Generational Differences in Response to Sales Promotions: A Comparative Study of Gen X and Gen Z

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Dissertation submitted in partial fulfillment of requirements for the MSc in Management with Specialization in Strategic Marketing at the Universidade Católica Portuguesa, January 2025.

ABSTRACT

Title: "Generational Differences in Response to Sales Promotions: A Comparative Study of Gen X and Gen Z"

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Sales promotions are one of the most efficient ways to influence short-term sales. For the Portuguese population, this is no news since they are among the top for caring for promotions in the fast-moving consumer goods category. Nevertheless, not all promotion types are the same, and not everyone is influenced similarly.

This research aims to understand if different promotional types (Discount, BOGOF, and Coupons) have different impacts on purchase intention and if external factors, more precisely generations, influence this perception focusing on the Portuguese population.

To do this, four stimuli were created, using a shower gel, trying to replicate real-life images of a discount, BOGOF, coupon, and no promotion. Each participant was then exposed to one of the scenarios during an online survey.

Findings showed no difference in purchase intention between the three promotional types, but no promotion obtained a significantly lower purchase intention. Moreover, generations do not predict purchase intention nor prefer a specific promotional type. These results could help managers optimize their costs in promotional campaigns by focusing on adding value to their customers instead of the type of promotion offered. Furthermore, there is no need to tailor the promotional efforts to age and standardization can be used to promote efficiency.

Keywords: Promotions, Generations, Purchase Intention, Portuguese

SUMÁRIO

Título: "Diferenças Geracionais na Reação às Promoções: Um Estudo Comparativo Entre a Geração X e a Geração Z"

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Promoções são das formas mais eficazes de influenciar as vendas a curto prazo. Para os portugueses, isto não é novidade, uma vez que estão entre os que mais se preocupam com promoções na categoria de bens-de-consumo-rápido. No entanto, nem todos os tipos de promoção são iguais, e nem todos são influenciados da mesma forma.

Este estudo tem como objetivo perceber se diferentes tipos de promoções (Desconto, BOGOF e Cupões) têm impactos diferentes na intenção de compra e se fatores externos, mais precisamente, gerações, influenciam esta perceção, com foco na população portuguesa.

Para tal, foram criados quatro estímulos, utilizando um gel de banho, com o objetivo de replicar imagens reais de um desconto, compre-um-leve-dois, cupão e sem promoção. Cada participante foi exposto a um dos cenários durante um inquérito online.

Os resultados não revelaram diferença na intenção de compra entre os três tipos de promoção, mas a ausência de promoção obteve uma intenção de compra significativamente inferior. Além disso, as gerações não preveem a intenção de compra nem preferem um tipo de promoção específico. Estes resultados podem ajudar os gestores a otimizar custos em campanhas promocionais, concentrando-se em acrescentar valor aos seus clientes em vez do tipo de promoção oferecida. Além disso, não há necessidade de adaptar os esforços promocionais à idade e a padronização pode ser utilizada para promover a eficiência.

Palavras-Chave: Promoções, Gerações, Intenção de Compra, Portugueses

ACKNOWLEDGEMENTS

I want to start by thanking my advisor, Paulo Romeiro, for his dedication and help throughout the entire process of writing my thesis. Without your guidance, insights, and clarifying sessions, this path would not have been so smooth, and I am extremely grateful for that.

Second of all, I want to thank every single person who answered and shared my surveys. Without your help, I would not have been able to finish my thesis and achieve the outcome of this work.

My appreciation extends to my lovely best friends who have supported me over the course of many years, especially in this last push to finish my master's degree. I value not only your dedication in distributing my survey but also the safe space and support you have provided me all these years.

I also have to thank my Católica friends for making this journey easy and fun, without you it would not have been the same. I have to give a special acknowledgment to my dear friend, Maryana Koval, who has been with me since day one of Católica and has supported me through every step of the way. I also want to thank you for the business analytics insights that helped me finish my data analysis.

I would also like to extend my heartfelt thank you to my lover, Cristian, for supporting me every single day. Thank you for always believing in me and pushing me to work harder and better every step of the way. Your encouraging words always give me the confidence that I can accomplish anything, and for that, I am deeply grateful.

Last but not least, I have to thank my family, who have been my biggest supporters throughout this journey. The biggest thank you to my mom, dad, and brother to whom I dedicate this thesis because without them none of this would be possible. Their unconditional support, love, and patience have made this journey less turbulent and made me who I am today. A big thank you from the bottom of my heart.

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GLOSSARY

BOGOF- Buy One Get One Free

Gen X- Generation X

Gen Y- Generation Y

Gen Z- Generation Z

PI- Purchase Intention

CHAPTER 1: INTRODUCTION

1.1 Background

The areas of sales promotions and consumer behavior have always been of the best interest in the marketing field. Retailers use marketing promotions to increase short-term sales and profits and, the different types of sales promotions used, result in different outcomes for demand, profits, and consumer surplus. (Khouja et al., 2020)

A study by Kantar, a market research company, showed that in 2020, Portugal ranked first in the world regarding the impact of promotions on total sales in the fast-moving consumer goods sector with a share of 31.1% (Casimiro, 2022). According to the study, Portuguese consumers are particularly interested in sales promotions that provide immediate discounts, temporary price reductions, or special pricing (Casimiro, 2022).

Nevertheless, we must consider that the effectiveness of the different sales promotions may depend on external factors such as consumer demographics, particularly age. Generational differences in expectations, experiences, lifestyles, and attitudes impact purchasing behavior. According to this many companies are trying to understand the different types of consumers and how to gain their attention. (Williams & Robert A. Page, 2011)

While previous research has built on the effectiveness of sales promotions (discounts, coupons, BOGOF) on purchase behavior, the role of age as a mediator in this relationship still has a lot to uncover.

The objective of this research is to fill this gap by studying how different types of sales promotions influence consumers' purchase intentions, using age (through generations) as a moderation factor. We can bring valuable insights into academic theory and practical marketing strategy by understanding how different generational groups respond to promotions. Knowing which promotions resonate most with different generations will allow marketers to improve customer acquisition and retention, as well as how to best employ their marketing efforts.

1.2 Problem Statement

Sales promotions are normally used to influence consumer purchase behavior. Nevertheless, not all sales promotions might be equally effective across groups of consumers. This paper aims to identify which type of promotions (discounts, coupons, buy one get one free) are most effective at influencing purchase intention and how generations can moderate this relationship.

In summary, the research explores how consumer preferences for promotions vary across different generations focusing on Gen Z and Gen X.

To help with our study three research questions were developed:

- What are the most effective types of sales promotions for influencing purchase intention?
- What role does age play in the relationship between sales promotion and purchase intention?
- Do different generational groups respond differently to specific types of sales promotions?

1.3 Relevance

This study aims to reinforce the marketing literature by doing an in-depth analysis of the relationship between different types of sales promotions and purchase intention, focusing on age, through generations, as a moderating variable. Although sales promotions alone have been extensively studied, the role of demographic factors is yet to be explored. By understanding these connections further academic research can discuss personalized marketing and consumer behavior.

From a more practical point of view, this research can help marketing managers with insights to design promotional campaigns. By understanding which type of promotion works better for different generations, promotional campaigns can be optimized leading to more effective targeting and potential higher returns. If, for example, a retailer wants to attract a younger generation it would be interesting and helpful for them to understand which type of sales promotion increases the purchase intention of this group.

1.4 Research methods

Given the nature of the research questions and the need to measure the relationship between the independent and dependent variables, we will use a quantitative approach to collect and analyze the data. The data required to conduct this study will be collected through primary data collection methods, more precisely, an online survey.

The online survey will be distributed to Portuguese participants who are either Gen Z or Gen X, and the expected sample size is 400 participants. Respondents will be asked to rate their purchase intention after being exposed to one specific sales promotion (stimuli).

By using this quantitative method, we will be able to have clear and measurable data that will allow smooth statistical testing. Furthermore, the larger the sample the greater the generalization of findings. Nevertheless, we need to account that a quantitative survey may not capture the depth of consumers' motivations and emotional responses. Furthermore, we need to watch out for response bias, particularly in self-reports of purchase intention.

After we obtain our results, some statistical methods will be employed to answer our research questions. First, a One-way ANOVA will be used to test whether there is a statistically significant difference in purchase intention means between our four scenarios. Following, a moderated ANOVA must be conducted to see if the interaction effect of generations is significant in explaining our model. Finally, Haye's process macro will be employed to test the model as an all and draw conclusions on our research questions.

1.5 Dissertation outline

This dissertation is divided into five chapters. The following chapter presents the literature review, in which a brief overview of sales promotion, purchase intention, and generations is given to better understand our area of study and potentially create connections between them. Based on this, six hypotheses were created that will later be the focus of our analysis.

The third chapter presents the methodology, which explains in detail the research approach, how our primary data was collected, how the stimuli were developed, the measurements of our variables, and finally a brief description of how the data analysis will be performed.

Chapter four presents our results and discussion. The results section starts by describing how our data was prepared, moving to a sample characterization, followed by a hypothesis and full model test to determine whether our hypotheses are aligned with reality. After the main analysis, some more relationships were tested to try to uncover more relationships.

The final chapter, "Conclusions and Limitations", will focus on exposing the main findings, the managerial and academic implications, and finally limitations and further research that will help to explore this topic further and deeper.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

This chapter provides a theoretical framework for the main concepts of our study. We start with an overview of sales promotions, identifying and defining their different types. Following, a theoretical definition and theories about purchase intention are presented. Lastly, we move to the chapter on generational behavior, which presents an overview of the different generations and their characteristics.

2.1 Sales Promotions

Sales promotion can be seen as an action-focused marketing event that aims to impact consumer behavior directly (Blattberg & Neslin, 1990). Over time, product pricing has become more prevalent in media and advertising campaigns (Alvarez & Casielles, 2005), mainly to boost sales in the short run (Bandyopadhyay et al., 2021). This can be achieved because promotions give the product greater appeal and value (Alvarez & Casielles, 2005), not only by providing monetary savings but also by hedonic and utilitarian benefits (Chandon et al., 2000).

When facing promotions consumers normally have one of these two reactions. They either increase their consumption and buy more of the product, or they will stock it for the future, anticipating future purchases (Alvarez & Casielles, 2005).

There are three main types of sales promotions. The first type- trade sales promotions- is when the manufacturer offers promotions to the retailer (Blattberg & Neslin, 1990). The second type- consumer sales promotions- is when the manufacturer targets their promotions to the consumer (Bandyopadhyay et al., 2021). Finally, we have the retailer promotions, where the retailer offers the promotions to the consumer. Ultimately, all these promotion types will end up targeting the consumer (Blattberg & Neslin, 1990).

In this research, we will focus only on retailer sales promotions. There are a vast number of methods to do this, but we will first group them into two categories: monetary and non-monetary. The type of retailer promotions chosen will lead to different outcomes when it concerns demand, profitability, consumer surplus, and much more (Khouja et al., 2020).

Although Khouja et al. (2020) use data analytics, like sales and transaction data, to evaluate the effectiveness of different promotions, it doesn't account for behavioral or consumer insights which can help understand consumer characteristics that take them to purchase from a specific promotional type.

2.1.1. Monetary Sales Promotions

In monetary sales promotions, we encounter a price discount (Blattberg & Briesch, 2012), where a portion of the original product price is cut off. These monetary incentives can be experienced right away, like price discounts. Some offer a delayed incentive, like the case of coupons (Khouja et al., 2020).

Let's see some types of monetary sales promotions.

Price Discounts: A reduction on the regular price is normally given in the form of a percentage or $ amount off (Gupta & Cooper, 1992). This type of discount applies to all customers, and there is an immediate price reduction and also a reduction in retailer revenue (Khouja et al., 2020), which makes it appealing to consumers.

Coupons: A few years ago, coupons started to be distributed more in a digital form (electronically) rather than by traditional means, like newspapers (Kang et al., 2006). Coupons are vouchers that allow customers to get a discount on a pre-defined product at the time of purchase, which is normally limited (Khouja et al., 2020). Since this is a delayed incentive, studies show that a smaller percentage of consumers go through the process of acquiring the coupon and take advantage of the promotion (Lu & Moorthy, 2007).

Buy-one-get-one (BOGOF): In this type of discount the consumer must purchase the first number of unit(s) at the regular price in order to get the discount on the incremental unit(s) (Khouja et al., 2020). This discount is normally presented to the consumer in the format of "Buy one, get one free".

> ***H1****: Price discounts will have a stronger positive effect on purchase intention compared to coupons and BOGOF offers.*

> ***H2****: Coupons will have the least impact on purchase intention compared to price discounts and BOGOF offers.*

2.1.2. Non-Monetary Sales Promotions

Non-monetary promotions are normally perceived as a "gain" obtained on a purchase (Palazon & Delgado-Ballester, 2009). Some examples of these are free samples, free gifts, and sweepstakes (Buil et al., 2013).

Free Gift: Offer of a free gift that is normally related to purchasing the product.

Free Samples: When buying a product, there is an offer of samples from products of the same brand. The objective is for consumers to get to know and try other products in the range.

Sweepstake: The brand organizes a lucky draw or equivalent, and there is a chance to win a large prize.

For this study, we will only focus on monetary sales promotions to understand their different impacts on purchase intention. As the Portuguese population is considered to be price-sensitive in its majority, it could be interesting to see how differently they perceive the different monetary sales promotions.

2.2 Purchase Intention

Purchase intention is people's projections of their own behaviors. The more the consumer sees himself using a product, the higher the expectations are to purchase it (Schlosser, 2003). Purchase intention varies among consumers based on behavior, perceptions, and attitudes (Mirabi et al., 2015), as well as marketing mix elements (Younus et al., 2015). This being said, the purchase decision process can be complex. (Mirabi et al., 2015).

Factors like price, design, packaging, quality, and familiarity impact the purchasing process. (Younus et al., 2015) Among these factors, price is one of the most important estimators of the consumers' purchasing decision (Büyükdağ et al., 2020), and normally, when consumers perceive the price of a product as reasonable, it increases the perceived benefits and also the purchase intention (Lien et al., 2015).

Consumer's purchase decisions can be changed by price promotions (Chen et al., 1998), and Büyükdağ (2020) even states that promotion is one of the methods used to increase purchase intention.

It is worth mentioning that the majority of the studies mentioned above were performed in the US population. It would be interesting to see how it would be applied to the Portuguese population. Are sales promotions and their type relevant to the purchase intention of the Portuguese population?

Some authors defend that there are five factors that affect buying behavior: cohort values, life stage, physiographic, emotional/affinity effects, and socioeconomics (Schewe et al., 2000). What is new about this approach is the belief that the cohort values rise upon the others, as life stage, physiographic, affinities, and socioeconomics are determined by age.

Some studies have already discussed the relationship between sales promotion and purchase intention, but some variations in this topic haven't been explored yet. In a study from Gorji & Siami (2020) on how sales promotion displays affect customer shopping intentions in retail, it is mentioned that it would be interesting to "focus on the age of respondents as a moderating variable" since it was not covered by their study. Another study that tested the effect of price promotions on perceived price attractiveness and purchase intention took into account gender as a moderator, but "if different generations were used, the effect of specific discount patterns used in price promotions on perceived price attractiveness and purchase intention could be compared". (Büyükdağ et al., 2020)

2.3 Generational Behavior

Not every generation is alike (Williams & Robert A. Page, 2011). Different generations should not be treated in the same way since each of them has its own characteristics, experiences, lifestyles, and behaviors that make them unique (Williams & Robert A. Page, 2011).

Generational cohorts are an efficient way to segment the market (Schewe et al., 2000), as individuals within each group have been impacted similarly by external events (Eastman & Liu, 2012). We can define a generational cohort as a "group of people with shared similar experiences and unique common characteristics around these experiences" (Eastman & Liu, 2012).

However, there are some weaknesses in using generational cohorts, for example, the overgeneralization as not all individuals within the generation have the same preferences and behaviors, the rapid change of technological and social environment can quickly alter generational behavior, and finally, these cohorts may overlook sub-cohorts such as cultural and socio-economic. Nevertheless, using generational cohorts can help create targeted strategies, understand patterns in consumer behavior, and help create long-term brand engagement.

Marketers should consider generational differences in purchasing patterns (Norum, 2003) and dive into multi-generational marketing to appeal to the unique needs of generational groups

(Williams & Robert A. Page, 2011). Many companies are already putting their hands to work to understand these groups of buyers (Williams & Robert A. Page, 2011).

We will now analyze the four main generations of the present day: Baby Boomers, Generation X, Millennials, and Generation Z.

> ***H3****: Age moderates the relationship between sales promotion types and purchase intention*

2.3.1. Baby Boomers

Baby Boomers, or just Boomers, were born between 1946 and 1964 (Williams et al., 2010). This designation is given after the dramatic increase in the birth rate at the end of World War II (Williams & Robert A. Page, 2011).

Boomers can be characterized as idealistic (Norum, 2003) and want to be seen as individuals (Hansen & Leuty, 2012), valuing self-expression, optimism, and living and enjoying the present moment (Williams & Robert A. Page, 2011). This group is very career-driven, and most are workaholics. Although a portion of this group has already retired, many continue working and plan an "active retirement" (Williams & Robert A. Page, 2011) (Williams et al., 2010). Nevertheless, family responsibilities play a crucial role in the lives of boomers. (Williams et al., 2010)

Boomers have increased discretionary income and time (Musico, 2008). This generation is known for its propensity for excess, high incomes, and time scarcity (Williams et al., 2010). Baby Boomers will be less price-sensitive if it comes together with quality and value (Williams & Robert A. Page, 2011). Their brand loyalty and higher spending can characterize the buying habits of this group (Norum, 2003).

When it comes to communication, Baby Boomers appreciate convenience and customization. Boomers also like face-to-face communication, so their preferred methods are social and recognition events and professional advisors (Williams & Robert A. Page, 2011). Furthermore, they also like phone conversations, e-mails, blogs, and social networking sites (Venter, 2017).

2.3.2. Gen X

Generation X was born between 1965 and 1976 (Norum, 2003) and entered their adult life during difficult economic times (Williams et al., 2010). This generation has grown up in a time of rising divorce rates and violence, and because of this, they grew up faster and took responsibility for raising themselves (Williams et al., 2010).

Unlike Baby Boomers, this generation puts the quality of personal life ahead of work life and accepts cultural diversity (Dietz, 2003). The individuals of this generation are seen as individualists rather than team players (Dietz, 2003). The core values of this generation are pessimism and diversity (Norum, 2003).

Gen X blames Baby Bommer's materialism and individualism for the difficult times they faced (Williams & Robert A. Page, 2011). Success is not so certain for them, and therefore, they have an economic and psychological "survivor" mentality as well as materialistic and impatient traits (Williams et al., 2010).

Due to the financial constraints this generation encountered and their various needs, they often purchase from value-oriented retailers (Williams & Robert A. Page, 2011). These individuals are very skeptical consumers (Norum, 2003) and often need reassurance about their decisions (Williams & Robert A. Page, 2011).

To attract this generation, marketers should give them stimuli, challenging environments, and flexibility with no long-term commitment. Gen X prefers an informal communication style with short segments to keep them hooked, but without being too modern, as that can push them away. It is important to be straightforward, honest, and informative. Their preferred communication channels are e-mail, multi-media, internet, and most important of all, word-of-mouth, especially in gatherings and social events with the ones they trust (Williams & Robert A. Page, 2011).

2.3.3 Millennials

Millennials, also known as Generation Y, were born between 1977 and 1994 (Williams & Robert A. Page, 2011), and they are the children of Baby Boomers (Naumovska, 2017). They grew up in a fast-paced change (Williams et al., 2010) where women had full-employment opportunities, more family types were socially accepted, and so were diverse ethnicities and cultures (Williams & Robert A. Page, 2011).

This was also a time of digital expansion, and electronic awareness leading to global economic progress, (Naumovska, 2017) and more transparent global boundaries (Williams & Robert A. Page, 2011) through travel, migration, and the Internet (Williams et al., 2010). This globalization led to the necessity of organizations to speak to a purpose (Williams et al., 2010). The core values of this generation are positivity and globalization (Norum, 2003).

Millennials are autonomous, independent, and self-reliant (Williams & Robert A. Page, 2011) and are more idealistic and more socially caused-oriented than Gen X (Dietz, 2003). Gen Y is image-driven and uses its image to make statements. As a result, they spend more than any other generation on apparel (Williams & Robert A. Page, 2011) (Williams et al., 2010).

In their buying habits, they include products with cool images (Norum, 2003) and try to purchase brands that resonate with their peers (Williams & Robert A. Page, 2011). Millennials are keen on customization, speed, and uniqueness, and brand names are important but on the other hand, quality is not a top priority, and competitive pricing and the ability to negotiate are expected (Williams & Robert A. Page, 2011).

Regarding communication, it is important to be creative, use social media and interactive platforms, and be fond of fast communication. It is also important to use humor and avoid too-serious advertising (Naumovska, 2017).

2.3.4. Gen Z

Generation Z was born between 1995 and 2010. This generation has lived in an age of economic recession, global crisis, and negative trends that have led to the loss of part of their childhood (Naumovska, 2017).

This generation was born in a high-tech world with multi-media devices and has never experienced life without the Internet (Naumovska, 2017; Williams et al., 2010). Some of the core values of this cohort are realness and authenticity (Williams & Robert A. Page, 2011), and some of their key characteristics are instant gratification, gamified success, and open-minded social values (Naumovska, 2017).

Another important matter about this generation is the importance of peer acceptance, as they feel the need to belong (Williams et al., 2010). Gen Z is also the most diverse and global generation, coming from a variety of backgrounds and having different life experiences (Williams & Robert A. Page, 2011).

Concerning communication, television is still a great channel, and it should emphasize peer acceptance and a sense of belonging. Gen Z individuals use other media at the same time as they watch television (Williams & Robert A. Page, 2011).

After analyzing these four main generations, we decided to focus our study on only two, Gen X and Gen Z. As stated in our literature review, Gen X is individualistic and seeks value in their purchases, being drawn by value for money and is less likely to make impulsive purchases. On the other hand, Gen Z likes instant offers and values authenticity, social acceptance, and a sense of belonging. This being said it would be interesting to compare these two generations with different life experiences and different approaches to consumption.

***H4**: Gen Z will have a higher purchase intention to price discounts than Gen X.*

***H5**: Gen X will have a higher purchase intention for coupons than Gen Z.*

***H6**: Gen X will have a higher purchase intention for BOGOFs than Gen Z.*

2.4 Conceptual Framework

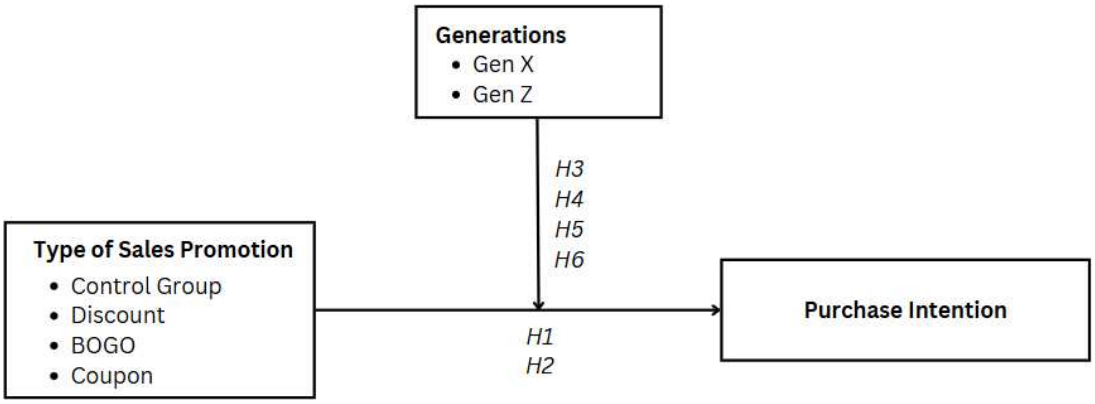

Figure 1: Conceptual Framework

CHAPTER 3: METHODOLOGY

In this chapter, we present the methodology used to gather the necessary data to answer the hypothesis exposed in the above chapter. The chapter starts with the research approach to describe how our objectives will be achieved. Then, we move to the primary data subchapter, which describes how we will collect our data, develop our stimuli, and identify the critical measures and indicators in the questionnaire. Finally, we have the data analysis section that describes the techniques that will be used to test our hypothesis.

3.1 Research Approach

As we have our conceptual model, research questions, and hypothesis defined, we now need to understand what our research approach will be to study how the different types of sales promotions (discounts, buy-one-get-one, and coupons) influence purchase intention, with a focus on generational differences between Gen Z and Gen X.

Our literature review used an exploratory method to gain familiarity with the topic. The purpose was to understand what was already known about the topic and what was yet to be revealed. With this exploratory research, we were also able to develop our hypothesis, which we will test in the next chapter.

We will now move to a confirmatory/explanatory method in order to confirm and understand the relationship between our variables and draw conclusions. To do this we will use a quantitative research design, through an online survey, to uncover these relationships.

Our online survey will be distributed to our two target generational groups, Gen Z and Gen X, and we will use stratified random sampling to ensure that both generations are adequately represented in our sample, which will confer a meaningful comparison between them. Within our survey, we will use an experimental stimulus. This stimulus will consist of four different sales promotion conditions: a discount, a BOGOF, a coupon, and a control scenario where no promotion is offered. Each participant will only view one of these stimuli to avoid bias and comparisons, and we will measure their purchase intention and the perceived attractiveness of the offer.

After collecting our data, we will then move to the data analysis to test our research hypothesis. An ANOVA will be used to understand if there are significant differences in purchase intention across the four promotional conditions. A moderated ANOVA analysis will also explore the moderating role of age on the relationship between sales promotion type and purchase intention.

In the chapter “Data Analysis”, we will develop these techniques further to understand how we will achieve our results.

By taking these steps, we ensure that the study objects are operationalized in a clear, systematic manner.

3.2 Primary Data

3.2.1 Data Collection

Our research will use only primary data, with a quantitative research design. Quantitative research is important because it helps us to do research at scale, it reveals insights about broader groups, and it becomes easier to compare them.

This primary data will be collected via an online survey that will be distributed to the ones with Portuguese nationality of our two target generations Gen Z (born between 1995 and 2010) and Gen X (born between 1965 and 1977). To ensure representation, we will use a stratified random sampling approach, which allows for targeted recruitment of participants based on their generational group. The use of random sampling is also advantageous for our study since every unit will have the same chance of being selected.

Our desired sample size is 400 respondents since we aim to have 50 participants per dependent variable breakout. By doing this, we guarantee, by the Central Limit Theorem, that the dependent variable is approximately normally distributed for each group of the independent variable.

To guarantee that our sample meets the requirements of our study, we will use two screening questions at the beginning of our survey. First, we will ask the participants which year they were born. If the participants weren’t born between 1965 and 1977 (Gen X) or between 1995 and 2010 (Gen Z), they will be automatically redirected to the end of the survey. The second screening question will assess if the participants have Portuguese nationality. We consider having Portuguese nationality those who have been born in Portuguese territory, have Portuguese parents, married a Portuguese citizen, or have lived in Portugal for more than 5 years. If participants don’t meet this requirement, they will also be redirected to the end of the survey.

After meeting these two requirements, the participants will be randomly assigned to one of the four experimental conditions (Discount, BOGOF, Coupon, or no discount) and will be asked about their purchase intention after being exposed to the stimuli.

3.2.2 Stimuli Development

Our study will incorporate four different stimuli to create a reaction in our respondents. These stimuli consist of four distinct promotional scenarios designed to reflect common sales promotions in the marketplace. To make sure that the stimuli are realistic, the scenarios will be developed based on real-world marketing tactics. These scenarios will include:

- Discount: Promotion offering a 50% discount on the product.
- BOGOF: Participants will have the chance to buy two products for the price of one.
- Coupon: Participants receive a coupon with a money discount to apply to their purchase. This value will represent 50% of the price of the product.
- Control group: This group will only see the original price of the product, without promotion

The original and final prices of the three promotions will be the same in order to see if there are perception differences between them. All scenarios will feature the same product.

To select the product to incorporate into the survey, a group of eight products was chosen with the same characteristics: low involvement, everyday items, high familiarity, and equally used by all ages and genders. The eight products were: soap, shampoo, detergent, soda, shower gel, cereals, yogurt, and toothpaste. A small pre-survey (Appendix 1) was conducted to understand the purchasing habits of consumers when buying these products to decide which would be the final product. The pre-survey counted 56 participants.

The products: detergent, soda, cereals, and yogurt were discarded since not all the respondents use or buy them. Of the remaining products, shower gel was the one where consumers were less concerned about the brand and more about the price. Furthermore, the majority had already bought it because it was in promotion. These results showed us that shower gel is in fact a low-involvement, everyday product equally used by everyone. (Appendix 2)

After choosing the shower gel as our product, four stimuli were created based on the scenarios presented above with the help of Canva and Photoshop. After creating our stimuli, individual interviews were conducted, evenly split between Gen X and Z, to assess if the scenarios were easily understood, and realistic, and if there wasn't any wording confusion. Some adjustments were made based on their feedback, mainly in the Buy One Get One Free promotion and the coupon scenario. The stimulus presented in our main survey were as follows:

Figure 2: Stimuli Discount

Figure 3: Stimuli BOGOF

Figure 4: Stimuli Coupon

Figure 5: Stimuli No Promotion

3.2.3 Measurement / Indicators

Purchase intention is the primary dependent variable in our study, and we will treat it as a construct. We will use (Spears & Singh, 2004) contribution to measuring purchase intention. Participants will respond to the model construct questions "I would consider buying this

product", "I will probably purchase this product", and "I am likely to buy this product", on a 7-point Likert scale.

Below, you can observe the operational model:

Framework	Measure	Items	Scale	Reference	Cronbach
IV	Sales Promotions (Discount, BOGOF, Coupon, Control)	n/a	n/a	n/a	n/a
Moderator	Generations (Z and X)	n/a	n/a	n/a	n/a
DV	Purchase Intention	3	7-point Likert Scale	(Spears & Singh, 2004)	n/a

Table 1: Constructs

3.3 Data Analysis

For our data analysis, we will use SPSS software version 28.0.0.0 (190).

First, we will perform an ANOVA to investigate whether there are statistically significant differences in purchase intention across the four promotional types. If we observe differences in the ANOVA we need to perform a post-hoc test to see in detail which specific promotions differ from each other. By doing this we will be able to accept or reject our first two hypotheses.

To test if the relationship between our independent variable (promotion type) and dependent variable (purchase intention) changes depending on our moderator (generation) a moderated ANOVA will be performed. This method will explicitly test the interaction effects (promotion type x generation) to see if age moderates this relationship, which matches our third hypothesis.

To finish the analysis, we will use Hayes' PROCESS model 1 which will allow us to model the interaction between the promotional types and generation on purchase intention, providing detailed insights into both direct and moderated relationships.

The following images are representative of our conceptual diagram and correspondent statistical diagram that will be tested in the following chapter.

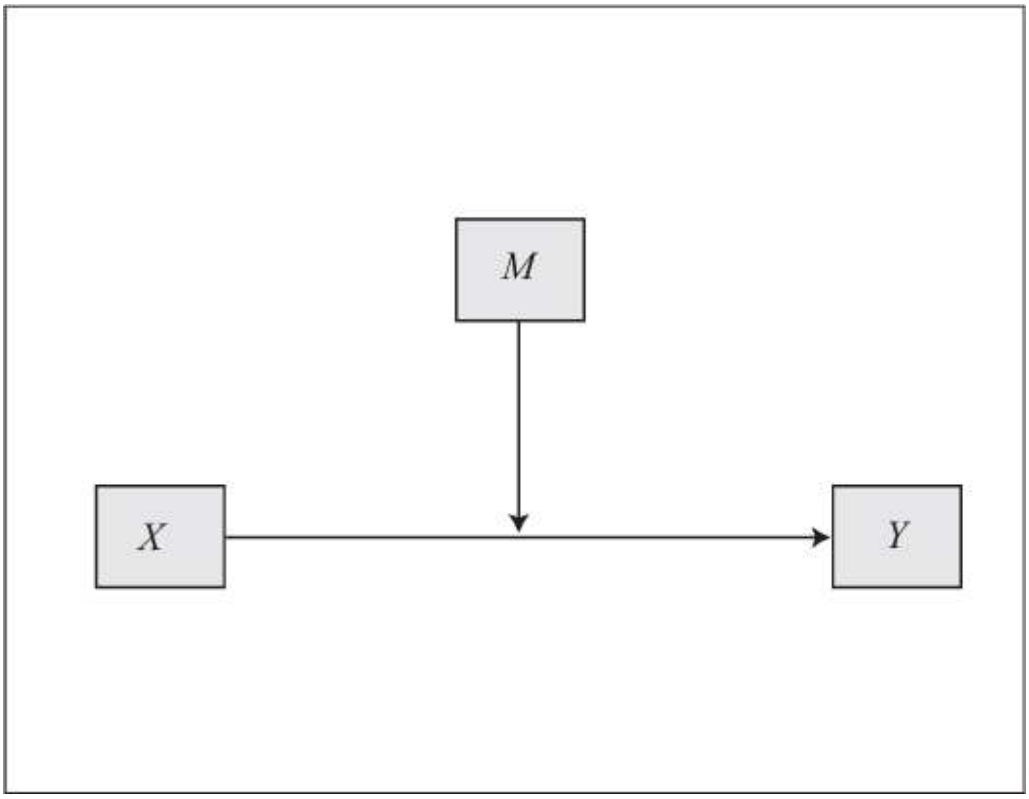

Figure 6: Conceptual Diagram

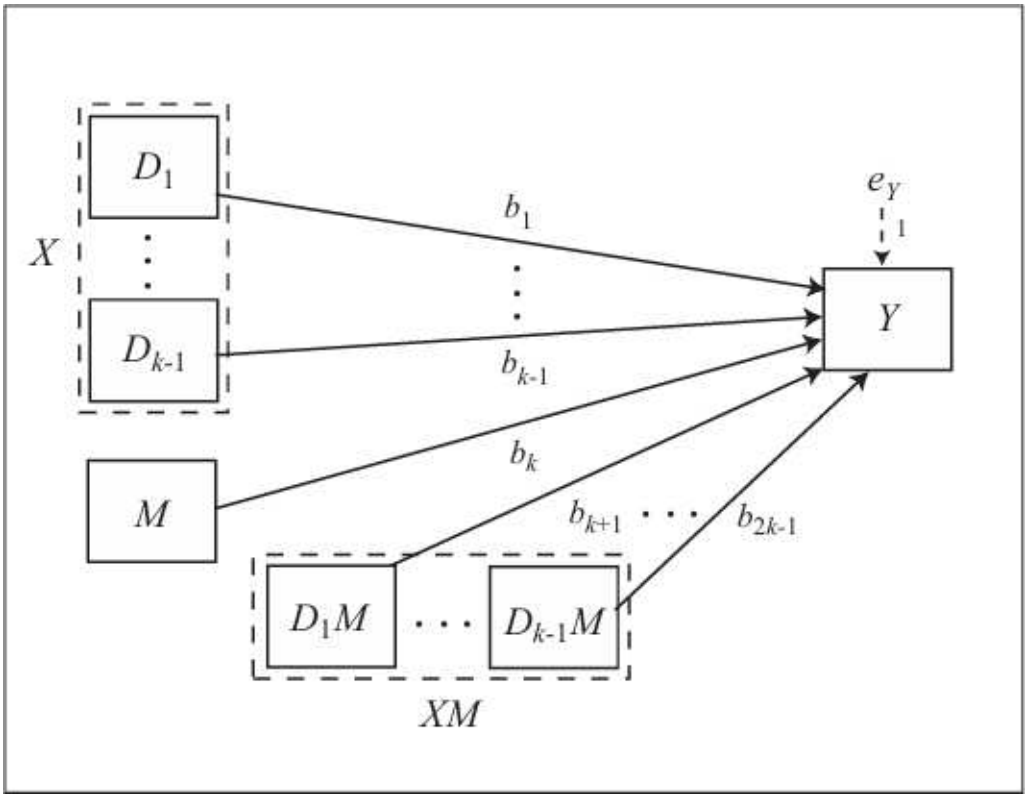

Figure 7: Statistical Diagram

CHAPTER 4: RESULTS AND DISCUSSION

The present chapter is dedicated to studying our results from the main survey. We will start by describing how the data was prepared, and then do a sample characterization followed by hypothesis and full-model testing. Further analysis will also be performed with age and usage of promotion types to analyze relationships in our data further. Our objective is to uncover relationships between purchase intention, promotion type, and generations.

4.1 Preparing the data

After closing our main survey (Appendix 3), we had a total of 550 responses. From those, ten responses were deleted since they corresponded to survey previews to confirm everything was correct. 69 answers were incomplete, which confers an 87.2% completeness rate, and an acceptance of 471 complete responses. While cleaning our data, 79 responses were dropped since they did not belong to either of the generations of interest in our study (Gen X or Gen Z). Since our work is only focused on the Portuguese population, 9 respondents were discharged since they did not have Portuguese nationality. The remaining participants were randomly distributed between the four promotional/no-promotion scenarios. Afterward, we deleted the answers that had repeated IP addresses. The next step was to confirm if the manipulation was rightfully understood by the participants. To do this, we asked the participants which promotion they had viewed after being exposed to it. All the answers where the response did not meet the actual promotion presented were eliminated. Finally, to improve the model's performance we removed the outliers. The outliers were removed through the Mahalanobis Distance method. We started by performing the Mahalanobis distance, which measures the distance between a point and a distribution, and then calculated the p-value of each of the distances. All answers with a p-value lower than 0.001 were removed. In the end, we got a total of 269 valid answers.

The tables below present a breakout of our answers:

Initial Observations	550
Preview	10
Incomplete Answers	69
Failed Screening Question: Age	79
Failed Screening Question: Nationality	9
Valid Observations	383

Table 2: Observations

	50% Discount	BOGOF	Coupon	No Promotion	Total
Initial Observations	104	91	96	92	383
Repeated IP's	17	9	11	8	45
Failed Manipulation	5	16	25	17	63
Outliers	2	1	1	2	6
Valid Observations	**80**	**65**	**59**	**65**	**269**

Table 3: Valid Observations

4.2 Measures Reliability

Although our purchase intention scale, composed of 3 items, was already validated with the literature, it is important to confirm for our data set that the measurement scale is reliable and has internal consistency. To measure if our scale is a consistent statistical measure of a concept, we calculated Cronbach's Alpa for each of the four scenarios.

Starting with the purchase intention for the 50% discount, we obtained a Cronbach Alpha of 0.935. For the BOGOF, our Cronbach alpha was 0.941, for the coupon, 0.898, and finally a 0.947 Cronbach Alpha for no promotion. The Cronbach alpha for the 50% discount, BOGOF, and no promotion is considered excellent while the value for the coupon is considered good (George & Mallery, 2010). Since we obtained good Cronbach Alphas for all promotion types, no item was deleted since it did not significantly increase these results.

Having ensured the measure's reliability, we can now move to the creation of the measures.

4.3 Measures Creation

After ensuring that we have internal consistency, we can start creating our own measures. To measure purchase intention, we made use of three items "I would consider buying this product", "I will probably purchase this product" and "I am likely to buy this product". In our data set, we have the responses for each of these items for each of the promotion types, so to create our purchase intention, we computed a new variable by averaging the scores of the three items for each of the four categories. By doing this we got the purchase intention for discount, BOGOF, coupon, and no promotion. Since to test our hypothesis we need one variable of purchase intention with the aggregate of the 4 promotional types, a data restructuring was performed. By doing this, our data was restructured from the wide to the long format, allowing us to have only one purchase intention variable called "PI_Aggregate". While doing this restructuring, a

promotion-type categorical variable was also automatically created with our four categories 1=discount, 2=BOGOF, 3=coupon, and 4=no promotion and was named “Promotion_Type”.

Finally, for our moderator, generations, we asked the participants which age range they were born in. After cleaning the data, we only had the respondents who answered our two required age ranges. To help our analysis and for a clear view of the results we transformed our age variable and recoded it into the same variables, recoding our labels from years to generation leaving out those we did not intend to study. After this, the value labels were updated to 1=Gen X and 2=Gen Z allowing us to have a better understanding of the outputs of our hypothesis testing.

4.4. Multicollinearity

It is important to study the multicollinearity in our data because it directly impacts the reliability, interpretability, and accuracy of the results. Since each of the participants in our survey only saw one scenario, it makes sense to analyze the multicollinearity separately for each type since they are effectively independent. Moreover, including all promotions in the model could lead to artificially inflated multicollinearity because they are mutually exclusive. By analyzing them separately, we can identify more accurately whether multicollinearity exists within the predictors for each subset.

To analyze this, we will analyze VIF, Eugen Values, and Condition Index for the moderator Generations for each category in our dependent variable.

	Discount	BOGOF	Coupon	No Promotion
VIF	1.000	1.000	1.000	1.000
Eugen Value	1.951	1.948	1.948	1.950
Condition Index	1.000	1.000	1.000	1.000

Table 4: Multicollinearity Assessment

All of our VIFs are below 2.500, Eugen Values are higher than 0.010, and the Condition Indexes are below 30.000. These results show that there is no multicollinearity in our model within either of our scenarios considering the moderator generations and dependent variable purchase intention. This indicates that we can proceed with our hypothesis analysis.

4.5. Sample Characterization

Our sample is evenly distributed between our two target generations, with 48.7% of the respondents belonging to Gen X (born between 1965 and 1976) and 51.3% from Gen Z (born

between 1995 and 2010). Furthermore, our sample is mostly constituted of women (60.2%) over men (39.4%), while some preferred not to respond (0.4%). As it was our goal, 100% of the participants have Portuguese nationality. More than half of the sample is employed full-time (53.9%), followed by students (26%), self-employed (9.7%), working students (5.6%), employed part-time (1.9%), and finally unemployed (0.7%) and retired (0.7%).

4.6. Hypothesis Test

> ***H1****: Price discounts will have a stronger positive effect on purchase intention compared to coupons and BOGOF offers.*

To test this hypothesis, we will use a One-Way ANOVA since we have a metric-dependent variable and a categorical independent variable. The null hypothesis that will be tested is as follows:

$$H_0: \mu_{Discount} = \mu_{BOGOF}$$

$$H_0: \mu_{Discount} = \mu_{Coupon}$$

By looking at the descriptive statistics (Appendix 4), we see that the purchase intention for the discount is the highest (5.31), followed by the coupon (5.06), then the BOGOF (5.02), and finally the no promotion has the lowest purchase intention (4.19). However, we need to perform the One-Way ANOVA to see if the difference in means is statistically significant.

Since we have $n>30$ for all our groups, we can apply the central limit theorem, ensuring that our data and residuals are normally distributed. Since our participants were exposed to only one of the promotion types, we ensured the independence of the observations. By looking at Levene's test results (Appendix 5), we have a $p>0.05$ ($p=0.007$), which means that the homogeneity of variances is violated. Due to this, we will rely on the robust tests of Brown-Forsythe instead of the ANOVA table.

By looking at the Robust Tests of Equality of Means (Appendix 6) we see that $F=7.352$ and $p<0.001$, which means that there is a significant difference between group means. To see which groups have statistically significant differences in means, we need to look at the Post Hoc tests (Appendix 7). The Tukey HSD between discount and BOGOF has a $p= 0.625$, which means that we fail to reject the fact that the mean of the two promotion types is equal. The turkey HSD between the discount and the coupon has a $p= 0.744$, so we fail to reject that the purchase intention mean of the two promotion types is equal.

By analyzing the multiple comparison table, we can see that, for the discount, we only reject that the means are equal with the no promotion scenario where the p-value between them is <0.001.

In summary, we reject our first hypothesis.

> ***H2****: Coupons will have the least impact on purchase intention compared to price discounts and BOGOF offers.*

To test this hypothesis, we will use a One-Way ANOVA since we have a metric-dependent variable and a categorical independent variable. The null hypothesis that will be tested is as follows:

$$H_0: \mu_{Coupon} = \mu_{Discount}$$

$$H_0: \mu_{Coupon} = \mu_{BOGOF}$$

Since this is the same test we performed for the hypothesis above, the same descriptive statistics apply (Appendix 4), but we need to perform the One-Way ANOVA to see if the difference in means is statistically significant.

Once again, both our data and residuals are normally distributed since n>30 for all groups, and we have independence of observations. Looking at Levene's test results (Appendix 5), we have a p>0.05 (p=0.007), which means that the homogeneity of variances is violated. Due to this, we will rely on the robust tests of Brown-Forsythe instead of the ANOVA table.

By looking at the Robust Tests of Equality of Means (Appendix 6) we see that F=7.352 and p<0.001 which means that there is a significant difference between group means. As previously analyzed, the Turkey HSD (Appendix 7) between the coupon and discount had a p=0.744, so we fail to reject the null hypothesis that the purchase intention means of these two promotion types are equal. Now comparing the means between the coupon and the BOGOF, by looking at the Turkey HSD we see that in the comparison between the Coupon and BOGOF p=0.999, meaning that we fail to reject the null that the purchase intention means are equal between the two groups.

Once again, there is only a statistically significant difference in means between the coupon and no promotion, since the p-value between them is equal to 0.001.

In conclusion, we reject our second hypothesis.

***H3**: Age moderates the relationship between sales promotion types and purchase intention*

To test our third hypothesis, we used a moderated ANOVA (Two-Way ANOVA with Interaction) since both our independent variable (promotion type) and moderator (generation) are categorical. To do this we created the interaction effect. The null hypothesis that we will test is constructed as follows:

H_0: $(\mu_{1,\ GenX} - \mu_{1,\ GenZ}) = (\mu_{2,\ Gen\ X} - \mu_{2,\ Gen\ Z}) = (\mu_{3,\ Gen\ X} - \mu_{3,\ Gen\ Z}) = (\mu_{4,\ GenX} - \mu_{4,\ Gen\ Z})$

Before starting our analysis, it is important to check if the test correspondent assumptions are met. To start all of our groups had n>30 which ensures that we can apply the central limit theorem meaning our data as well as the residuals are normally distributed. Additionally, we have independence of observations since each respondent only saw one promotional scenario that was randomly assigned to each participant. When analyzing Levene's test of equality of variances (Appendix 8), we obtained a p=0.004, so the assumption of homogeneity of variances is violated. Although this could affect the ANOVA results, we will proceed with caution since ANOVA is robust to minor violations with balanced group sizes.

Starting by looking at the descriptive statistics of our test (Appendix 9), we can see that there is a very small variation in the purchase intention between the two generations within each promotion type. Nevertheless, to confirm if age moderates the relationship between promotion type and purchase intention, we will look at the test of between-subjects effects (Appendix 10). The main effect of generation has a p=0.554 which means there is no overall difference in purchase intention between Gen X and Gen Z. When looking at the interaction effect (Promotion Type*Generation) a p=0.724 was obtained so, we can conclude that the relationship between promotion type and purchase intention does not depend on generation.

In conclusion, we reject our third hypothesis.

***H4**: Gen Z will have a higher purchase intention to price discounts than Gen X.*

***H5**: Gen X will have a higher purchase intention for coupons than Gen Z.*

***H6**: Gen X will have a higher purchase intention for BOGOFs than Gen Z.*

The null hypothesis for our three final hypotheses is as follows:

H_0: $\mu_{Gen\ Z,\ Discount} = \mu_{Gen\ X,\ Discount}$

H_0: $\mu_{Gen\ Z,\ Coupon} = \mu_{Gen\ X,\ Coupon}$

H_0: $\mu_{Gen\ Z,\ BOGOF} = \mu_{Gen\ X,\ BOGOF}$

As we have seen before, generations have not moderated the relationship between promotion type and purchase intention. Furthermore, by looking at the pairwise comparisons table of the interaction effect (Appendix 11) we see that there is no p-value lower than 0.05 between promotion type and generations. This being said, we fail to reject the null hypotheses and reject our final three hypotheses, which are that generations have different purchase intentions for different promotions.

4.7. Full Model Test

To test our full model, Hayes' PROCESS model 1 (Hayes, 2017) was used and its outcome can be seen in Appendix 12. Our predictor (X) is the promotion type which is a categorical variable with 4 levels. Our outcome (Y) is the purchase intention treated as a continuous variable, and finally, our moderator (W) is the generation, a categorical variable with two levels (Gen X and Gen Z).

Starting by looking at the model summary, we see that we have a correlation (R) equal to 0.290 between promotion type and purchase intention which is relatively small. Furthermore, we obtained an R-squared equal to 0.084, so our model only explains 8.4% of the variance in purchase intention. In regards to model significance, an $F(7,261)=3.461$ was obtained with a p-value=0.002, so our overall model is statistically significant.

Moving to the main effects analysis, starting with the constant we got an intercept of 4.625 with a p-value<0.001, this represents the baseline purchase intention for the reference group (Discount and Gen X). For the main effect of promotion type, none of the dummy-coded predictors significantly predicted purchase intention since all p-values were lower than 0.05, the BOGOF (X1) had a coefficient of 0.344, but a p-value of 0.664, the coupon (X2) had a coefficient of 0.429 but a p-value of 0.598, and finally, the no promotion (X3) had a coefficient of -0.361 with a p-value of 0.652. In addition, the main effect of generation on purchase intention is not significant, since we obtained a coefficient of 0.447, but a p=0.180. Finally, looking at the interaction terms we see that none of them is significant since all p-values are lower than 0.05, the BOGOF x Gen has a coefficient= -0.416 with p=0.403, the Coupon x Gen has a coefficient of -0.445 with a p-value of 0.383 and lastly, no promotion x Gen presents a coefficient of -0.496 and a p=0.319. Looking at the overall model with the interaction, the

change in R^2 is only 0.5% compared to our original model with F=0.441. Furthermore, a p=0724 was obtained meaning that the interaction effects do not significantly explain the additional variance.

To finalize our full model analysis, we will analyze the conditional effects of promotion type by generation. Starting with Generation X, for BOGOF (X1) we obtained a coefficient of -0.072 but a p=0.839, for Coupon (X2) a coefficient of -0.017 with p=0.964 and for No Promotion (X3) a coefficient of -0.857 was obtained with a p-value of 0.018. This being said we have a significantly lower purchase intention for No Promotion compared to the discount. Moving to the Gen Z analysis, the BOGOF (X1) had a coefficient of -0.488 with p=0.160, the Coupon (X2) had a coefficient of -0.462 with p=0.197, and finally, the no promotion (X3) had a coefficient of -1.353 with p<0.001. With these results, we see that no promotion is significantly less effective (with a large and significant drop) compared to the discount.

In conclusion, no promotion significantly reduces the purchase intention for both Gen X and Gen Z. However, the type of promotion does not significantly affect purchase intention. In addition, generations do not moderate the relationship between promotion type and purchase intention, and although Gen Z reports slightly higher purchase intention across the board, these differences are not statistically significant in this analysis.

4.8 Further Analysis

Gender as moderator

As we previously saw, generations do not moderate the relationship between promotion type and purchase intention. Nevertheless, it could be interesting to study if gender could be a moderator in our scenario. To do this, we performed a moderated ANOVA (2-way ANOVA with interaction).

Starting by looking at the descriptive statistics (Appendix 13), we see that across all promotion types, females have a slightly higher purchase intention mean than males. Still, we need to confirm if this difference is statistically significant. In Leven's test for equality of error variances (Appendix 14), a p=0.001 was obtained violating the assumption of homogeneity of variances, so our results should be interpreted with caution.

Looking at the interaction effect between promotion type and gender (Appendix 15), we obtained an F(2,260) = 0.404 with a p=0.750 meaning that the interaction effect is not significant. The effect of promotion type on purchase intention does not vary by gender.

In conclusion, gender is not a moderator between promotion type and purchase intention.

Promotions usage

Although our analysis focuses on purchase intention based on the promotion type it could be interesting to study how often the respondents use the different promotion types and see if the results match their purchase intention.

To do this we asked the respondents how often they used each promotion type and will now proceed with repeated measures ANOVA to analyze those results.

Starting by analyzing the descriptive statistics table (Appendix 16), we see that the price discounts are the highest usage mean (5.13), followed by BOGOFs (3.97) and finally coupons (3.61), but we need to further test it to see if the difference in means is statistically significant. Considering the multivariate test table (Appendix 17), Pillai's Trace presents an $F(2,267) = 130.652$, with a $p<0.001$, suggesting a strong effect of promotion type on usage. A $p<0.001$ was obtained in Mauchly's test of Sphericity (Appendix 18), indicating a violation of sphericity so, we will use the corrected test Greenhouse-Geisser in the test of within-subjects effects.

By analyzing the Greenhouse-Geisser test (Appendix 19) we obtained $F(1.886, 505.539) = 106.982$ with $p<0.001$, indicating a significant difference in the usage of the three promotion types. In the pairwise comparison table (Appendix 20), all pairs have a p-value < 0.05 which confirms that the means usage of all products are different, meaning discounts are the most used, followed by BOGOFs and finally coupons.

In conclusion, although there is no difference in purchase intention between promotion types, there is a difference in usage.

Promotion usage and age

It could be interesting to investigate if the usage of the different types of promotions differs across our two generations. To do this repeated measures ANOVA was used to analyze the within-subjects factor of promotion type across two between-subjects groups.

Starting by looking at the descriptive statistics (Appendix 21), more precisely the means, we can observe that Gen Z uses price discounts and BOGOFs more frequently than Gen X. On the other hand, Gen X has a higher usage of coupons than Gen Z. These can suggest potential generational preferences in promotion, but we need to test further to see if the difference in means is statistically significant.

By looking at the Box's test of equality of covariance matrices (Appendix 22) we have a p=0.228 suggesting that the assumption of equal covariance matrices is valid, so we can proceed with the ANOVA. In the multivariate tests table (Appendix 23), when looking at the interaction between usage and generation in Pillai's Trace we got F (2,266)=7.547, p<0.001, and partial eta squared= 0.054 meaning that the interaction effect is statistically significant although relatively small. Mauchly's test of sphericity (Appendix 24) has a p-value < 0.001 suggesting that the assumption of sphericity is violated. As a result, we will rely on the Greenhouse-Geisser correction. In the tests of within-subjects effects (Appendix 25), the interaction term Usage x Generation is also significant with F=8.741, p<0.001, indicating promotion usage varies across generations.

Finally, looking at the pairwise comparison of the interaction (Appendix 26) we can confirm for which promotions the generational usage has a statistically significant difference in means. Looking at the price discount, we obtained a p=0.013 confirming that Gen Z uses price discounts more frequently than Gen X. Moving to the coupon, a p=0.085 was obtained meaning that there is not a statistically significant difference in its usage between Gen X and Gen Z. Last but not least, the BOGOF showed a p=0.024, so we can conclude that Gen Z reports a significantly higher usage of BOGOFs compared to Gen Z.

To conclude, this analysis uncovered that Gen Z uses more discounts and BOGOF than Gen Z, while the coupons did not show a significant generational difference, implying that both generations may use coupons similarly.

CHAPTER 5: CONCLUSIONS AND LIMITATIONS

Our fifth and final chapter outlines the findings and conclusions of our research by combining the results obtained in the previous chapter with the literature presented in chapter two. The following section discusses the implications of our study both for practitioners and researchers. Finally, the main limitations of the research are identified, and some topics are proposed for future research to guide the next steps in exploring the topic.

5.1 Main Findings & Conclusions

Four stimuli were created to study the effect of promotions on purchase intention. A pre-survey was conducted to decide which product was the best suited for our study, and the results led to the choice of shower gel due to its high familiarity and price sensitivity.

Based on these results, four stimuli were created using a well-known shower gel brand with the help of Canva and Photoshop. After, interviews were conducted to see if the stimuli were rightfully interpreted. The following images were then used in the survey.

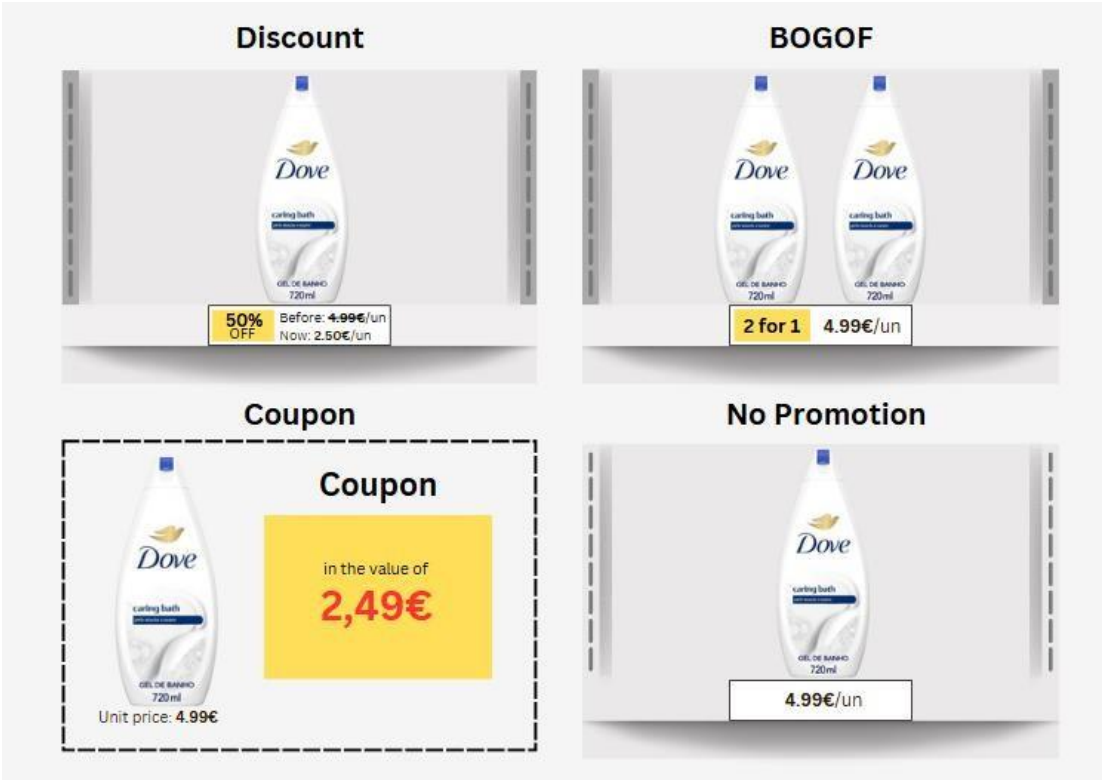

Figure 8: Stimuli Overview

After this, the main study was conducted, and the data was gathered through an online survey. With this data, we will now analyze our initial research questions and draw conclusions.

5.1.1 What are the most effective types of sales promotions for influencing purchase intention?

In order to answer the first research question, a One-Way ANOVA was conducted to observe if there was a difference in means between the four scenarios.

Our results showed no difference in purchase intention between the three promotional scenarios (Discount, BOGOF, and Coupon). Our only significant difference was in the no promotion scenario, which resulted in lower purchase intention than the presence of any promotion. These findings suggest that, contrary to the hypothesis derived from the literature, no promotional type was more effective than the others in driving purchase intention. However, the lower purchase intention in the no promotion scenario highlights the importance of promotions in consumer decision-making.

One possible reason for the same influence of the three types of promotion on purchase intention could be because, in fact, consumers may perceive promotions as a mechanism of financial savings, regardless of their format. The benefit congruency framework (Chandon et al., 2000) states that consumers evaluate promotions based on the utilitarian benefits they provide. In our case, it is possible that the promotions were viewed as having equivalent value in terms of monetary savings.

Furthermore, due to the lack of data, our literature was not centered on the Portuguese population. Some cultural and economic factors could moderate how consumers perceive different promotion types (Zhang et al., 2017). In the Portuguese context, price sensitivity and value consciousness prevail, which can make the overall presence of promotions more critical than the specific format in which they are encountered.

Finally, in the shower gel category, it is very easy to encounter sales promotions in every supermarket run. This can lead to promotion fatigue, meaning that repeated exposure to sales promotions can reduce their effectiveness over time, since consumers expect the promotions as a standard part of the shopping experience. This phenomenon can reduce the unique impact of the different promotional types (DelVecchio et al., 2006).

5.1.2 What role does age play in the relationship between sales promotion and purchase intention?

In order to answer our next research question, a moderated ANOVA was conducted to test the interaction effect between promotion type and generation. After running our analysis, it was revealed that generations did not significantly moderate the relationship between sales promotion and purchase intention, contrary to what was revealed in our literature review.

Although our literature review revealed that generations are a good way to segment the market (Schewe et al., 2000) there are some reasons that could explain the lack of relevance of this moderator effect. First, as we saw above, the economic and cultural factors have a unifying influence on consumer behavior (Zhang et al., 2017), furthermore, there are times when consumers evaluate the different types of promotions primarily based on the monetary savings rather than their formats (Chandon et al., 2000). Since price sensitivity is a strong predictor of promotion effectiveness (Lichtenstein et al., 1995), the fact that the Portuguese are a price-sensitive population can lead to the override of generational distinctions, which can cause similar responses between Gen X and Gen Z.

Moreover, with the rise of the digital era, access to information and the spread of e-commerce has contributed to a convergence in consumer behavior across generations, reducing age-related differences in how consumers respond to promotions (Gurunathan & Lakshmi, 2023).

5.1.3 Do different generational groups respond differently to specific types of sales promotions?

As we saw in our last research question, age did not moderate the relationship between sales promotions and purchase intention, so we discarded any difference in response between Gen X and Gen Z, opposing what we found in the literature review.

As we saw in our literature review, Gen X has an individualist mindset (Dietz, 2003) due to the difficult times they faced while growing up. On the other hand, Gen Z emphasizes peer acceptance as they want to feel like they belong (Williams et al., 2010).

Nevertheless, both generations grew up in difficult economic times during recession times. This has led them to opt for value for money in their purchases which can cause the same reaction of both generations when encountering the different sales promotions. Furthermore, although Gen Z likes instant gratification the fact that the coupon option was presented right by the side

of the product may have led to the feeling of immediate satisfaction instead of a delayed incentive.

5.2 Managerial Implications

Throughout our three research questions, it was consistent that the presence of promotions, regardless of the type, positively impacts purchase intention. For managers, this shows the importance of maintaining promotional campaigns, regardless of their type, to drive consumers' interest. Nevertheless, this lack of differentiation gives the flexibility to allocate resources without a strong emphasis on tailored promotion formats. As an example, the retailer can prioritize cost-effective strategies such as generic price reductions. However, it is important to mitigate promotion fatigue by exploring periodic rather than constant promotional activities to sustain engagement (Rucker et al., 2009). In these cases, alternatives such as personalized recommendations or community-driven promotions should be employed to diversify the engagement methods (Dholakia & Kimes, 2011).

Moreover, the absence of generational differences gives the opportunity for unified marketing strategies. The efforts could be simplified by developing sales promotions that appeal to a broad audience by emphasizing economic benefits. Managers should take advantage of digital platforms since both Gen X and Gen Z respond similarly to promotions and are both increasingly connected through e-commerce and social media. (Thangavel et al., 2022).

Through the unified message, managers should focus on clearly communicating the economic value of the offers and educating consumers on how the promotions align with their financial goals.

5.3 Academic Implications

This study challenges the widely held assumptions about generational differences in consumer behavior. The convergence between Gen X and Gen Z demonstrates the need for further academic research into the situations and context factors, like cultural and economic influences, that might mitigate the generational differences in consumer responses, in particular to promotion response.

The lack of differentiation between our different promotional types opens a door for academia to explore alternative factors that drive promotion effectiveness. Furthermore, it would be interesting to explore whether the findings on the Portuguese population are consistent in other economic and cultural contexts.

In conclusion, the results highlight the opportunity for academics to refine generational behavior theories and sales promotion effectiveness. Addressing the gaps will also provide a deeper understanding of how promotions influence consumer decision-making across diverse populations.

5.4 Limitations and Further Research

Due to the context, timeframe, and environment of our research, we should be aware of some limitations and future steps to overcome them.

To begin with, the study focused exclusively on one product category, consumer-packed goods, and one single product, shower gel. While this controls for product-specific variability, the findings should not be generalized to other industries or products where price sensitivity or consumer motivations differ, such as electronics or luxury goods. Furthermore, the fact that a well-known brand (Dove) was used for the stimuli could have influenced the purchase intention due to factors such as brand loyalty and perceived quality. The positive perception of Dove could have created a Halo Effect, where the brand reputation could have influenced how participants evaluated the different promotions (Leuthesser et al., 1995).

Another limitation of the study is the promotion format. Our study incorporated visual stimuli through the usage of images which added realism to the scenarios, however, the complexity of real-world consumer experiences may not have been fully captured. For example, the store environment, peer influence, dynamic pricing, and presence of other products were not addressed, and it could have played a significant role in shaping purchase intention. In the case of the coupon, the fact that we only presented the image of the coupon asking about the purchase intention, could have given the idea of instant gratification instead of delayed incentive.

Moreover, we need to account for the intention-behavior gap. As we saw, there was no difference in purchase intention between the three promotional types. However, in our further research, in the previous chapter, we found that discounts were the most used promotion followed by BOGOFs, and finally coupons. This being said, it is important to account for this gap when drawing conclusions, as some authors already discuss how purchase intention might not be the best predictor for future consumer behavior (Morwitz et al., 2007).

To complete this study, some further research could be employed to understand the relationship between our variables on a deeper level.

First of all, it could be interesting to test the model using both a manufacturer brand and a private label to contrast the effect of promotion and highlight the role of brand equity. Furthermore, the model could be tested in other product categories and expand the research to more hedonic products to see if the reaction to promotions would be the same as in the utilitarian category.

Our study was limited to monetary promotions, and our sample responded equally to each of the scenarios except for the no promotion. As we know the Portuguese population is price-sensitive so it could be interesting to make a comparison between monetary and non-monetary promotions to see if the true driver of purchase intention is purely monetary. The interaction effects with economic variables could also be explored to see how they moderate the effectiveness of sales promotions, providing valuable insights on how to tailor promotions during varying economic conditions.

Finally, it would be interesting to explore the moderation of generations further. This study focused only on two generations, Gen X and Gen Z. To complete this analysis, the remaining generations should be included in the study to understand if the found behavior is homogeneous among all generations.

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APPENDICES

Appendix 1: Pre-Survey

Thank you for participating in this survey! In this questionnaire, you'll be asked to **evaluate 2** everyday products. Your insights will help us better understand consumer choices and behaviors. The survey will take no more than 5 minutes, and your responses will remain anonymous.
We appreciate your honest feedback!

Block 1: Product Evaluation

Q1- On this question, two products out of a selection of eight were randomly assigned to the participants and the questions on this block were answered for both products.

- Product 1: Liquid Hand Soap (Ex: Dove, Palmolive, Own brand, ...)
- Product 2: Hair Shampoo (Ex: Pantene, Garnier, Elvive, Own brand, ...)
- Product 3: Landry Detergent (Ex: Skip, Vanish, Own brand, ...)
- Product 4: Soda Drink (Ex: Coca Cola, Sprite, Sumol, ...)
- Product 5: Shower Gel (Ex: Dove, Nivea, Axe, Own brand, ...)
- Product 6: Breakfast Cereals (Ex: Chocapic, Kellogg's, Own brand, ...)
- Product 7: Individual Yogurt (Ex: Danone, Mimosa, Own brand, ...)
- Product 8: Toothpaste (Ex: Colgate, Oral-B, Own brand...)

Q2- How often do you use this product?

- Never
- Yearly
- Every few months
- Monthly
- Weekly
- Daily

Q3- How often do you buy this product?

- Never
- Yearly
- Every few months
- Monthly
- Weekly
- Daily

Q4- On a scale of 1-5, how important is each of the following when choosing this product?

(1- Not important, 5- Extremely important)

	1	2	3	4	5
Price					
Brand					
Quality					
Convenience					

Q5- Have you ever bought this product because it was in promotion?

- o No
- o Yes

Block 2: Demographics

Q5- In which year were you born?

- o 1946-1964
- o 1965-1976
- o 1977-1994
- o 1995-2010
- o Other

Q6- What is your gender?

- o Male
- o Female
- o Other
- o Prefer not to say

Q7- What is your employment status?

- o Student
- o Employed full-time
- o Employed part-time
- o Unemployed
- o Self-employed
- o Retired
- o Other

Appendix 2: Pre- Survey Analysis

Soap

How often do you use this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yearly	1	1.8	7.1	7.1
	Daily	13	23.2	92.9	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

How often do you buy this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yearly	4	7.1	28.6	28.6
	Every few months	3	5.4	21.4	50.0
	Monthly	7	12.5	50.0	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Price	14	1	5	3.50	1.225
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Brand	14	1	4	2.43	1.016
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Quality	14	2	5	3.86	.949
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Convinience	14	1	5	3.79	1.051

Have you ever bought this product because it was in promotion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	4	7.1	28.6	28.6
	Yes	10	17.9	71.4	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Shampoo

How often do you use this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Weekly	3	5.4	21.4	21.4
	Daily	11	19.6	78.6	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

How often do you buy this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Every few months	4	7.1	28.6	28.6
	Monthly	10	17.9	71.4	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Price	14	3	5	3.86	.663
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Brand	14	2	5	3.50	1.092
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Quality	14	3	5	4.64	.633
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Convinience	14	1	5	3.14	1.099
Valid N (listwise)	14				

Have you ever bought this product because it was in promotion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	14	25.0	100.0	100.0
Missing	System	42	75.0		
Total		56	100.0		

Detergent

How often do you use this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.8	7.1	7.1
	Yearly	1	1.8	7.1	14.3
	Monthly	2	3.6	14.3	28.6
	Weekly	9	16.1	64.3	92.9
	Daily	1	1.8	7.1	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

How often do you buy this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.8	7.1	7.1
	Every few months	2	3.6	14.3	21.4
	Monthly	11	19.6	78.6	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Price	14	1	5	4.07	1.072
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Brand	14	1	5	3.07	1.141
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Quality	14	1	5	4.36	1.082
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Convinience	14	1	5	3.50	1.092
Valid N (listwise)	14				

Have you ever bought this product because it was in promotion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1	1.8	7.1	7.1
	Yes	13	23.2	92.9	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Soda

How often do you use this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	5	8.9	38.5	38.5
	Yearly	3	5.4	23.1	61.5
	Every few months	2	3.6	15.4	76.9
	Monthly	1	1.8	7.7	84.6
	Weekly	1	1.8	7.7	92.3
	Daily	1	1.8	7.7	100.0
	Total	13	23.2	100.0	
Missing	System	43	76.8		
Total		56	100.0		

How often do you buy this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	6	10.7	46.2	46.2
	Yearly	2	3.6	15.4	61.5
	Every few months	2	3.6	15.4	76.9
	Monthly	1	1.8	7.7	84.6
	Weekly	2	3.6	15.4	100.0
	Total	13	23.2	100.0	
Missing	System	43	76.8		
Total		56	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Price	13	1	5	3.46	1.266
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Brand	13	1	5	3.62	1.609
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Quality	13	1	5	3.85	1.519
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Convinience	13	1	5	3.08	1.188
Valid N (listwise)	13				

Have you ever bought this product because it was in promotion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	7	12.5	53.8	53.8
	Yes	6	10.7	46.2	100.0
	Total	13	23.2	100.0	
Missing	System	43	76.8		
Total		56	100.0		

Shower Gel

How often do you use this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Weekly	1	1.8	7.1	7.1
	Daily	13	23.2	92.9	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

How often do you buy this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yearly	1	1.8	7.1	7.1
	Every few months	3	5.4	21.4	28.6
	Monthly	10	17.9	71.4	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Price	14	3	5	4.00	.679
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Brand	14	1	5	2.93	1.072
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Quality	14	3	5	4.14	.663
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Convinience	14	2	5	4.00	.961
Valid N (listwise)	14				

Have you ever bought this product because it was in promotion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1	1.8	7.1	7.1
	Yes	13	23.2	92.9	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Cereals

How often do you use this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	5.4	21.4	21.4
	Yearly	4	7.1	28.6	50.0
	Every few months	2	3.6	14.3	64.3
	Monthly	1	1.8	7.1	71.4
	Weekly	2	3.6	14.3	85.7
	Daily	2	3.6	14.3	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

How often do you buy this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	4	7.1	28.6	28.6
	Yearly	4	7.1	28.6	57.1
	Monthly	5	8.9	35.7	92.9
	Weekly	1	1.8	7.1	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Price	14	1	5	3.07	1.492
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Brand	14	1	5	2.93	1.492
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Quality	14	1	5	3.64	1.550
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Convinience	14	1	5	3.00	1.359
Valid N (listwise)	14				

Have you ever bought this product because it was in promotion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	7	12.5	50.0	50.0
	Yes	7	12.5	50.0	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Yogurt

How often do you use this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.8	7.1	7.1
	Every few months	5	8.9	35.7	42.9
	Monthly	1	1.8	7.1	50.0
	Weekly	4	7.1	28.6	78.6
	Daily	3	5.4	21.4	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

How often do you buy this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.8	7.1	7.1
	Yearly	1	1.8	7.1	14.3
	Every few months	3	5.4	21.4	35.7
	Monthly	1	1.8	7.1	42.9
	Weekly	8	14.3	57.1	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Price	14	1	5	3.79	1.051
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Brand	14	1	5	3.36	1.393
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Quality	14	1	5	4.50	1.092
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Convinience	14	1	5	3.64	1.082
Valid N (listwise)	14				

Have you ever bought this product because it was in promotion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1	1.8	7.1	7.1
	Yes	13	23.2	92.9	100.0
	Total	14	25.0	100.0	
Missing	System	42	75.0		
Total		56	100.0		

Toothpaste

How often do you use this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Every few months	1	1.8	7.7	7.7
	Daily	12	21.4	92.3	100.0
	Total	13	23.2	100.0	
Missing	System	43	76.8		
Total		56	100.0		

How often do you buy this product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yearly	1	1.8	7.7	7.7
	Every few months	5	8.9	38.5	46.2
	Monthly	7	12.5	53.8	100.0
	Total	13	23.2	100.0	
Missing	System	43	76.8		
Total		56	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Price	13	3	5	4.23	.927
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Brand	13	2	5	3.85	1.144
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Quality	13	1	5	4.23	1.235
On a scale of 1-5, how important is each of the following when choosing this product? (1- Not important, 5- Extremely important) - Convinience	13	2	5	4.00	1.155
Valid N (listwise)	13				

Have you ever bought this product because it was in promotion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	13	23.2	100.0	100.0
Missing	System	43	76.8		
Total		56	100.0		

Appendix 3: Main Survey

Main Survey

Thank you for participating in this survey. Your insights will help us learn more about the preferences and perceptions surrounding different promotion styles. In this survey, you will see a promotional scenario and be asked to share your thoughts on it. There are no right or wrong answers - we're interested in your honest opinions! This survey should take no more than 5 minutes.

Please note: All responses are anonymous, and your data will be used solely for academic purposes.

Thank you again for your time and valuable input!

Block 1: Screening Question 1

Q1- In which year were you born?

- 1946-1964
- 1965-1976
- 1977-1994
- 1995-2010
- Other

If the participants don't answer "1965-1976" or "1995-2010" they will be redirected to the end of the survey.

Block 2: Screening Question 2

Q2- Do you have Portuguese nationality?

- Yes
- No

If the participants don't answer "Yes" they will be redirected to the end of the survey.

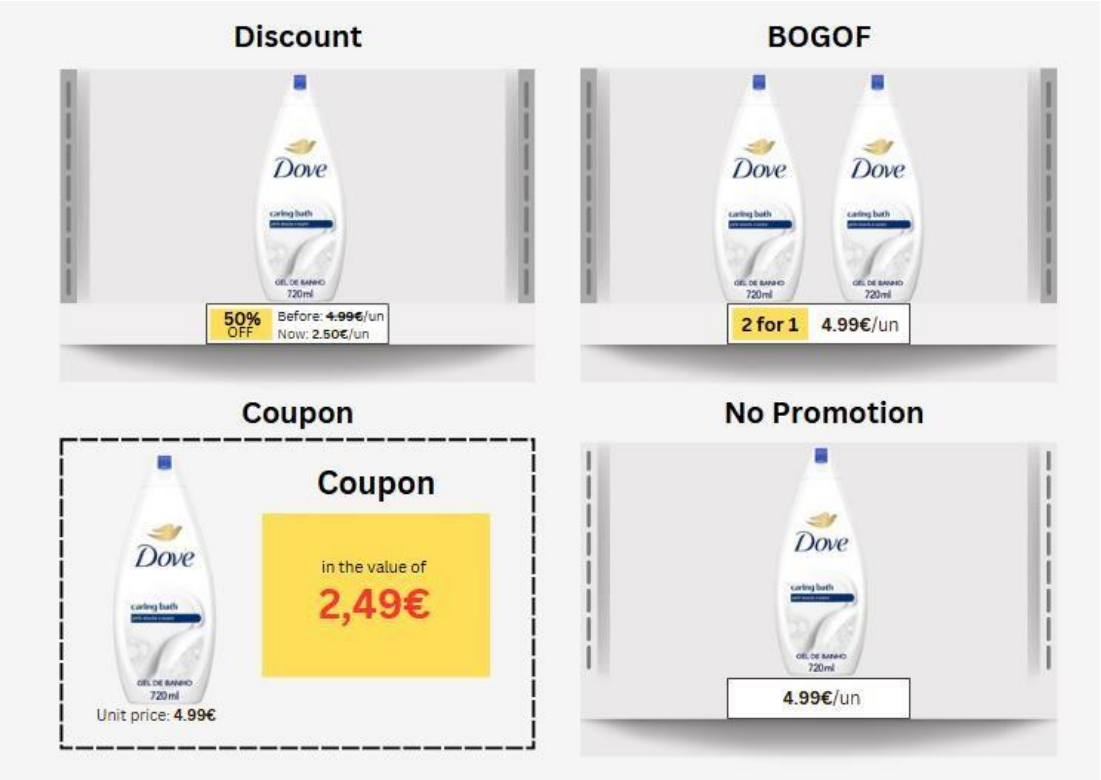
Block 3: Information

In the following section, you will see one **image of a shower gel**. Please look at the picture carefully and **imagine that you encountered this in the real world**.

After, you'll be asked a few questions about your impressions and thoughts. Please answer as honestly as possible, based on your initial reactions.

Block 4: Stimuli

One of the following images was randomly shown to the participants



Q3- Based on the image you just viewed, please indicate your level of agreement with the following statements:

	Strongly Agree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
I would consider buying this product							
I will probably purchase this product							
I am likely to buy this product							

Block 5: Manipulation Check

Q4- Please complete the blank section of the following sentence: "The scenario that you saw had _____promotion."

- no
- a 50% discount
- a Coupon
- a Buy one get one free

Block 6: Further Analysis

Q5- How often do you use the following types of promotions?

	Never	Once a year or less	Every few months	Once a month	Few times per month	Once a week	Daily
Price Discounts							
Coupons							
Buy one get one free							

Q6- Please rank the below attributes, from most important to least important, when you are considering promotions

- Save money immediately
- Obtain a better value for money
- Ability to try new products
- Bulk Buying
- Feeling

Block 7: Demographics

Q7- What is your gender?

- Male
- Female
- Other
- Prefer not to say

Q8- What is your employment status?

- Student
- Employed full-time
- Employed part-time
- Unemployed
- Self-employed
- Retired
- Other

Appendix 4: One-Way ANOVA Descriptives

PI_Aggregate

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	80	5.3125	1.33896	.14970	5.0145	5.6105	1.00	7.00
2	65	5.0154	1.46063	.18117	4.6535	5.3773	1.33	7.00
3	59	5.0565	1.36198	.17731	4.7016	5.4114	2.00	7.00
4	65	4.1897	1.73902	.21570	3.7588	4.6207	1.00	7.00
Total	269	4.9133	1.53075	.09333	4.7295	5.0970	1.00	7.00

Appendix 5: One-Way ANOVA Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
PI_Aggregate	Based on Mean	4.075	3	265	.007
	Based on Median	3.031	3	265	.030
	Based on Median and with adjusted df	3.031	3	261.755	.030
	Based on trimmed mean	4.059	3	265	.008

Appendix 6: One-Way ANOVA Robust Tests of Equality of Means

PI_Aggregate

	Statistic[a]	df1	df2	Sig.
Brown-Forsythe	7.352	3	244.317	<.001

a. Asymptotically F distributed.

Appendix 7: One-Way ANOVA Multiple Comparison

Dependent Variable: PI_Aggregate

	(I) Index1	(J) Index1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	1	2	.29712	.24690	.625	-.3412	.9354
		3	.25600	.25373	.744	-.4000	.9120
		4	1.12276*	.24690	<.001	.4844	1.7611
	2	1	-.29712	.24690	.625	-.9354	.3412
		3	-.04111	.26586	.999	-.7285	.6463
		4	.82564*	.25935	.009	.1551	1.4962
	3	1	-.25600	.25373	.744	-.9120	.4000
		2	.04111	.26586	.999	-.6463	.7285
		4	.86675*	.26586	.007	.1794	1.5541
	4	1	-1.12276*	.24690	<.001	-1.7611	-.4844
		2	-.82564*	.25935	.009	-1.4962	-.1551
		3	-.86675*	.26586	.007	-1.5541	-.1794
LSD	1	2	.29712	.24690	.230	-.1890	.7832
		3	.25600	.25373	.314	-.2436	.7556
		4	1.12276*	.24690	<.001	.6366	1.6089
	2	1	-.29712	.24690	.230	-.7832	.1890
		3	-.04111	.26586	.877	-.5646	.4824
		4	.82564*	.25935	.002	.3150	1.3363
	3	1	-.25600	.25373	.314	-.7556	.2436
		2	.04111	.26586	.877	-.4824	.5646
		4	.86675*	.26586	.001	.3433	1.3902
	4	1	-1.12276*	.24690	<.001	-1.6089	-.6366
		2	-.82564*	.25935	.002	-1.3363	-.3150
		3	-.86675*	.26586	.001	-1.3902	-.3433

*. The mean difference is significant at the 0.05 level.

Appendix 8: Moderated ANOVA Levene's Test of Equality of Error Variances

		Levene Statistic	df1	df2	Sig.
PI_Aggregate	Based on Mean	3.079	7	261	.004
	Based on Median	1.937	7	261	.064
	Based on Median and with adjusted df	1.937	7	234.914	.065
	Based on trimmed mean	2.977	7	261	.005

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: PI_Aggregate

b. Design: Intercept + Promotion_Type + Generation + Promotion_Type * Generation

Appendix 9: Moderated ANOVA Descriptive Statistics

Dependent Variable: PI_Aggregate

Promotion_Type	In which year were you born?	Mean	Std. Deviation	N
1	Gen X	5.0721	1.55979	37
	Gen Z	5.5194	1.09182	43
	Total	5.3125	1.33896	80
2	Gen X	5.0000	1.66667	33
	Gen Z	5.0312	1.23961	32
	Total	5.0154	1.46063	65
3	Gen X	5.0556	1.33644	30
	Gen Z	5.0575	1.41160	29
	Total	5.0565	1.36198	59
4	Gen X	4.2151	1.76918	31
	Gen Z	4.1667	1.73739	34
	Total	4.1897	1.73902	65
Total	Gen X	4.8473	1.61365	131
	Gen Z	4.9758	1.45081	138
	Total	4.9133	1.53075	269

Appendix 10: Moderated ANOVA Tests of Between-Subjects Effects

Dependent Variable: PI_Aggregate

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	52.699[a]	7	7.528	3.416	.002	.084
Intercept	6340.807	1	6340.807	2876.788	<.001	.917
Promotion_Type	47.370	3	15.790	7.164	<.001	.076
Generation	.774	1	.774	.351	.554	.001
Promotion_Type * Generation	2.919	3	.973	.441	.724	.005
Error	575.277	261	2.204			
Total	7121.667	269				
Corrected Total	627.976	268				

a. R Squared = .084 (Adjusted R Squared = .059)

Appendix 11: Moderated ANOVA Pairwise Comparisons

Dependent Variable: PI_Aggregate

Promotion_Type	(I) In which year were you born?	(J) In which year were you born?	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
						Lower Bound	Upper Bound
1	Gen X	Gen Z	-.447	.333	.180	-1.103	.208
	Gen Z	Gen X	.447	.333	.180	-.208	1.103
2	Gen X	Gen Z	-.031	.368	.932	-.757	.694
	Gen Z	Gen X	.031	.368	.932	-.694	.757
3	Gen X	Gen Z	-.002	.387	.996	-.763	.759
	Gen Z	Gen X	.002	.387	.996	-.759	.763
4	Gen X	Gen Z	.048	.369	.896	-.678	.774
	Gen Z	Gen X	-.048	.369	.896	-.774	.678

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix 12: Full Model Test

```
Run MATRIX procedure:

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

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

**************************************************************************
Model  : 1
    Y  : PI_Aggre
    X  : Promotio
    W  : Generati

Sample
Size:  269

Coding of categorical X variable for analysis:
 Promotio       X1       X2       X3
    1.000     .000     .000     .000
    2.000    1.000     .000     .000
    3.000     .000    1.000     .000
    4.000     .000     .000    1.000

**************************************************************************
OUTCOME VARIABLE:
 PI_Aggre

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .290       .084      2.204      3.416      7.000    261.000       .002

Model
              coeff         se          t          p       LLCI       ULCI
constant      4.625       .538      8.595       .000      3.565      5.684
X1             .344       .791       .435       .664     -1.213      1.901
X2             .429       .812       .528       .598     -1.170      2.028
X3            -.361       .799      -.452       .652     -1.935      1.212
Generati       .447       .333      1.344       .180      -.208      1.103
Int_1         -.416       .496      -.838       .403     -1.394       .562
Int_2         -.445       .510      -.873       .383     -1.450       .559
Int_3         -.496       .497      -.998       .319     -1.474       .482

Product terms key:
 Int_1    :        X1       x        Generati
 Int_2    :        X2       x        Generati
 Int_3    :        X3       x        Generati

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W       .005       .441      3.000    261.000       .724
----------
    Focal predict: Promotio (X)
          Mod var: Generati (W)

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

Moderator value(s):
Generati      1.000

       Effect         se          t          p       LLCI       ULCI
X1      -.072       .355       -.203       .839      -.772       .628
X2      -.017       .365       -.045       .964      -.735       .702
X3      -.857       .361      -2.371       .018     -1.569      -.145

Test of equality of conditional means
          F        df1        df2          p
```

```
      2.470      3.000    261.000       .062

Estimated conditional means being compared:
   Promotio   PI_Aggre
      1.000      5.072
      2.000      5.000
      3.000      5.056
      4.000      4.215
--------------
Moderator value(s):
Generati      2.000

       Effect         se          t          p       LLCI       ULCI
X1      -.488       .347     -1.408       .160     -1.171       .194
X2      -.462       .357     -1.295       .197     -1.164       .241
X3     -1.353       .341     -3.970       .000     -2.024      -.682

Test of equality of conditional means
          F        df1        df2          p
      5.332      3.000    261.000       .001

Estimated conditional means being compared:
   Promotio   PI_Aggre
      1.000      5.519
      2.000      5.031
      3.000      5.057
      4.000      4.167

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/
   Promotio   Generati   PI_Aggre   .
BEGIN DATA.
      1.000      1.000      5.072
      2.000      1.000      5.000
      3.000      1.000      5.056
      4.000      1.000      4.215
      1.000      2.000      5.519
      2.000      2.000      5.031
      3.000      2.000      5.057
      4.000      2.000      4.167
END DATA.
GRAPH/SCATTERPLOT=
 Promotio WITH     PI_Aggre BY       Generati .

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

Level of confidence for all confidence intervals in output:
  95.0000

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

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

Appendix 13: Gender as a Moderator Descriptive Statistics

Dependent Variable: PI_Aggregate

Promotion_Type	What is your gender?	Mean	Std. Deviation	N
1	Male	5.2952	.88846	35
	Female	5.3259	1.61509	45
	Total	5.3125	1.33896	80
2	Male	4.6923	1.59701	26
	Female	5.2281	1.35811	38
	Total	5.0104	1.47162	64
3	Male	4.8750	1.45732	24
	Female	5.1810	1.29943	35
	Total	5.0565	1.36198	59
4	Male	4.1429	1.95099	21
	Female	4.2121	1.65201	44
	Total	4.1897	1.73902	65
Total	Male	4.8239	1.49157	106
	Female	4.9691	1.56206	162
	Total	4.9117	1.53340	268

Appendix 14:Gender as a Moderator Levene's Test of Equality of Error Variances

		Levene Statistic	df1	df2	Sig.
PI_Aggregate	Based on Mean	3.545	7	260	.001
	Based on Median	2.217	7	260	.033
	Based on Median and with adjusted df	2.217	7	213.559	.034
	Based on trimmed mean	3.369	7	260	.002

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: PI_Aggregate

b. Design: Intercept + Promotion_Type + Q15 + Promotion_Type * Q15

Appendix 15: Gender as a Moderator Tests of Between Subjects Effects

Dependent Variable: PI_Aggregate

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	54.442[a]	7	7.777	3.527	.001	.087
Intercept	5923.339	1	5923.339	2686.054	<.001	.912
Promotion_Type	44.095	3	14.698	6.665	<.001	.071
Gender	3.462	1	3.462	1.570	.211	.006
Promotion_Type * Gender	2.672	3	.891	.404	.750	.005
Error	573.357	260	2.205			
Total	7093.222	268				
Corrected Total	627.799	267				

a. R Squared = .087 (Adjusted R Squared = .062)

Appendix 16: Usage Descriptive Statistics

	Mean	Std. Deviation	N
How often do you use the following types of promotions? - Price Discounts	5.13	1.300	269
How often do you use the following types of promotions? - Coupons	3.61	1.814	269
How often do you use the following types of promotions? - Buy-one-get-one-free	3.97	1.441	269

Appendix 17: Usage Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Usage	Pillai's Trace	.495	130.652[b]	2.000	267.000	<.001	.495
	Wilks' Lambda	.505	130.652[b]	2.000	267.000	<.001	.495
	Hotelling's Trace	.979	130.652[b]	2.000	267.000	<.001	.495
	Roy's Largest Root	.979	130.652[b]	2.000	267.000	<.001	.495

a. Design: Intercept
Within Subjects Design: Usage

b. Exact statistic

Appendix 18: Usage Mauchly's Test of Sphericity

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Epsilon[b] Lower-bound
Usage	.940	16.593	2	<.001	.943	.950	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept
Within Subjects Design: Usage

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Appendix 19: Usage Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Usage	Sphericity Assumed	340.647	2	170.323	106.982	<.001	.285
	Greenhouse-Geisser	340.647	1.886	180.586	106.982	<.001	.285
	Huynh-Feldt	340.647	1.899	179.355	106.982	<.001	.285
	Lower-bound	340.647	1.000	340.647	106.982	<.001	.285
Error(Usage)	Sphericity Assumed	853.353	536	1.592			
	Greenhouse-Geisser	853.353	505.539	1.688			
	Huynh-Feldt	853.353	509.008	1.677			
	Lower-bound	853.353	268.000	3.184			

Appendix 20: Usage Pairwise Comparison

Measure: MEASURE_1

(I) Usage	(J) Usage	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	1.520*	.108	<.001	1.308	1.733
	3	1.167*	.097	<.001	.976	1.358
2	1	-1.520*	.108	<.001	-1.733	-1.308
	3	-.353*	.120	.004	-.590	-.117
3	1	-1.167*	.097	<.001	-1.358	-.976
	2	.353*	.120	.004	.117	.590

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix 21: Usage by Generation Descriptive Statistics

	In which year were you born?	Mean	Std. Deviation	N
How often do you use the following types of promotions? - Price Discounts	Gen X	4.93	1.371	131
	Gen Z	5.33	1.203	138
	Total	5.13	1.300	269
How often do you use the following types of promotions? - Coupons	Gen X	3.81	1.776	131
	Gen Z	3.43	1.836	138
	Total	3.61	1.814	269
How often do you use the following types of promotions? - Buy-one-get-one-free	Gen X	3.76	1.408	131
	Gen Z	4.16	1.451	138
	Total	3.97	1.441	269

Appendix 22: Usage by Generation Box's Test of Equality of Covariance Matrices

Box's M	8.238
F	1.356
df1	6
df2	512727.773
Sig.	.228

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Generation Within Subjects Design: Usage

Appendix 23: Usage by Generation Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Usage	Pillai's Trace	.499	132.258[b]	2.000	266.000	<.001	.499
	Wilks' Lambda	.501	132.258[b]	2.000	266.000	<.001	.499
	Hotelling's Trace	.994	132.258[b]	2.000	266.000	<.001	.499
	Roy's Largest Root	.994	132.258[b]	2.000	266.000	<.001	.499
Usage * Generation	Pillai's Trace	.054	7.547[b]	2.000	266.000	<.001	.054
	Wilks' Lambda	.946	7.547[b]	2.000	266.000	<.001	.054
	Hotelling's Trace	.057	7.547[b]	2.000	266.000	<.001	.054
	Roy's Largest Root	.057	7.547[b]	2.000	266.000	<.001	.054

a. Design: Intercept + Generation
Within Subjects Design: Usage

b. Exact statistic

Appendix 24: Usage by Generation Mauchly's Test of Sphericity

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Usage	.948	14.073	2	<.001	.951	.961	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept + Generation
Within Subjects Design: Usage

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Appendix 25: Usage by Generation Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Usage	Sphericity Assumed	337.045	2	168.522	108.908	<.001	.290
	Greenhouse-Geisser	337.045	1.902	177.207	108.908	<.001	.290
	Huynh-Feldt	337.045	1.922	175.322	108.908	<.001	.290
	Lower-bound	337.045	1.000	337.045	108.908	<.001	.290
Usage * Generation	Sphericity Assumed	27.052	2	13.526	8.741	<.001	.032
	Greenhouse-Geisser	27.052	1.902	14.223	8.741	<.001	.032
	Huynh-Feldt	27.052	1.922	14.072	8.741	<.001	.032
	Lower-bound	27.052	1.000	27.052	8.741	.003	.032
Error(Usage)	Sphericity Assumed	826.301	534	1.547			
	Greenhouse-Geisser	826.301	507.831	1.627			
	Huynh-Feldt	826.301	513.291	1.610			
	Lower-bound	826.301	267.000	3.095			

Appendix 26: Usage by Generation Pairwise Comparisons

Measure: MEASURE_1

Usage	(I) In which year were you born?	(J) In which year were you born?	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1	Gen X	Gen Z	-.395*	.157	.013	-.704	-.086
	Gen Z	Gen X	.395*	.157	.013	.086	.704
2	Gen X	Gen Z	.382	.220	.085	-.052	.816
	Gen Z	Gen X	-.382	.220	.085	-.816	.052
3	Gen X	Gen Z	-.396*	.174	.024	-.740	-.053
	Gen Z	Gen X	.396*	.174	.024	.053	.740

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).