, the results of this study have provided valuable insights into the relationship between PV and OBE. These findings are consistent with previous research that suggest a strong, positive relationship between PV and OBE (e.g., Yan, 2019).

RQ3: How do these effects vary for hedonic and utilitarian products?

Thirdly, this thesis was dedicated to exploring whether PT moderates the above-described effects. As seen in the previous chapter, the effect of BT on WTP varies for different levels of PT. In comparison to national brands, store brands have a lower effect on WTP for utilitarian products compared to hedonic products. For chocolate, the WTP is higher for store brands than national brands. Whereas in the toilet paper category, the WTP is higher for national brands than store brands. Even though PT does not significantly moderate the relationship between BT and PV, the results of further analyses have found that, for chocolate, Milka has a significantly higher PQ and PEV in comparison to store brands. While, for toilet paper, Continente has a higher PVM in comparison to Renova. This is in line with previous literature which suggests that store brands are believed to offer better PVM (Nugroho et al., 2009). Renova has a higher PQ in comparison to store brands. Thus, one can conclude that PQ is higher for national brands than store brands. This contradicts previous literature that suggests that the “quality gap” between national and store brands is fading as the latter acquires expertise in competing against national brands (Kadirov, 2015; Rossi et al., 2015). Moreover, the relationship between BT and OBE is moderated by PT. Therefore, the effect of BT on OBE changes for different levels of PT. Store brands have a higher effect on OBE for utilitarian products compared to hedonic products. This means that, for toilet paper, store brands will have a higher OBE than Renova. For chocolate, Milka will have a higher effect on OBE. Note that this moderation is canceled in the full model analysis due to the integration of further variables.

5.2 Managerial Implications

This study assists managers in understanding the relationship between BT and consumers' WTP, considering the mediating factors of PV and OBE as well as the impact of PT. Generally, managers should concentrate on pricing their products according to the optimal prices calculated using the Van Westendorp PSM to maximize customer demand and profitability. Additionally, they should focus on delivering more value to the consumer as this will positively impact BE, which – according to literature – will, in turn, have a positive effect on WTP. To provide more targeted recommendations for manufacturers and retailers, managerial recommendations will be provided per PT.

Starting with chocolate, it is possible to conclude that consumers are unwilling to pay more for national brands than store brands. Based on the PSM, it is recommended that price adjustments be made for the products under study. Specifically, Milka could consider lowering its price from 1.74€ to 1.45€ and Lidl from 1.85€ to 1.40€. While Continente and Pingo Doce may benefit from increasing their prices from 0.63€ to 1.50€ and 2.05€, respectively. Nevertheless, it is essential to acknowledge that these suggestions for price reductions do not take into consideration additional factors such as fixed and variable costs. Thus, it is imperative to assess them with prudence. Overall, Milka has a higher PV than store brands and scores significantly high on the dimensions of PQ and PEV. Thus, store brands in the product category of chocolate should focus on the alteration of consumers' perceptions about their products as these still seem to be perceived to be of lower quality in comparison to national brands. To achieve this, store brands could introduce product promotion stands at the point-of-sale. The fact that Milka has a higher PEV than store brands can be explained by the fact that the brand is known for using emotional themes, such as love and kindness, in its marketing campaigns. To preserve its leadership position in terms of PEV, Milka should continue to create promotional campaigns that emphasize emotional cues. Store brands, however, should increase the emotional relevance of their products by investing in the development of advertising campaigns. Moreover, Milka has a higher BE in comparison to store brands. Thus, Milka should concentrate on maintaining its leadership position in BE, whereas store brands should prioritize enhancing their BE by, for instance, improving brand reputation and awareness.

Moving on to toilet paper, consumers seem to have a higher WTP for national brands than store brands. An appropriate price adjustment would involve Renova reducing their price from 9.98€ to 3.60€, Continente from 3.99€ to 3.20€, Pingo Doce from 4.29€ to 3.35€, and Lidl from 3.79€ to 3.25€. Once again, these recommendations for price reductions need to be analyzed with caution as they do not account for fixed and variable costs. Overall, Renova has a higher PV in comparison to store brands and it scores significantly high on the dimension of PQ. Whereas the toilet paper store brands score significantly high on PVM. This can serve as a further indicator that there is still room for improvement in the pricing strategies of national brands.

Again, store brands should focus on the alteration of consumers' perceptions about private-label goods as these still seem to be perceived to be of lower quality in comparison to national brands. Additionally, store brands have a higher effect on BE than Renova – which leads to believe that toilet paper store brands have developed BE throughout the years. Renova's management should bear this in mind and explore strategies to enhance their BE by investing in advertising, improving brand awareness or image as well as PV.

During times of economic recession and political turmoil, it is crucial to strategically position brands and products accordingly. Therefore, managers of national brands should be aware of two facts: (1) the market shares of store brands increase when the economy is suffering (Lamey et al., 2007); and (2) there is a low probability for consumers to switch back to national brands in recovery from an economic crisis which can lead to a long-term increase in the market share and customer loyalty of store brands (Chandra Mandal, 2016; Steenkamp et al., 2010).

5.3 Academic Implications

The results of this research contribute to a further understanding of consumers' perceptions of national versus store brands as well as the role of PV, BE, and PT in directly and indirectly influencing consumers' WTP. While previous research has rather focused on individual components of PV, this study compares the PV of store brands to that of national brands by taking four different value dimensions into consideration. In addition, the relationship between PV and BE has often been overlooked in previous research. Therefore, this study looks at the broader image by incorporating BE. This research additionally contributes to the literature by analyzing two distinct product categories, namely chocolate and toilet paper, which are primarily classified as hedonic and utilitarian, respectively. Although prior literature has made a great effort in examining the topic at hand, the grocery industry has been changing frequently and considerably. Thus, this study serves as an attempt to address the literature gap concerning the competition of national versus store brands and present an updated outlook on the field of investigation.

5.4 Limitations and Further Research

As this research is being conducted within the scope of a master's thesis dissertation, it is crucial to consider the various limitations that come with it, including financial and time constraints.

As the sample was collected through a technique known as convenience sampling, it cannot be considered representative of the total population. Consequently, the study results must be interpreted with caution and in the context of the sample's characteristics. To enhance the generalizability of the results, future research on this topic could benefit from a larger and more demographically representative sample size.

Secondly, the application area of the study is limited since only two product categories have been analyzed. Thus, no conclusions can be made about the general effect of BT on PV, OBE, and WTP or about the impact of PT on the output. Therefore, research should be conducted on other product categories, also beyond the grocery industry.

Third, this study only tested four brands, one national brand and three store brands, per product category in the Portuguese market. To get a better overview of this market, the store brands of the remaining retailers could have been included. Additionally, future research on this topic could also focus on other markets.

Fourth, the complexity of BE as a construct is a limitation in this study. Even though a multi-dimensional construct with 72 items by Keller (2001) was considered to measure BE, the scope of this dissertation only allowed for a limited number of items to be included in the survey, potentially resulting in a less accurate measurement of BE. To obtain more reliable results, future research should consider utilizing a more multi-faceted construct to measure BE.

Another limitation is the experimental design of this survey which involved randomly assigning participants to eight sub-groups and manipulating variables to observe their effect on the outcome variable. To validate the results of this study and to gain additional insights into consumer preferences and choices, future research could use the methods of a Choice Experiment Survey or a Conjoint Analysis to study the research topic.

Finally, this study did not manipulate for external factors that influence a consumer's perception of a product. Potential areas of research include, among others, investigating the role of advertising, price, culture, store image, and store atmosphere. This could be addressed by setting up a more exhaustive research design where the impact of each external factor is assessed separately and in conjunction with others. Moreover, the performance of an experiment to measure how store atmosphere impacts the consumer's perception of national versus store brands could be of interest.

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APPENDICES

Appendix 1: *Main Study – Online Survey*

Survey Flow

Show Block: Introduction

Show Block: Control Questions (5 Questions)

Randomizer: 1 – Evenly Present Elements

- Group: Hedonic – National Brand (12 Questions)
  - Show Block: Hedonic Product – Chocolate Bar – National Brand
  - Randomizer: 4 - Evenly Present Elements
    - Show Block: Manipulation Check – Hedonic – National Brand
    - Show Block: Perceived Value – Hedonic – National Brand
    - Show Block: Overall Brand Equity – Hedonic – National Brand
    - Show Block: Willingness-to-Pay – Hedonic – National Brand
- Group: Hedonic – Continente Brand (12 Questions)
  - Show Block: Hedonic Product – Chocolate Bar – Continente Brand
  - Randomizer: 4 - Evenly Present Elements
    - Show Block: Manipulation Check – Hedonic – Continente Brand
    - Show Block: Perceived Value – Hedonic – Continente Brand
    - Show Block: Overall Brand Equity – Hedonic – Continente Brand
    - Show Block: Willingness-to-Pay – Hedonic – Continente Brand
- Group: Hedonic – Pingo Doce Brand (12 Questions)
  - Show Block: Hedonic Product – Chocolate Bar – Pingo Doce
  - Randomizer: 4 - Evenly Present Elements
    - Show Block: Manipulation Check – Hedonic – Pingo Doce Brand
    - Show Block: Perceived Value – Hedonic – Pingo Doce Brand
    - Show Block: Overall Brand Equity – Hedonic – Pingo Doce Brand
    - Show Block: Willingness-to-Pay – Hedonic – Pingo Doce Brand
- Group: Hedonic – Lidl Brand (12 Questions)
  - Show Block: Hedonic Product – Chocolate Bar – Lidl
  - Randomizer: 4 - Evenly Present Elements
    - Show Block: Manipulation Check – Hedonic – Lidl Brand
    - Show Block: Perceived Value – Hedonic – Lidl Brand
    - Show Block: Overall Brand Equity – Hedonic – Lidl Brand
    - Show Block: Willingness-to-Pay – Hedonic – Lidl Brand

Group: Utilitarian – National Brand (12 Questions)

Show Block: Utilitarian Product – Chocolate Bar – National Brand

Randomizer: 4 - Evenly Present Elements

Show Block: Manipulation Check – Utilitarian – National Brand

Show Block: Perceived Value – Utilitarian – National Brand

Show Block: Overall Brand Equity – Utilitarian – National Brand

Show Block: Willingness-to-Pay – Utilitarian – National Brand

Group: Utilitarian – Continente Brand (12 Questions)

Show Block: Utilitarian Product – Toilet Paper – Continente Brand

Randomizer: 4 - Evenly Present Elements

Show Block: Manipulation Check – Utilitarian – Continente Brand

Show Block: Perceived Value – Utilitarian – Continente Brand

Show Block: Overall Brand Equity – Utilitarian – Continente Brand

Show Block: Willingness-to-Pay – Utilitarian – Continente Brand

Group: Utilitarian – Pingo Doce Brand (12 Questions)

Show Block: Utilitarian Product – Toilet Paper – Pingo Doce

Randomizer: 4 - Evenly Present Elements

Show Block: Manipulation Check – Utilitarian – Pingo Doce Brand

Show Block: Perceived Value – Utilitarian – Pingo Doce Brand

Show Block: Overall Brand Equity – Utilitarian – Pingo Doce Brand

Show Block: Willingness-to-Pay – Utilitarian – Pingo Doce Brand

Group: Utilitarian – Lidl Brand (12 Questions)

Show Block: Utilitarian Product – Toilet Paper – Lidl

Randomizer: 4 - Evenly Present Elements

Show Block: Manipulation Check – Utilitarian – Lidl Brand

Show Block: Perceived Value – Utilitarian – Lidl Brand

Show Block: Overall Brand Equity – Utilitarian – Lidl Brand

Show Block: Willingness-to-Pay – Utilitarian – Lidl Brand

Show Block: Demographics (8 Questions)

Show Block: End of Survey

Block 1 – Introduction

Q1: Introduction

Dear participant,

I would like to thank you in advance for your time and participation in this survey. This research is being done under a Master's Thesis in International Management with Specialization in Marketing, by Universidade Católica Portuguesa; every data collected will be treated anonymously and only used for research purposes. This survey will take you 3-4 minutes to complete and it is important to answer all questions as honestly as possible, after reading each question carefully. If you are not sure about your answer, please choose the one that is most close to your initial assessment. There are no right or wrong answers. Finally, if you have any questions or interest in knowing the final results of this study, please contact: s-marfauoliveira@ucp.pt

Thank you very much!

Block 2 – Control Questions

Q2: Control Question 1

Are you currently living in Portugal?

- Yes
- No

If the participant answers "No", he or she skips to the end of the survey.

Q3: Control Question 3

Have you previously lived in Portugal for longer than 6 months?

- Yes
- No

If the participant answers "No", he or she skips to the end of the survey.

Q4: Control Question 4

Do you grocery shop at least once per month?

- Yes
- No

If the participant answers "No", he or she skips to the end of the survey.

Q5: Control Question 5

Have you purchased chocolate in the last 12 months?

- Yes
- No

Q6: Control Question 6

Have you purchased toilet paper in the last 12 months?

- Yes
- No

Block 3 – Randomization and Presentation of Two Stimulus of Hedonic Nature

Q7: Presentation of Hedonic Stimulus

Imagine that you are at the supermarket with the intention of buying 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 product, please answer the following questions.

Block 3.1. – Manipulation Check

Q8: Manipulation Question 1

Chocolate:

What is the brand of the product presented before? Please select the one that applies.

- Milka
- Continente
- Pingo Doce
- Lidl

Toilet paper:

What is the brand of the product presented before? Please select the one that applies.

- Renova
- Continente
- Pingo Doce
- Lidl

Block 3.2. – Perceived Value

Q9: Perceived Quality

Please indicate your level of agreement with the following statements concerning perceived quality.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
X has consistent quality.							
X is well made.							
X has an acceptable standard of quality.							
X has poor workmanship.*							
X would not last a long time.*							
X would perform consistently.							

(*) reverse scored

Q10: Perceived Emotional Value

Please indicate your level of agreement with the following statements regarding perceived emotional value.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
X is one that I would enjoy.							
X would make me want to use it.							
X is one that I would feel relaxed about using.							

X would make me feel good.							
X would give me pleasure.							

Q11: Perceived Value for Money

Please indicate your level of agreement with the following statements in regard to perceived value for money.

	Strongly disagree	Disagree	Somewh at disagree	Neither agree nor disagree	Somewh at agree	Agree	Strongly agree
X is reasonably priced.							
X offers value for money.							
X is a good product for the price.							
X would be economical.							

Q12: Perceived Social Value

Please indicate your level of agreement with the following statements respecting perceived social value.

	Strongly disagree	Disagree	Somewh at disagree	Neither agree nor disagree	Somewh at agree	Agree	Strongly agree
X would make me feel acceptable.							
X would improve the way I am perceived.							
X would make a good impression on other people.							
X would give its owner							

social approval.							

Block 3.3. – Overall Brand Equity

Q13: Overall Brand Equity

Please rate the degree to which you agree or disagree with each of the following statements related to brand equity.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
It makes sense to buy X instead of any other brand, even if they are the same.							
Even if another brand has some features as X, I would prefer to buy X.							
If there is another brand as good as X, I prefer to buy X.							
If another brand is not different from X in any way, it seems smarter to purchase X.							

Block 3.4. – Willingness to Pay

Q14: Willingness to Pay Question 1

Below what price would the product become so inexpensive that you would doubt its quality and not consider buying it? (too cheap)

Q15: Willingness to Pay Question 2

At what price do you consider the product to become inexpensive but you would still consider it to be a bargain? (cheap)

Q16: Willingness to Pay Question 3

At what price do you consider the product to become expensive but you would still consider buying it? (expensive)

Q17: Willingness to Pay Question 4

Above what price would the product become too expensive so that you would not consider buying it? (too expensive)

Block 4 – Demographics

Q17: Gender

What gender do you identify as?

- Male
- Female
- Non-binary / third gender
- Prefer not to say.

Q18: Age

How old are you?

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 or older

Q19: Nationality

Please indicate your nationality:

- Portuguese
- German
- Other, please indicate:

Q20: Level of education

What is the highest degree or level of education you have completed?

- Middle School
- High School
- Bachelor Degree
- Master Degree
- Doctoral Degree
- Other, please indicate:

Q21: Marital status

What is your marital status?

- Single
- In a relationship
- Married
- Divorced
- Widowed

Q22: Household

How many people, including yourself, live in your household?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8 or more

Q23: Occupation

Please select your occupation:

- Student
- Student Worker
- Employed
- Unemployed
- Retired
- Other, please indicate:

Q24: Gross monthly income

What is your gross monthly income?

- No income
- Less than 500€
- 500-999€
- 1000-1499€
- 1500-1999€
- 2000-2999€
- 3000-3999€
- 4000-4999€
- 5000€ or more
- Prefer not to say.

Block 5 – End of Survey

We thank you for your time spent taking this survey. Your response has been recorded.

Appendix 2: Stimuli Identification for Store Brands

Chocolate

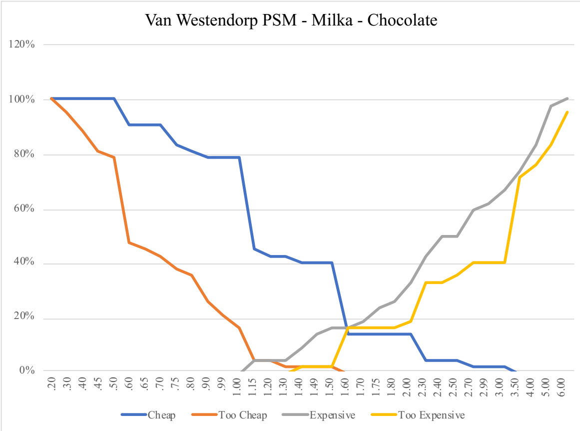
	Continente	Pingo Doce	Lidl	Mini Preço	Aldi	Auchan	Intermarché	Mercadona
Milk, 100g	X	X	X	X	X	X	X	X
Dark, 100g	X	X	X	X	X	X	X	X
White, 100g	X	X	X	X	X	X	X	X

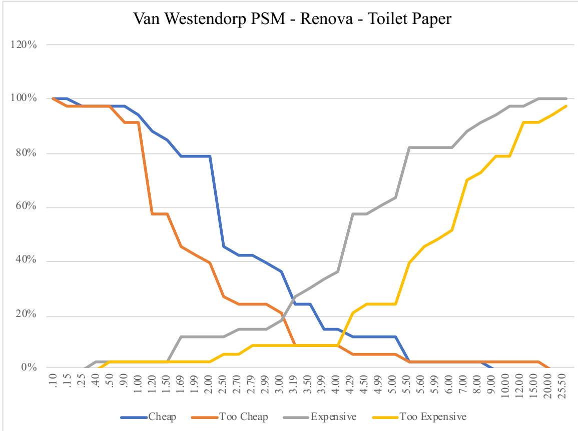
Toilet Paper

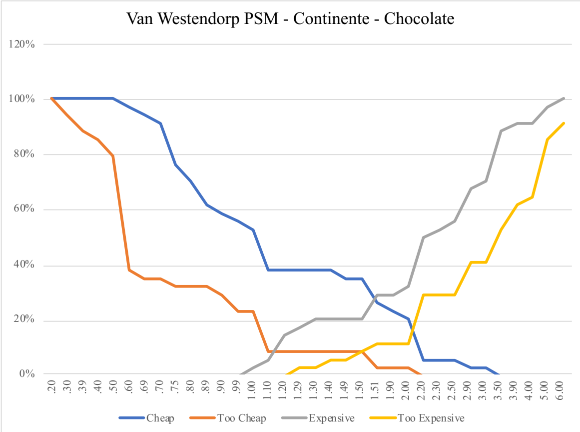
	Continente	Pingo Doce	Lidl	Mini Preço	Aldi	Auchan	Intermarché	Mercadona
4 units, 2 ply						X	X	
6 units, 2 ply		X		X			X	X
6 units, 3 ply				X		X		
8 units, 2 ply						X		
8 units, 4 ply			X	X				X
9 units, 3 ply		X					X	
9 units, 4 ply					X			
12 units, 2 ply	X	X	X	X		X	X	X
12 units, 3 ply	X	X	X	X	X	X	X	
12 units, 4 ply	X	X				X	X	
16 units, 2 ply						X		
18 units, 2 ply							X	
24 units, 2 ply				X		X	X	
32 units, 2 ply							X	
48 units, 2 ply						X	X	

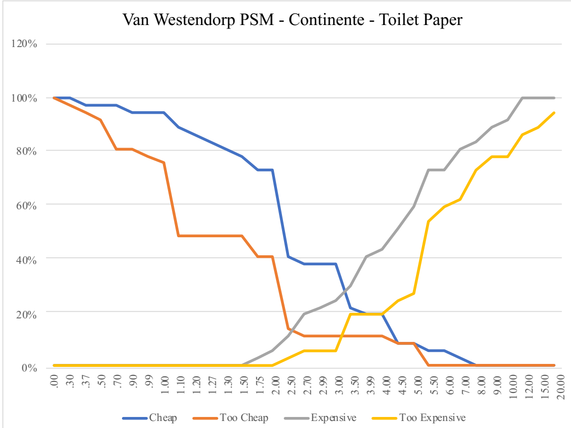
Appendix 3: Van Westendorp Price Sensitivity Meter (PSM)

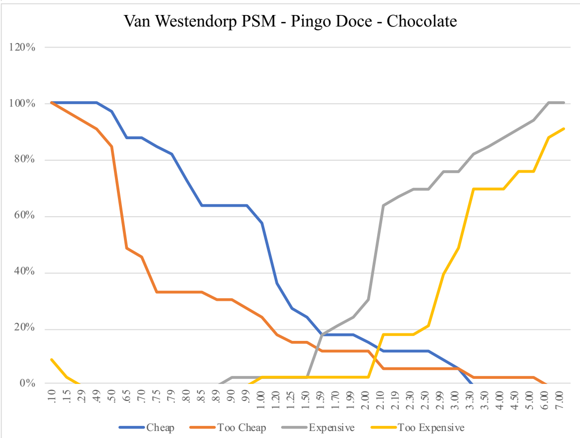
Excel Graphs

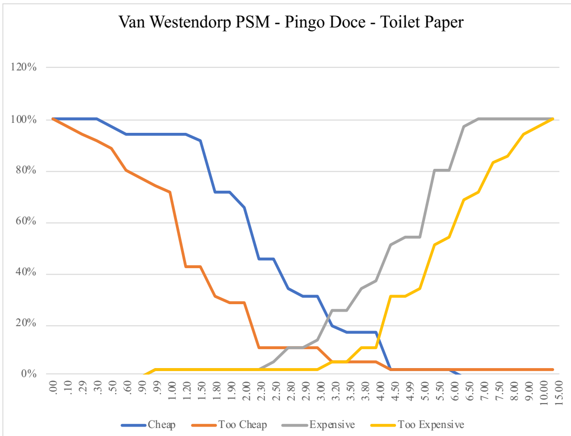


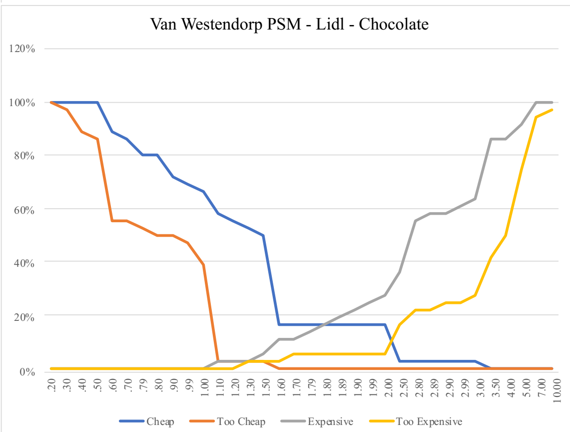


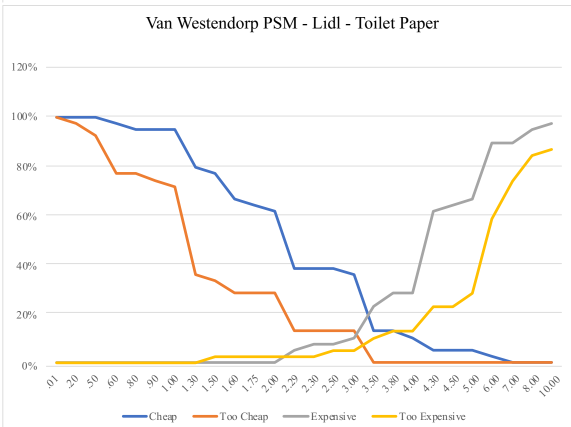












Appendix 4: Main Survey – Sample Characteristics (n=289)

Demographics

Variable		G1	G2	G3	G4	G5	G6	G7	G8	Total
Responses	Total#	42	34	33	36	33	37	35	39	289
Buying Behavior Chocolate	Yes	90.5%	91.2%	93.9%	91.7%	93.9%	91.9%	97.1%	89.7%	92.4%
	No	9.5%	8.8%	6.1%	8.3%	6.1%	8.1%	2.9%	10.3%	7.6%
Buying Behavior Toilet Paper	Yes	100%	94.1%	93.9%	97.2%	100%	100%	97.1%	97.4%	97.6%
	No	0%	5.9%	6.1%	2.8%	0%	0%	2.9%	2.6%	2.4%
Gender	Male	47.6%	38.2%	42.4%	36.1%	18.2%	32.4%	34.3%	48.7%	37.7%
	Female	52.4%	61.8%	57.6%	63.9%	81.8%	67.6%	65.7%	48.7%	61.9%
	Prefer not to say	0%	0%	0%	0%	0%	0%	0%	2.6%	0.4%
Age	18-24	54.8%	50%	54.5%	61.1%	51.5%	48.7%	65.7%	56.4%	55.5%
	25-34	45.2%	41.2%	33.3%	25%	39.5%	29.7%	28.6%	33.3%	34.6%
	35-44	0%	0%	6.1%	2.8%	3%	5.4%	0%	2.6%	2.4%
	45-54	0%	5.9%	6.1%	5.5%	3%	8.1%	5.7%	7.7%	5.2%
	55-64	0%	2.9%	0%	2.8%	0%	8.1%	0%	0%	1.7%
	65-74	0%	0%	0%	0%	3%	0%	0%	0%	0.3%
	75 or older	0%	0%	0%	2.8%	0%	0%	0%	0%	0.3%
Nationality	Portuguese	35.7%	38.2%	42.4%	63.9%	57.6%	62.2%	51.4%	38.5%	48.1%
	German	54.8%	44.1%	42.4%	22.2%	33.3%	29.7%	37.1%	53.8%	40.1%
	Other	9.5%	17.7%	15.2%	13.9%	9.1%	8.1%	11.5%	7.7%	11.8%
Education	Middle School	0%	0%	0%	2.8%	0%	0%	0%	0%	0.3%
	High School	9.5%	5.9%	12.1%	5.5%	15.2%	10.8%	17.1%	12.8%	11.1%
	Bachelor's Degree	57.1%	67.6%	54.5%	50%	51.5%	51.4%	54.3%	59%	55.7%
	Master's Degree	33.4%	26.5%	30.3%	38.9%	33.3%	37.8%	25.7%	28.2%	31.8%
	Doctoral Degree	0%	0%	0%	0%	0%	0%	2.9%	0%	0.3%
	Other	0%	0%	3.1%	2.8%	0%	0%	0%	0%	0.8%
Marital Status	Single	61.9%	58.8%	60.6%	51.6%	51.5%	32.4%	54.3%	53.8%	53.3%
	In a relationship	38.1%	32.4%	21.2%	38.7%	45.5%	52.9%	42.9%	41%	38.8%
	Married	0%	5.9%	15.2%	9.7%	3%	11.8%	2.8%	2.6%	6.6%
	Divorced	0%	2.9%	0%	0%	0%	2.9%	0%	2.6%	1%
	Widowed	0%	0%	3%	0%	0%	0%	0%	0%	0.3%
Household	1	19%	23.5%	18.2%	13.9%	12%	13.5%	14.3%	10.2%	15.6%
	2	19%	17.6%	15.2%	33.3%	39.4%	21.6%	28.6%	23.1%	24.6%
	3	26.2%	23.5%	42.4%	27.8%	18.2%	40.5%	17.1%	43.6%	30.1%

	4	26.2%	32.4%	18.2%	19.4%	15.2%	19%	34.3%	17.9%	22.8%
	5	4.8%	0%	0%	2.8%	6.1%	5.4%	5.7%	2.6%	3.5%
	6	2.4%	3%	6%	2.8%	6.1%	0%	0%	0%	2.4%
	7	2.4%	0%	0%	0%	3%	0%	0%	0%	0.7%
	8 or more	0%	0%	0%	0%	0%	0%	0%	2.6%	0.3%
Occupation	Student	47.6%	53%	57.6%	30.6%	45.5%	32.4%	62.9%	56.4%	48.2%
	Student Worker	33.3%	20.6%	21.2%	30.6%	27.3%	21.6%	22.8%	20.5%	24.9%
	Employed	16.7%	20.6%	12.1%	36.1%	24.2%	35.1%	8.6%	23.1%	22.1%
	Unemployed	2.4%	2.9%	9.1%	0%	0%	5.5%	5.7%	0%	3.1%
	Retired	0%	0%	0%	2.7%	3%	2.7%	0%	0%	1%
	Other	0%	2.9%	0%	0%	0%	2.7%	0%	0%	0.7%
Income	No income	21.4%	35.3%	18.2%	19.4%	18.2%	21.6%	22.9%	18%	21.8%
	Less than 500€	11.9%	5.9%	12.1%	13.9%	21.2%	13.5%	14.3%	2.6%	11.8%
	500-999€	19.1%	20.7%	12.1%	19.4%	6.1%	16.2%	14.3%	25.6%	17%
	1000-1499€	11.9%	14.7%	24.2%	13.9%	24.2%	19%	14.3%	20.5%	17.6%
	1500-1999€	2.4%	5.9%	9.2%	8.3%	15.2%	5.4%	20%	5.1%	8.7%
	2000-2999€	21.4%	2.9%	6.1%	5.6%	0%	5.4%	2.8%	15.4%	8%
	3000-3999€	7.1%	2.9%	3%	8.3%	3%	5.4%	0%	5.1%	4.5%
	4000-4999€	0%	2.9%	0%	5.6%	0%	2.7%	2.8%	0%	1.7%
	5000€ or more	2.4%	2.9%	3%	0%	6.1%	2.7%	2.9%	2.6%	2.8%
	Prefer not to say	2.4%	5.9%	12.1%	5.6%	6%	8.1%	5.7%	5.1%	6.1%

Note. G1=Milka, G2=Continente_Hedonic, G3=Pingo Doce_Hedonic, G4=Lidl_Hedonic, G5=Renova, G6=Continente_Utilitarian, G7=Pingo Doce_Utilitarian, G8=Lidl_Utilitarian

Appendix 5: Test of *Normality*

Shapiro-Wilk

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
OPP	.292	289	.000	.774	289	.000
PV	.038	289	.200*	.995	289	.519
OBE	.070	289	.002	.984	289	.003
PQ	.054	289	.042	.988	289	.014
PEV	.098	289	.000	.965	289	.000
PVM	.097	289	.000	.979	289	.000
PSV	.129	289	.000	.970	289	.000

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

a. Lilliefors Significance Correction

Appendix 6: *Main Study – H1*

Mann-Whitney U Test

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.[a,b]	Decision
1	The distribution of OPP is the same across categories of BT.	Independent-Samples Mann-Whitney U Test	.374	Retain the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

Descriptive Statistics

Group Statistics

	BT	N	Mean	Std. Deviation	Std. Error Mean
OPP	National Brand	75	2.3960	1.07442	.12406
	Store Brand	214	2.4834	.83789	.05728

Ranks

Ranks

	BT	N	Mean Rank	Sum of Ranks
OPP	National Brand	75	152.32	11424.00
	Store Brand	214	142.43	30481.00
	Total	289		

Test Statistics

Test Statistics[a]

	OPP
Mann-Whitney U	7476.000
Wilcoxon W	30481.000
Z	-.889
Asymp. Sig. (2-tailed)	.374

a. Grouping Variable: BT

Appendix 7: *Main Study – H2*

Mediation: Matrix Procedure – Model 4

```
Run MATRIX procedure:

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

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

**************************************************************************
Model  : 4
    Y  : OPP
    X  : BT
    M  : PV

Sample
Size:  289
**************************************************************************
OUTCOME VARIABLE:
 PV
```

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2227	.0496	.6061	14.9717	1.0000	287.0000	.0001

Model

	coeff	se	t	p	LLCI	ULCI
constant	5.2533	.1875	28.0178	.0000	4.8843	5.6224
BT	-.4042	.1045	-3.8693	.0001	-.6098	-.1986

Standardized coefficients

	coeff
BT	-.5071

Covariance matrix of regression parameter estimates:

	constant	BT
constant	.0352	-.0190
BT	-.0190	.0109

****
OUTCOME VARIABLE:
OPP

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0713	.0051	.8189	.7300	2.0000	286.0000	.4828

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6584	.4212	6.3113	.0000	1.8293	3.4874
BT	.0605	.1246	.4857	.6275	-.1847	.3057
PV	-.0666	.0686	-.9704	.3327	-.2016	.0685

Standardized coefficients

	coeff
BT	.0669
PV	-.0587

Covariance matrix of regression parameter estimates:

	constant	BT	PV
constant	.1774	-.0357	-.0247
BT	-.0357	.0155	.0019
PV	-.0247	.0019	.0047

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
OPP

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0425	.0018	.8187	.5183	1.0000	287.0000	.4721

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.3086	.2179	10.5938	.0000	1.8797	2.7375
BT	.0874	.1214	.7199	.4721	-.1516	.3264

Standardized coefficients

	coeff
BT	.0967

Covariance matrix of regression parameter estimates:

	constant	BT
constant	.0475	-.0257
BT	-.0257	.0147

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

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps
.0874	.1214	.7199	.4721	-.1516	.3264	.0967

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps
.0605	.1246	.4857	.6275	-.1847	.3057	.0669

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
PV	.0269	.0296	-.0293	.0885

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

	Effect	BootSE	BootLLCI	BootULCI
PV	.0298	.0327	-.0324	.0975

```
Model
              coeff         se          t          p       LLCI       ULCI
constant     2.3086      .2179    10.5938      .0000     1.8797     2.7375
BT            .0874      .1214      .7199      .4721     -.1516      .3264

Standardized coefficients
         coeff
BT       .0967

Covariance matrix of regression parameter estimates:
           constant         BT
constant      .0475     -.0257
BT           -.0257      .0147


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

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps
      .0874      .1214      .7199      .4721     -.1516      .3264      .0967

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps
      .0605      .1246      .4857      .6275     -.1847      .3057      .0669

Indirect effect(s) of X on Y:
       Effect     BootSE   BootLLCI   BootULCI
PV      .0269      .0296     -.0293      .0885

Partially standardized indirect effect(s) of X on Y:
       Effect     BootSE   BootLLCI   BootULCI
PV      .0298      .0327     -.0324      .0975

*********************** 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.

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

Appendix 8: *Main Study – H2A*

Descriptive Statistics

Group Statistics

	BT	N	Mean	Std. Deviation	Std. Error Mean
PV	National Brand	75	4.8491	.80401	.09284
	Store Brand	214	4.4449	.76945	.05260

Independent Samples T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
PV	Equal variances assumed	.668	.415	3.869	287	.000	.000	.40421	.10447	.19860	.60983
	Equal variances not assumed			3.788	124.668	.000	.000	.40421	.10670	.19303	.61540

Appendix 9: *Main Study – H2B*

Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.065[a]	.004	.001	.90370

a. Predictors: (Constant), PV

ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.002	1	1.002	1.227	.269[b]
	Residual	234.384	287	.817		
	Total	235.387	288			

a. Dependent Variable: OPP

b. Predictors: (Constant), PV

Coefficients

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.797	.309		9.067	.000
	PV	-.074	.067	-.065	-1.108	.269

a. Dependent Variable: OPP

Appendix 10: *Main Study – H3*

Mediation: Matrix Procedure – Model 4

```
Run MATRIX procedure:

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

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

**************************************************************************
Model  : 4
    Y  : OPP
    X  : BT
    M  : OBE

Sample
Size:  289

**************************************************************************
OUTCOME VARIABLE:
 OBE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0625      .0039     1.8924     1.1239     1.0000   287.0000      .2900

Model
              coeff         se          t          p       LLCI       ULCI
constant     4.1157      .3313    12.4221      .0000     3.4636     4.7678
BT           -.1957      .1846    -1.0602      .2900     -.5590      .1676

Standardized coefficients
          coeff
BT       -.1422

Covariance matrix of regression parameter estimates:
           constant         BT
constant      .1098     -.0593
BT           -.0593      .0341
**************************************************************************
OUTCOME VARIABLE:
 OPP

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0727      .0053      .8187      .7605     2.0000   286.0000      .4684

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.4686      .2702     9.1354      .0000     1.9367     3.0005
BT            .0798      .1217      .6560      .5124     -.1596      .3192
OBE          -.0389      .0388    -1.0014      .3175     -.1153      .0375
```

```
Standardized coefficients
        coeff
BT      .0883
OBE    -.0592


Covariance matrix of regression parameter estimates:
          constant         BT        OBE
constant     .0730     -.0269     -.0062
BT          -.0269      .0148      .0003
OBE         -.0062      .0003      .0015

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 OPP

Model Summary
         R       R-sq        MSE          F        df1        df2          p
     .0425      .0018      .8187      .5183     1.0000   287.0000      .4721

Model
             coeff         se          t          p       LLCI       ULCI
constant    2.3086      .2179    10.5938      .0000     1.8797     2.7375
BT           .0874      .1214      .7199      .4721     -.1516      .3264

Standardized coefficients
       coeff
BT     .0967


Covariance matrix of regression parameter estimates:
          constant         BT
constant     .0475     -.0257
BT          -.0257      .0147

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

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps
      .0874      .1214      .7199      .4721     -.1516      .3264      .0967

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps
      .0798      .1217      .6560      .5124     -.1596      .3192      .0883

Indirect effect(s) of X on Y:
        Effect     BootSE   BootLLCI   BootULCI
OBE      .0076      .0128     -.0166      .0358

Partially standardized indirect effect(s) of X on Y:
        Effect     BootSE   BootLLCI   BootULCI
OBE      .0084      .0142     -.0184      .0400

*********************** 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.

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

Appendix 11: *Main Study – H3A*

Mann-Whitney U Test

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.[a,b]	Decision
1	The distribution of OBE is the same across categories of BT.	Independent-Samples Mann-Whitney U Test	.280	Retain the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

Descriptive Statistics

Group Statistics

	BT	N	Mean	Std. Deviation	Std. Error Mean
OBE	National Brand	75	3.9200	1.56997	.18128
	Store Brand	214	3.7243	1.30138	.08896

Ranks

Ranks

	BT	N	Mean Rank	Sum of Ranks
OBE	National Brand	75	153.95	11546.00
	Store Brand	214	141.86	30359.00
	Total	289		

Test Statistics

Test Statistics[a]

	OBE
Mann-Whitney U	7354.000
Wilcoxon W	30359.000
Z	-1.080
Asymp. Sig. (2-tailed)	.280

a. Grouping Variable: BT

Appendix 12: *Main Study – H3B*

Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.062[a]	.004	.000	.90391

a. Predictors: (Constant), OBE

ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.893	1	.893	1.093	.297[b]
	Residual	234.494	287	.817		
	Total	235.387	288			

a. Dependent Variable: OPP

b. Predictors: (Constant), OBE

Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.613	.156		16.806	.000
	OBE	-.040	.039	-.062	-1.045	.297

a. Dependent Variable: OPP

Appendix 13: *Main Study – H4*

Sequential Mediation: Matrix Procedure – Model 6

```
Run MATRIX procedure:

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

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

**************************************************************************
Model  : 6
    Y  : OPP
    X  : BT
   M1  : PV
   M2  : OBE

Sample
Size:  289

**************************************************************************
OUTCOME VARIABLE:
 PV

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2227      .0496      .6061    14.9717     1.0000   287.0000      .0001

Model
              coeff         se          t          p       LLCI       ULCI
constant     5.2533      .1875    28.0178      .0000     4.8843     5.6224
BT           -.4042      .1045    -3.8693      .0001     -.6098     -.1986

Standardized coefficients
        coeff
BT     -.5071

Covariance matrix of regression parameter estimates:
           constant         BT
constant      .0352     -.0190
BT           -.0190      .0109

**************************************************************************
OUTCOME VARIABLE:
 OBE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .5560      .3092     1.3170    64.0024     2.0000   286.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    -1.0234      .5342    -1.9158      .0564    -2.0748      .0281
BT            .1997      .1580     1.2644      .2071     -.1112      .5106
PV            .9782      .0870    11.2423      .0000      .8070     1.1495

Standardized coefficients
        coeff
BT      .1452
PV      .5668

Covariance matrix of regression parameter estimates:
           constant         BT         PV
constant      .2854     -.0574     -.0398
BT           -.0574      .0250      .0031
PV           -.0398      .0031      .0076

**************************************************************************
OUTCOME VARIABLE:
 OPP

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0785      .0062      .8208      .5887     3.0000   285.0000      .6229
```

```
Model
              coeff         se          t          p       LLCI       ULCI
constant     2.6318      .4244     6.2010      .0000     1.7964     3.4672
BT            .0657      .1251      .5253      .5998     -.1805      .3118
PV           -.0412      .0825     -.4991      .6181     -.2035      .1212
OBE          -.0260      .0467     -.5565      .5783     -.1179      .0659

Standardized coefficients
         coeff
BT       .0727
PV      -.0363
OBE     -.0395

Covariance matrix of regression parameter estimates:
           constant         BT         PV        OBE
constant      .1801     -.0362     -.0270      .0022
BT           -.0362      .0156      .0023     -.0004
PV           -.0270      .0023      .0068     -.0021
OBE           .0022     -.0004     -.0021      .0022

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 OPP

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0425      .0018      .8187      .5183     1.0000   287.0000      .4721

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.3086      .2179    10.5938      .0000     1.8797     2.7375
BT            .0874      .1214      .7199      .4721     -.1516      .3264

Standardized coefficients
        coeff
BT      .0967

Covariance matrix of regression parameter estimates:
           constant         BT
constant      .0475     -.0257
BT           -.0257      .0147
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps
      .0874      .1214      .7199      .4721     -.1516      .3264      .0967

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps
      .0657      .1251      .5253      .5998     -.1805      .3118      .0727
Indirect effect(s) of X on Y:
           Effect     BootSE   BootLLCI   BootULCI
TOTAL       .0217      .0311     -.0400      .0860
Ind1        .0166      .0342     -.0514      .0866
Ind2       -.0052      .0130     -.0369      .0182
Ind3        .0103      .0192     -.0284      .0495
(C1)        .0218      .0318     -.0432      .0841
(C2)        .0064      .0474     -.0892      .1029
(C3)       -.0155      .0299     -.0810      .0436

Partially standardized indirect effect(s) of X on Y:
           Effect     BootSE   BootLLCI   BootULCI
TOTAL       .0240      .0345     -.0443      .0954
Ind1        .0184      .0379     -.0572      .0961
Ind2       -.0057      .0144     -.0409      .0200
Ind3        .0114      .0212     -.0314      .0551
(C1)        .0241      .0353     -.0481      .0939
(C2)        .0070      .0525     -.0989      .1141
(C3)       -.0171      .0331     -.0896      .0483

Specific indirect effect contrast definition(s):
(C1)          Ind1      minus   Ind2
(C2)          Ind1      minus   Ind3
(C3)          Ind2      minus   Ind3

Indirect effect key:
Ind1 BT          ->     PV          ->     OPP
Ind2 BT          ->     OBE         ->     OPP
Ind3 BT          ->     PV          ->     OBE          ->     OPP
```

```
************************ 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.

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

Appendix 14: *Main Study – H4A*

Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.553[a]	.305	.303	1.14881

a. Predictors: (Constant), PV

ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	166.480	1	166.480	126.143	.000[b]
	Residual	378.775	287	1.320		
	Total	545.256	288			

a. Dependent Variable: OBE

b. Predictors: (Constant), PV

Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.564	.392		-1.439	.151
	PV	.954	.085	.553	11.231	.000

a. Dependent Variable: OBE

Appendix 15: *Main Study – H5A*

Moderation: Matrix Procedure – Model 1

```
Run MATRIX procedure:

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

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

**************************************************************************
Model  : 1
    Y  : PV
    X  : BT
    W  : PT

Sample
Size:  289
```

```
*****************************************************************************
OUTCOME VARIABLE:
 PV

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2385      .0569      .6056     5.7307     3.0000   285.0000      .0008

Model
              coeff         se          t          p       LLCI       ULCI
constant     6.0639      .5772    10.5066      .0000     4.9279     7.1999
BT           -.8399      .3240    -2.5920      .0100    -1.4778     -.2021
PT           -.5607      .3774    -1.4857      .1385    -1.3035      .1821
Int_1         .3004      .2100     1.4303      .1537     -.1130      .7138

Product terms key:
 Int_1    :        BT       x        PT

Covariance matrix of regression parameter estimates:
           constant         BT         PT      Int_1
constant      .3331     -.1810     -.2060      .1116
BT           -.1810      .1050      .1116     -.0644
PT           -.2060      .1116      .1424     -.0769
Int_1         .1116     -.0644     -.0769      .0441

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0068     2.0458     1.0000   285.0000      .1537
----------
    Focal predict: BT       (X)
          Mod var: PT       (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   BT         PT         PV         .
BEGIN DATA.
     1.0000     1.0000     4.9637
     2.0000     1.0000     4.4241
     1.0000     2.0000     4.7033
     2.0000     2.0000     4.4642
END DATA.
GRAPH/SCATTERPLOT=
 BT       WITH     PV       BY       PT       .

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

Level of confidence for all confidence intervals in output:
  95.0000

NOTE: Standardized coefficients are not available for models with moderators.

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

Appendix 16: *Main Study – H5B*

Moderation: Matrix Procedure – Model 1

```
Run MATRIX procedure:

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

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

**************************************************************************
Model  : 1
    Y  : OBE
    X  : BT
    W  : PT

Sample
Size:  289
```

```
**************************************************************************
OUTCOME VARIABLE:
 OBE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .1445      .0209     1.8732     2.0270     3.0000   285.0000      .1103

Model
              coeff         se          t          p       LLCI       ULCI
constant     6.2365     1.0150     6.1442      .0000     4.2386     8.2344
BT          -1.3144      .5699    -2.3064      .0218    -2.4362     -.1927
PT          -1.4686      .6637    -2.2126      .0277    -2.7750     -.1622
Int_1         .7727      .3694     2.0920      .0373      .0457     1.4997

Product terms key:
 Int_1    :        BT       x        PT

Covariance matrix of regression parameter estimates:
           constant         BT         PT      Int_1
constant     1.0303     -.5600     -.6371      .3452
BT           -.5600      .3248      .3452     -.1992
PT           -.6371      .3452      .4405     -.2378
Int_1         .3452     -.1992     -.2378      .1364

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0150     4.3763     1.0000   285.0000      .0373
----------
    Focal predict: BT       (X)
          Mod var: PT       (W)

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

         PT     Effect         se          t          p       LLCI       ULCI
     1.0000     -.5417      .2506    -2.1619      .0315    -1.0349     -.0485
     2.0000      .2310      .2714      .8511      .3954     -.3032      .7651

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   BT         PT         OBE       .
BEGIN DATA.
     1.0000     1.0000     4.2262
     2.0000     1.0000     3.6845
     1.0000     2.0000     3.5303
     2.0000     2.0000     3.7613
END DATA.
GRAPH/SCATTERPLOT=
 BT       WITH     OBE      BY       PT       .

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

Level of confidence for all confidence intervals in output:
  95.0000

NOTE: Standardized coefficients are not available for models with moderators.

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

Appendix 17: *Main Study – H5C*

Moderation: Matrix Procedure – Model 1

```
Run MATRIX procedure:

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

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

**************************************************************************
Model  : 1
    Y  : OPP
    X  : BT
    W  : PT

Sample
Size:  289
```

```
******************************************************************************
OUTCOME VARIABLE:
 OPP

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .9813      .9630      .0305  2473.8066     3.0000   285.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    -1.4177      .1296   -10.9376      .0000    -1.6728    -1.1625
BT            .7177      .0728     9.8616      .0000      .5744      .8609
PT           2.6764      .0848    31.5789      .0000     2.5096     2.8432
Int_1        -.5264      .0472   -11.1607      .0000     -.6192     -.4336

Product terms key:
 Int_1    :        BT       x        PT

Covariance matrix of regression parameter estimates:
           constant         BT         PT      Int_1
constant      .0168     -.0091     -.0104      .0056
BT           -.0091      .0053      .0056     -.0032
PT           -.0104      .0056      .0072     -.0039
Int_1         .0056     -.0032     -.0039      .0022
Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0162   124.5621     1.0000   285.0000      .0000
----------
    Focal predict: BT       (X)
          Mod var: PT       (W)

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

         PT     Effect         se          t          p       LLCI       ULCI
     1.0000      .1913      .0320     5.9776      .0000      .1283      .2542
     2.0000     -.3351      .0347    -9.6715      .0000     -.4033     -.2669

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   BT         PT         OPP        .
BEGIN DATA.
     1.0000     1.0000     1.4500
     2.0000     1.0000     1.6413
     1.0000     2.0000     3.6000
     2.0000     2.0000     3.2649
END DATA.
GRAPH/SCATTERPLOT=
 BT       WITH     OPP      BY       PT       .

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

Level of confidence for all confidence intervals in output:
  95.0000

NOTE: Standardized coefficients are not available for models with moderators.

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

Appendix 18: *Main Study – Full Model*

Conditional Process Modeling: Matrix Procedure – Model 85

```
Run MATRIX procedure:

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

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

```
******************************************************************************
Model  : 85
    Y  : OPP
    X  : BT
   M1  : PV
   M2  : OBE
    W  : PT

Sample
Size:  289

******************************************************************************
OUTCOME VARIABLE:
 PV

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2385      .0569      .6056     5.7307     3.0000   285.0000      .0008

Model
              coeff         se          t          p       LLCI       ULCI
constant     6.0639      .5772    10.5066      .0000     4.9279     7.1999
BT           -.8399      .3240    -2.5920      .0100    -1.4778     -.2021
PT           -.5607      .3774    -1.4857      .1385    -1.3035      .1821
Int_1         .3004      .2100     1.4303      .1537     -.1130      .7138

Product terms key:
 Int_1    :        BT       x        PT

Covariance matrix of regression parameter estimates:
           constant         BT         PT      Int_1
constant      .3331     -.1810     -.2060      .1116
BT           -.1810      .1050      .1116     -.0644
PT           -.2060      .1116      .1424     -.0769
Int_1         .1116     -.0644     -.0769      .0441

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0068     2.0458     1.0000   285.0000      .1537
----------
    Focal predict: BT       (X)
          Mod var: PT       (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   BT         PT         PV         .
BEGIN DATA.
     1.0000     1.0000     4.9637
     2.0000     1.0000     4.4241
     1.0000     2.0000     4.7033
     2.0000     2.0000     4.4642
END DATA.
GRAPH/SCATTERPLOT=
 BT       WITH     PV       BY       PT       .

******************************************************************************
OUTCOME VARIABLE:
 OBE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .5621      .3160     1.3133    32.7974     4.0000   284.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      .3819     1.0010      .3815      .7031    -1.5885     2.3523
BT           -.5035      .4828    -1.0429      .2979    -1.4537      .4468
PV            .9655      .0872    11.0687      .0000      .7938     1.1372
PT           -.9272      .5579    -1.6620      .0976    -2.0253      .1709
Int_1         .4827      .3104     1.5551      .1210     -.1283     1.0936

Product terms key:
 Int_1    :        BT       x        PT
```

```
Covariance matrix of regression parameter estimates:
           constant         BT         PV         PT      Int_1
constant     1.0021     -.4313     -.0461     -.4725      .2559
BT           -.4313      .2331      .0064      .2456     -.1416
PV           -.0461      .0064      .0076      .0043     -.0023
PT           -.4725      .2456      .0043      .3112     -.1680
Int_1         .2559     -.1416     -.0023     -.1680      .0963

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0058     2.4183     1.0000   284.0000      .1210
----------
    Focal predict: BT       (X)
          Mod var: PT       (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   BT         PT         OBE       .
BEGIN DATA.
     1.0000     1.0000     3.8266
     2.0000     1.0000     3.8058
     1.0000     2.0000     3.3821
     2.0000     2.0000     3.8439
END DATA.
GRAPH/SCATTERPLOT=
 BT       WITH     OBE      BY       PT       .

*************************************************************************
OUTCOME VARIABLE:
 OPP

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .9817      .9638      .0301  1506.4303     5.0000   283.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    -1.2565      .1516    -8.2863      .0000    -1.5550     -.9580
BT            .7007      .0733     9.5654      .0000      .5565      .8449
PV           -.0388      .0158    -2.4536      .0147     -.0699     -.0077
OBE           .0119      .0090     1.3204      .1878     -.0058      .0296
PT           2.6721      .0849    31.4746      .0000     2.5050     2.8392
Int_1        -.5239      .0472   -11.0992      .0000     -.6168     -.4310

Product terms key:
 Int_1    :        BT       x        PT

Covariance matrix of regression parameter estimates:
           constant         BT         PV        OBE         PT      Int_1
constant      .0230     -.0099     -.0010      .0000     -.0109      .0059
BT           -.0099      .0054      .0001      .0000      .0057     -.0033
PV           -.0010      .0001      .0002     -.0001      .0000      .0000
OBE           .0000      .0000     -.0001      .0001      .0001      .0000
PT           -.0109      .0057      .0000      .0001      .0072     -.0039
Int_1         .0059     -.0033      .0000      .0000     -.0039      .0022

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0158   123.1913     1.0000   283.0000      .0000
----------
    Focal predict: BT       (X)
          Mod var: PT       (W)

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

         PT     Effect         se          t          p       LLCI       ULCI
     1.0000      .1768      .0326     5.4284      .0000      .1127      .2409
     2.0000     -.3471      .0348    -9.9747      .0000     -.4157     -.2786

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   BT         PT         OPP       .
BEGIN DATA.
     1.0000     1.0000     1.4607
     2.0000     1.0000     1.6375
     1.0000     2.0000     3.6089
     2.0000     2.0000     3.2617
END DATA.
```

```
GRAPH/SCATTERPLOT=
 BT       WITH     OPP      BY       PT       .

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

Conditional direct effects of X on Y
        PT     Effect         se          t          p       LLCI       ULCI
    1.0000      .1768      .0326     5.4284      .0000      .1127      .2409
    2.0000     -.3471      .0348    -9.9747      .0000     -.4157     -.2786

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 BT         ->    PV          ->    OPP

        PT     Effect     BootSE   BootLLCI   BootULCI
    1.0000      .0209      .0109      .0031      .0458
    2.0000      .0093      .0080     -.0030      .0284

Index of moderated mediation (difference between conditional indirect effects):
       Index     BootSE   BootLLCI   BootULCI
PT     -.0116      .0106     -.0360      .0050

 Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)
    Effect1    Effect2   Contrast     BootSE   BootLLCI   BootULCI
      .0093      .0209     -.0116      .0106     -.0360      .0050

INDIRECT EFFECT:
 BT         ->    OBE         ->    OPP

        PT     Effect     BootSE   BootLLCI   BootULCI
    1.0000     -.0002      .0032     -.0072      .0067
    2.0000      .0055      .0054     -.0026      .0182

Index of moderated mediation (difference between conditional indirect effects):
       Index     BootSE   BootLLCI   BootULCI
PT      .0057      .0064     -.0036      .0209

 Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)
    Effect1    Effect2   Contrast     BootSE   BootLLCI   BootULCI
      .0055     -.0002      .0057      .0064     -.0036      .0209

INDIRECT EFFECT:
 BT         ->    PV          ->    OBE         ->    OPP

        PT     Effect     BootSE   BootLLCI   BootULCI
    1.0000     -.0062      .0049     -.0170      .0023

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

NOTE: Standardized coefficients are not available for models with moderators.

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

Appendix 19: *Main Study – Further Research*

Kruskal-Wallis H Test – Brand_Hedonic on WTP$_{OPP}$

Ranks

	Brand_Hedonic	N	Mean Rank
OPP	Milka	42	57.50
	Continente	34	95.50
	Pingo Doce	33	129.00
	Lidl	36	18.50
	Total	145	

Test Statistics[a,b]

	OPP
Kruskal-Wallis H	144.000
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Brand_Hedonic

Kruskal-Wallis H Test – Brand_Utilitarian on WTP_{OPP}

Ranks

	Brand_Utilitarian	N	Mean Rank
OPP	Renova	33	128.00
	Continente	37	19.00
	Pingo Doce	35	94.00
	Lidl	39	57.00
	Total	144	

Test Statistics[a,b]

	OPP
Kruskal-Wallis H	143.000
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Brand_Utilitarian

Kruskal-Wallis H Test – Brand_Hedonic on Perceived Quality

Ranks

	Brand_Hedonic	N	Mean Rank
PQ	Milka	42	102.30
	Continente	34	57.82
	Pingo Doce	33	54.24
	Lidl	36	70.35
	Total	145	

Test Statistics[a,b]

	PQ
Kruskal-Wallis H	31.720
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Brand_Hedonic

Kruskal-Wallis H Test – Brand_Utilitarian on Perceived Quality

Ranks

	Brand_Utilitarian	N	Mean Rank
PQ	Renova	33	87.82
	Continente	37	79.22
	Pingo Doce	35	74.26
	Lidl	39	51.59
	Total	144	

Test Statistics[a,b]

	PQ
Kruskal-Wallis H	15.345
df	3
Asymp. Sig.	.002

a. Kruskal Wallis Test

b. Grouping Variable: Brand_Utilitarian

Kruskal-Wallis H Test – Brand_Hedonic on Perceived Emotional Value

Ranks

	Brand_Hedonic	N	Mean Rank
PE	Milka	42	88.49
	Continente	34	65.74
	Pingo Doce	33	58.50
	Lidl	36	75.08
	Total	145	

Test Statistics[a,b]

	PE
Kruskal-Wallis H	10.791
df	3
Asymp. Sig.	.013

a. Kruskal Wallis Test

b. Grouping Variable: Brand_Hedonic

Kruskal-Wallis H Test – Brand_Utilitarian on Perceived Value for Money

Ranks

	Brand_Utilitarian	N	Mean Rank
PVM	Renova	33	57.55
	Continente	37	90.69
	Pingo Doce	35	84.23
	Lidl	39	57.37
	Total	144	

Test Statistics[a,b]

	PVM
Kruskal-Wallis H	19.417
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Brand_Utilitarian