Lisbon School of Economics & Management
Universidade de Lisboa

MESTRADO EM

MANAGEMENT AND INDUSTRIAL STRATEGY

TRABALHO FINAL DE MESTRADO

DISSERTAÇÃO

THE EFFECTS OF INFLATION ON CONSUMER CHOICES IN THE FOOD RETAIL MARKET: A COMPARATIVE STUDY OF A-BRANDS VERSUS PRIVATE LABEL FOOD PRODUCTS FROM BOTH A FIRM AND CONSUMER PERSPECTIVE

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Glossary

PL – Private Label

EDLP – Every Day Low Price

TCV – Theory of Consumption Value

BCG – Boston Consulting Group

IMF - International Monetary Fund

HICP – Harmonized Index of Consumer Prices

CPG – Consumer Packed-Goods

FMCG – Fast Moving Consumer Goods

SOM – Share of Market

PCA – Principal Consumer Analysis

KMO – Kaiser-Meyer-Olkin

VIF - Variance Inflation Factor

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À minha mãe, aos meus irmãos Daniel e Carlos, aos meus avós e restante família, pelo apoio incondicional, palavras de incentivo e por acreditarem sempre em mim. Obrigada por toda a ajuda ao longo do meu percurso académico.

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Resumo

A rivalidade entre Marcas de Fabricante e Marcas Brancas no sector alimentar em Portugal requer uma abordagem de marketing acerca das diversas opções disponíveis no mercado, especialmente num contexto de instabilidade económica e constante oscilação dos níveis de inflação desde 2021. Este cenário tornou os consumidores mais apreensivos face às suas decisões de compras de supermercado e na preferência de uma marca em detrimento da outra. O objetivo desta tese de mestrado consiste em desenvolver um modelo explicativo dos fatores que preveem esta escolha, propondo uma ligação com diversas variáveis como a perceção da inflação, sensibilidade ao preço, valor percebido, qualidade percebida, lealdade à marca e risco percebido. Condições sociodemográficas como a idade e o rendimento também são consideradas nesta investigação com o objetivo de identificar padrões e tendências face às características da amostra.

A investigação inicial, de natureza explanatória, focou-se na perspetiva das empresas com o intuito de analisar a evolução das vendas, em valor e volume, das marcas mais impactantes nas diversas categorias de mercado exploradas. O segundo estudo baseou-se na perspetiva do consumidor, através de um estudo quantitativo com amostra não probabilística, resultante de um questionário online que obteve 207 respostas válidas, analisadas através do IBM SPSS Statistics. Os resultados demonstram que, a perceção de inflação, sensibilidade ao preço, a perceção de valor e a lealdade para com as Marcas de Fabricante, são considerados fatores relevantes para explicar a Escolha de Marca pelo Consumidor. Contrariamente, a idade e o rendimento não apresentam influência significativa nas escolhas de marcas alimentares.

A nível académico, a presente dissertação aprofunda a compreensão da Escolha de Marca no setor alimentar, tendo como foco dados de mercado específicos e a situação económica portuguesa, avaliando períodos pré e pós inflação, e as suas implicações na mudança de comportamento do consumidor. A nível prático, oferece insights valiosos para as marcas ajustarem as suas estratégias de marketing, enfatizando a necessidade de alinhar as táticas aplicadas com as perceções e preferências dos consumidores.

Palavras-chave: Escolha de Marca; Sensibilidade ao Preço; Perceção de Inflação; Lealdade à Marca; Setor Alimentar Português.

Abstract

The substantial rivalry amongst A-Brands and PL Brands in the food retail sector requires a marketing approach that enables the analysis of the various options available in the market, especially in a context of economic instability and constant fluctuation in inflation levels since 2021. This scenario has led consumers to developing a more apprehensive approach towards grocery shopping decisions and when choosing one brand over the other one. The objective of this master's dissertation consists in developing an explanatory model of the factors that predict consumer choices between both brands types, proposing a link with several variables such as perception of inflation, price sensitivity, perceived value, perceived quality, brand loyalty and perceived risk. Sociodemographic conditions, such as age and income, are also included in this investigation with the aim of identifying any patterns and trends through sample characterization.

The initial research focused on the companies' perspective, analyzing the evolution of sales, both in value and volume, of the most significant brands across the various market categories explored. The second study focused on the consumer perspective, through a quantitative study with a non-probabilistic sample, obtained through an online questionnaire that gathered 207 valid responses, analyzed using IBM SPSS Statistics. The observed results show that perception of inflation, price sensitivity, perception of value and consumer loyalty to A-Brands are considered as the most relevant factors when explaining Consumer Brand Choice. Contrarily, age and income do not have significant influence on food brand choice.

At an academic level, this dissertation deepens the understanding of Consumer Brand Choice in the food sector, focusing on market data specifically from Portugal and its economic situation, evaluating pre and post inflation periods and their implications on shifts in consumer behavior. On a practical level, it offers valuable insights for brands to adjust their marketing strategies, emphasizing the need to align tactics with consumers' perceptions and preferences.

Key words: Brand Choice; Price Sensitivity; Inflation Perception; Brand Loyalty; Portuguese Food Sector.

Table of Contents

List of Figures

List of Tables

1. Introduction

1.1 Theoretical Background

Since July 2021, Portuguese inflation levels accelerated significantly, largely driven by various causes such as the reopening of the economy after the Covid-19 Pandemic and the Ukraine-Russia War, which forcefully led to supply-chain irregularities and higher commodity import prices (Quelhas & Serra, 2023). Inflation stabilized towards the end of 2022, however, it peaked at an unprecedented 8,1%, a level never seen in the previous 30 years (McKinsey & Company, 2022). This phenomenon reduced purchasing power through increased price levels, thereby affecting consumer and business expenditures during this period (McKinsey & Company, 2022).

Currency devaluation combined with surging inflation, strongly impacts consumer price sensitivity (Negm, 2023), especially for frequently purchased goods such as essential groceries. As a result, changes in food choices and consumption patterns emerged, pressuring many consumers to readjust their budgets (Hempel, 2024).

Given the escalating presence of PLs, competition for customer loyalty has been has intensified within the grocery retail landscape since traditionally, price and quality were the primary competitive battlegrounds (Ndlovu, 2023). While A-Brands are progressively leveraging brand equity to justify their premium prices, PLs retaliate with strategic value-oriented positioning (Ndlovu, 2023). Therefore, according to Nielsen 2023, brands are obliged to review their marketing strategies to efficiently reach a price-conscious consumer base who shifted their attention towards cost-conscious decisions. Strategies to enhance market relevance should include improving product offering and diversification, strengthening brand distinction and understanding changes in customer preferences across different categories (Nielsen, 2023).

1.2 Research Objectives

The food sector in Portugal is one of the most important commercial industries, both in wholesale and retail (Luz, 2024). Until recently, A-Brands mainly competed amongst one another as the potential of PL products was non-threatening to them (Gázquez-Abad et al., 2021). However, rising demand for less expensive grocery prices has driven value growth for this type of brand, establishing them as a cost-effective alternative in the consumer mindset and reshaping the food market environment (Gázquez-Abad et al., 2021).

Consumer Buying Behaviour studies the decision-making and actions of individuals when purchasing products, highlighting the importance of understanding intrinsic customer motivations and how they are affected by culture, social standing, and personality traits (Rani, 2014). Therefore, the scope of this research relies on this concept by exploring the complex interplay between an inflation context, customer behaviour, and brand choice (A-Brands vs PL Brands) within certain categories of the Portuguese food retail sector, including Cereals, Biscuits, Coffee Capsules, Snacks/Chips and Sauces category. The key focus is to understand how price, value, quality, loyalty and risk, shape consumer preferences, considering the following research questions:

Q1. What is the impact of inflation on the profits of food brands in Portugal?

Q2. What factors affect consumer choice between A-Brands and PL?
Q2.1. Do sociodemographic characteristics of the consumer act as moderators between these relations?

1.3 Academic Relevance

Previous research on consumer behaviour has explored various factors influencing A-Brand vs. PL Brand choices. Some studies highlighted price and quality perceptions as key factors (Pinto et al., 2022) whilst others emphasized brand loyalty and openness to new brands as more important indicators (Khowjoy et al., 2023). Additionally, Van Loo et al. (2021) examined the growing acceptance of PLs, often considered as direct rivals to A-Brands, when offering similar quality at lower prices. Nonetheless, prior studies have not connected consumer behaviour with inflationary pressures impacts. The present research attempts to fill this gap by identifying how inflation influences consumer choices, especially shifts toward value-oriented shopping.

Valaskova et al. (2018) highlight several consumer traits that are associated with a preference for certain brands, while Slabá (2020) reflects on the generational differences while selecting brands. While it has been established that consumer demographics have an impact on purchase behaviour, only a few studies so far have reported the predictive nature of these variables on the preferences of different product categories (Namin & Dehdashti, 2019). The present dissertation seeks to explore how sociodemographic factors, specifically age and income, may serve as moderators in influencing brand choices.

Several studies have been conducted in other countries, such as in the United States by Bouhal & Capps (2012) and Charm et al. (2020), New Zealand by Hayo and Neumeier (2022), Slovakia by Križan et al. (2023) and Egypt by Negm (2023). Additionally, there is also research amongst Portuguese consumers, such as Brochado et al. (2015), and more recently by Pinto et al. (2022). However, Pinto et al. (2022) conclusions might not fully capture the behaviour of the entire Portuguese consumer base since it was targeted at a specific area of Portugal, Aveiro. This dissertation therefore intends to conduct a survey among the consumers of a few Portuguese regions so that their understanding of behaviour can be presented in a more representative way on factors like age, income, genre, and education.

1.4. Business Relevance

Regarding corporate contribution, this study intends to inform new methods for customer segmentation and forecasting purchase potential, which can be beneficial for retail chains to develop new marketing strategies. Understanding customer behavior can help analyze retail transitions in specific locations, like Portugal (Križan et al., 2023). Focusing on the business viewpoint, exploring the reasoning behind brand decisions (Asamoah et al., 2011) can enrich existing literature by allowing companies to create engaging customer experiences that resonate with their target audience. Also, it can lead to developing more effective marketing strategies, allowing businesses to create messaging and advertising campaigns that truly connect with customers' desires (Rani, 2014), resulting in increased customer satisfaction and loyalty (Asamoah et al., 2011; Maslow, 1954). Furthermore, understanding how customers mentally categorize items

enables marketers to craft campaigns that are more likely to appeal to their target population (Skwara, 2023).

Overall, existing literature on brand choice tendentially focuses on a single perspective, either consumer behaviour or providing business insights and suggestions for improvement. This dissertation takes a broader approach by integrating both perspectives. By analyzing brand revenue shifts alongside with consumer opinions and attitudes, it aims to draw larger conclusions and fill a gap in literature that connects changes in consumer brand preferences with their impact on brand profitability.

1.5. Structure of the Dissertation

This research work is split into four chapters. The Introduction contextualizes the topic, outlines the objective of the thesis, and indicates the academic and practical relevance. In the second chapter, a literature review is conducted to present the essential concepts relevant for the research, beginning with a firm perspective, and them assessing the factors affecting the choice between A-Brands and PL Brands, through the lens of the consumer. Additionally, it is presented a correlation between the sociodemographic conditions that affect consumer categorization and how these determinants ultimately impact consumer brand choice. The third chapter describes the methodology used in the research and, to conclude, the last chapter exposes the analysis of the data gathered from surveys to Portuguese consumers, the discussion and the conclusions obtained.

2. Literature Review

2.1 The Portuguese food retail sector

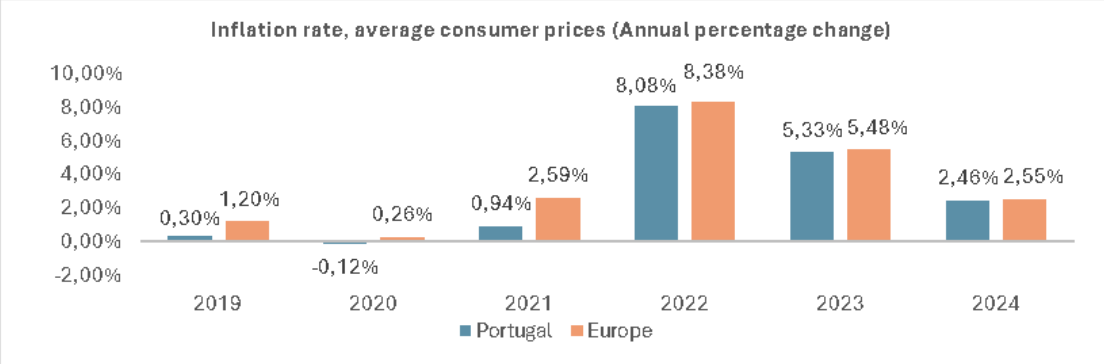
In 2019, the Portuguese food retail sector was dominated by five main chains, which collectively held 69,6% of market share, according to Costa et al. (2020). Continente (21,9%) and Pingo Doce (20,8%) are identified by customers as the two most preferred supermarkets (Costa et al., 2020). A study by Luz (2024) enhances Sonae, owner of Continente, Continente Modelo, Continente Bom Dia, and Continente Online as the ultimate leader with the largest market share and the highest consumer rating.

Recent data from Nielsen (2023) suggests a shift in the Fast-Moving Consumer Goods (FMCG) market's dynamic due to economic alterations Portugal since 2021. Continente has solidified its leading position, expanding its market share to 27,6% in 2023. Inversely, Pingo Doce, with a market share of 23,0%, has had struggles maintaining its position and experienced a slight loss of 1,5% since 2022, yet remaining the second-largest food retail chain. Furthermore, the official rebranding of Jumbo to Auchan resulted in a decrease of its market share to 4,8%, and similarly Intermarché also saw a share reduction to 7,7% in the same year. Lidl stands out as the major gainer, reaching a remarkable share of 12,3%. In addition, Mercadona, a new player in the market since 2019, has steadily grown its presence, reaching a market share of 6,0% by the end of 2023 and expecting further development given its focus on Every Day Low Prices (EDLP) promotion strategies and competitive PL alternatives. Lidl and Mercadona exemplify the trend of cheaper retailers, highlighting evident price competitiveness as the ongoing battlefield in the Portuguese food retail industry (Nielsen, 2024).

2.2 Inflation Levels – Portugal vs. EU – and its influence on firm's profits

Inflation is typically measured by comparing changes in a price index, most commonly through a basket of goods and services (European Commission, 2018). This phenomenon, when measured by the Harmonized Index of Consumer Prices (HICP), plays a key role in determining both regional and global economic stability, as well as investment and consumption choices (Araújo et al. 2023). Notably, in Portugal — until very recent global disruptions occurred — the International Monetary Fund, IMF (2023) reported 10 years of general price stability, with average inflation slightly lower than in Europe (Figure 1). For instance, Portugal's annual inflation rate was only 0,9% in 2021, compared to the EU's 3,5% (IMF, 2023). While policy measures initially diminished the rise in energy prices relative to the Eurozone average, headline inflation eventually accelerated, peaking at 10,6% in October 2022 (IMF, 2023). Since then, percentages have slowed down, gradually decling again.

Figure 1 - Inflation Rate: Portugal vs. EU (2019-2024)



Source: *International Monetary Fund (2023)*

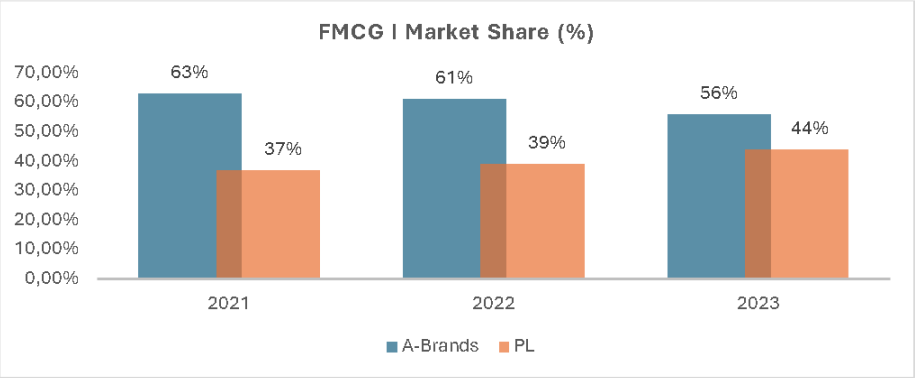
2.3. The Firms' Perspective

A-Brands, also known as National Brands, are the products belonging to and sold by established companies, while Private Labels (PL) refer to a product that is owned by a retailer rather than a manufacturer (Giovannini et al., 2017). PL products are marketed under the branding of the retailer or some unique identity (Giovannini et al., 2017).

According to Nielsen (2023), A-Brands continue to lose volume sales growth in Portugal's FMCG sector, resulting in a decline of market share, whereas PLs are experiencing rapid growth. Different studies note that PLs are on a significant rise, especially within the Consumer-Packaged Goods (CPG) category, due to an evolving range of choices and diminished purchasing power (Cuneo et al., 2015; Scholdra et al., 2022).

Figure 2 illustrates the percentage of market share for A-Brands and PLs, from 2021 until 2023, demonstrating that PLs represent a significant phenomenon in grocery markets and in the retail system (Giovannini et al., 2017). This growth can be explained through several strategies employed by distributors aimed at strengthening their bargaining power with suppliers and increasing customer loyalty while adjusting to the new economic scenario (Giovannini et al., 2017).

Figure 2 - Market Share: A-Brands vs. PLs (2021-2023)



Source: Anuário Nielsen (2023)

Therefore, we present this hypothesis for the first research question:

H1: Higher inflation levels lead to a decrease in A-Brand's Market Share.

H2: Higher inflation levels lead to an increase in PL Brands' Market Share.

2.4. The consumers' perspective

Focusing on the consumer side, this behaviour is a complex field influenced by several elements, one of which is motivation (Asamoah et al., 2011). As Bandhu et al. (2024) point out, human behaviour is the product of a complex interaction of internal and external influences and incentives. Motivation theories are critical in various psychology studies, including educational psychology, behavioural psychology, and social psychology (Shuman & Baird, 2023). According to these researchers, motivation primarily concernes the objectives individuals establish for themselves and the methods they use to reach those goals, being classified as intrinsic or extrinsic (Cherry, 2023). Intrinsic motivation arises inside the individual and is driven by a desire for personal fulfilment or progress. In contrast, extrinsic incentive is fuelled by external rewards and recognition (Cherry, 2023).

Furthermore, Sheth et al. (1991) established the Theory of Consumption Value (TCV), which provides a complementary perspective on consumers decision making. According to Tanrikulu (2021), who further developed this model, TCV is a marketing theory that highlights the significance of consumption values in influencing customer behaviour. Consumption value, in this context, is the amount to which a product meets a consumer's wants and provides satisfaction (Biswas & Roy, 2015).

Nevertheless, their choices are not exclusively driven by the desire to fulfil functional desires, since consumers also identify items according to their utility or hedonic value (Brochado et al., 2015). Dhar and Wertenbroch (2000) emphasize the relevance of both hedonic and utilitarian factors, claiming that utilitarian motives are concerned with practicality and utility - the product's capacity to execute a given task or solve a problem. Hedonic motives, on the other hand, are motivated by emotions and a desire for pleasure, experience, or social prestige (Dhar and Wertenbroch, 2000). Understanding these two motives helps to explain why customers may prefer a more

costly brand that provides a better experience (hedonic) over a generic brand that only meets a fundamental requirement (utilitarian) (Dhar & Wertenbroch, 2000).

2.5 Factors affecting consumer's choice between A-Brands and PL

While internal motivations play an important role in consumer decision-making in the food retail industry, it is recognized that a variety of external variables also exert a strong impact. Given the present state of changing inflation, this study tries to shed light on other components, beyond internal drivers, that influence consumer purchase patterns within specific food categories.

2.5.1. Perception of Inflation

Perception is an active process that describes how raw sensory input is meaningfully organized and portrayed by humans (Niosi, 2021). It is an organization of information, including the grouping of comparable feelings, which are shaped by prior experiences, knowledge, and expectations (Niosi, 2021). According to Ranyard et al. (2008), the influences and constraints on perception, such as memory recall, are fundamental drivers of inflation expectations and influence economic actions. As their studies evidence, consumers tend to overestimate inflation when rates are falling but underestimate it when it is rising, reflecting systemic mistakes in perception (Ranyard et al., 2008). Furthermore, individuals normally use past inflation rates estimates to form expectations about the future rates (Hayo & Neumeier, 2022). This may imply poor anticipation of futureinfltion rates, leading to suboptimal decisions regarding groceries spending decisions - either economizing more than they need to or being oversensitive to price changes in essential foods (Ranyard et al., 2008). In fact, Arioli et al. (2016) exposed that perceptions and expectations of European consumers about inflation are significantly higher than the observed rates. As a response to price sensitivity, consumers are willing to accept the less attractive but cheaper alternative to their favored options or give up the diversity in consumption (Tulwin, 2014). Therefore, pricing plays a crucial role in consumer choice (Tulwin, 2014). These considerations are further supported by Scholdra et al. (2022), who indicate that economic downturns are associated with a shift from the purchase of A-Brands toward PLs. Such shift reflects the conscious effort of customers to stay within their mental grocery budget by settling for cheaper options. While the overall expenditure and purchase volume may increase, this is likely to occur under one conceptual category in which consumers, while adjusting their spending whithin that budget, buy more units of cheaper commodities. Therefore, based on the literature review findings, the following hypothesis emerges:

H3: Higher perception of inflation leads a consumer to purchase PL over A-Brand food products.

2.5.2 Price Sensitivity

To understand the purchasing decisions of consumers in this context, it is essential to consider the Mental Budgeting Theory, among other theories, to gain insights into how individuals and households manage their income (Thaler, 1999). It highlights the role that budgeting and accounting play in shaping consumer preference and spending behaviour (Heath & Soll,1996). Heath & Soll (1996) further emphasize how individuals risk overconsumption and under-consumption in certain spending categories as a result of having pre-set budgetary constraints. These authors add that budgets, which are

frequently created before the actual purchases, may not correctly reflect the finances required for various expenditure categories, leading consumers to allocate more or less money than expected for specific expenses. Therefore, striking a balance between flexibility and rigidity is critical for effective budgeting, since excessive flexibility may result in improper budget reallocations (Heath & Soll, 1996).

Homburg et al. (2010) extend the notion of mental accounting and propose that consumers mentally divide their food budget among distinct product categories such as meat, milk and snacks. Their results identify, in consensus with Heath and Soll's (1996) research, that keeping a detailed record of spending results in better budgeting decisions. In addition, tracking costs across categories underscores the importance of expenditure classification (Homburg et al., 2010). Contrarily, Thaler (1999) highlights expenditure categorization as one of the primary factors influencing customer choice. This author argues that customers who categorize their expenditures into various classifications, such as housing and food, are generally confined into implicit or explicit budgets. According to Thaler (1999) these categories determine the extent of expenditures and nature of financial control in the divisions of funds.

Although showing improvements since the second half of 2023 up to the current date (IMF,2023), food price inflation remains a challenge to food manufacturers due to rising supplier costs (Vos et al., 2023). Moreover, with advancements in the food industry, consumer's attitudes and perceptions also evolve in response to food products (Gurbuz & Macabangin, 2019).

According to Ko (2022) while developing an Ipsos' study (Ipsos Coronavirus Consumer Tracker Survey, 2022), it was assessed that consumers expect that the current state of inflation and price increases will change their buying habits leading them to buying less and/or hunting for offers. Price perception is a consumer judgment or emotional form that dictates whether the price set by the seller is acceptable or can be justified when compared to other alternatives (Marlien et al, 2020). For instance, in the food retail segment, consumers are becoming more budget-consicious by seeking ways to save, opting for promotions and discounts, reducing non-essential or premium items, and turning to PLs for what is perceived to grant a more affordable price (Nielsen, 2022). In this sense, PL goods may serve as a solution for customers who are trying to bridge the gap between their demands and what their financial capabilities. Nonetheless, still to this date, a large number of consumers do not view PLs as a viable alternative for their financial challenges (Ipsos, 2022).

According to research by Alemany (2024) on customer loyalty in the face of rising inflation by Harvard Business Review, consumers become more price-sensitive and emphasize value for money under these challenging circumstances. This article emphasizes that buyers carefully evaluate prices before purchasing certain goods, often swapping more expensive A-Brands for cheaper alternatives. According to Van Loo et al. (2021), price sensitivity is pronounced among a specific market niche composed of young people. As a result, this segment's preference for PLs emphasizes pricing as a critical aspect in their decision-making process (Van Loo et al., 2021).

A Boston Consulting Group (BCG) article (2021) conducted by Witschi et al. (2021) points out that there is a disconnect between consumers who claim to be "value

conscious" and their actual purchasing behaviour. Whilst most shoppers afirm they value price, only a small percentage consistently chooses the absolute lowest price option (2-18% depending on category and market). Marlien et al. (2020) support this argumentative study, stating that when customers become more price sensitive, they may perceive A-Brands to provide greater value for money than PLs, even if these items are cheaper. As a result, the following hypothesis is proposed to the presented research question:

H4: Price sensitivity influences consumers to choose PL Brands over A-Brands.

2.5.3. Perceived Value and Perceived Quality

Typically, PL Brands are seen as generic, low-cost alternatives with rudimentary functionality (González-Benito & Martos-Partal, 2014). Consumers are primarily motivated by price, with a consistent belief that A-Brands provide greater quality (Brochado et al., 2015). Media and advertising frequently reinforce this idea (Brochado et al., 2015). Nonetheless, the consumer landscape is facing dramatic changes as shoppers increasingly make purchasing decisions based on perceived value, which includes both perceived quality and price advantage (Marlien et al., 2020).

In essence, perceived value shows how customers weigh the advantages (quality) and sacrifices (price) of a product in comparison to competing alternatives (Kotler & Armstrong, 2020). This notion is in line with the "purchase value" concept suggested by Pinto et al. (2022) which emphasizes the utilitarian value dimension, considering price and quality assessments.

Kakkos et al. (2015) explore additional aspects of perceived value that determine the intention to purchase PLs. Perceived value for money is stated to be the most important element in determining PL Brand purchase intention (Kakkos et al., 2015). Consumers compare price to their perception of quality and may choose PLs when perceived quality justifies the lower price compared to A-Brands (Kakkos et al., 2015). Additionally, convenience is also a key factor when determining perceived value of benefits received. Therefore, while not explicitly exposed by these authors, it can be considered that consumers may pick PL Brands if the convenience (time and effort saved) outweights any perceived difference in advantages over A-Brands (Kakkos et al., 2015). Given the presented literature regarding perceived value, the following hypothesis is presented:

H5: Consumers that perceive PL Brands to have more value than A-Brands will choose them over the other brand type.

Therefore, value is understood to be a trade-off between price and quality (Pinto et al., 2022). Perceived quality is considered multidimensional by these authors, and it arises from different perspectives related to philosophy, marketing, engineering, and manufacturing processes (Pinto et al., 2022). According to Bech et al. (2001), consumer perceptions of quality strongly influence food choices and buying behaviour. Moreover, Braun et al. (2020), affirm that quality encompasses price and convenience, as well as ethical considerations. This emphasizes that quality is centered on the product attributes, whilst value considers the "get" (price) and "give" (efforts) aspects of a transaction (Braun et al., 2020).

Where the quality of a PL item is comparable to its A-Brand counterpart but offering a cheaper price, it becomes attractive to customers, leading them to switch from the A-Brand to the PL product. Czeczotko et al. (2022) note that some consumers consider that PL Brands are of equal or even superior quality compared A-Brand. In this context, these attributes (price and quality perceptions) play a key role in the buying of PLs by customers who perceive PL Brands to be similar in quality to A-Brands. This confirms the ever-growing popularity of PL Brands, especially when facing budgetary constraints.

The controversial findings by Brochado et al. (2015) show that consumers who are price-conscious are more likely to choose A-Brands when higher costs are associated with higher quality. Inversely, price and quality perceptions affect the purchases of PLs amongst customers who identify that PLs have equal quality to A-Brands. This suggest that, even though some consumers associate lower price with lower quality, others acknowledge the potential quality compromise for certain product categories. According to DelVecchio (2001), consumers demonstrate a higher level of trust in PLs when it comes to frequently purchased products or for products whose quality is consistent across different brands.

These findings assessed lead to the conclusion that the "quality gap" is closing, resulting in a more equitable comparison between the two and emphasizing the importance of addressing the branding gap. Perceived value, which encompasses price and perceived quality, is emerging as a crucial variable in customer selection between A-Brands and PL items. While price is still critical, there is a growing interest in a balance between price and perceived quality. This shift in perspective requires an approach that focuses on closing the gap in perceived quality and repairing the deficit in branding in order to enhance PLs attractiveness. As so, the following hypothesis is presented:

H6: Consumers who perceive PL Brands to have similar or higher quality than A-brands, are more prone to purchase them over the other brand type.

2.5.4. Brand Loyalty

Brand loyalty is a long-standing concept that lacks a uniform definition (Knox et al., 2001). It refers to the degree to which consumers hold positive attitudes toward brands, reflecting their devotion and the intention of continuing buying them in the future (Brochado et al., 2015). In other words, brand loyalty is a relationship established between buyers and brands, which leads to the repurchase of products over time (Brochado et al., 2015). Generally speaking, brand loyalty occurs when the attitude and intention of a customer favors towards one brand (Zaidun et al., 2020). According to Pinto et al. (2022), brand loyalty is among the determinant factors that affect purchasing decisions. Its measure, however, is difficult to analyze especially in Fast-Moving Consume Goods (FMCG) due to low involvement and attachment consumers have in these purchases (Knox et al. 2001).

Khowjoy et al. (2023) highlight several dimensions that a brand maintains, influencing customers both directly and indirectly. These dimensions include brand experience, brand value, brand satisfaction, brand trust, and brand loyalty (Khowjoy et al., 2023). More precisely, research found that the combination of brand pleasure and brand trust enhances the interconnected relationship among brand experience, brand

value, and loyalty (Khowjoy et al., 2023). Also, both brand experience and value directly influence customer loyalty to the food products offered by an A-Brand.

A study by Indrayani et al. (2008) explores the effects of food price variations on brand loyalty, posing that price volatility substantially influence consumers' switching behaviour. This implies that even small changes in prices can easily shift brand preferences. The same study revealed that the levels of brand loyalty varied from one brand to another (Indrayani et al.,2008). In contrast, Pinto et al. (2022) argue that consumers are likely to continue purchasing well-known A-Brands in which they have confidence, even amid economic oscillations and Bisschoff (2021) even adds that some buyers are willing to pay a premium for products from specific brands. Thus, even if a company increases its prices, loyal consumers are still likely to buy its products (Bisschoff, 2021). Overall, PL products are perceived to be cheaper when compared to A-Brands, thereby attracting consumers who are more sensitive to prices (Calvo-Porral & Lévy Mangin, 2016). Therefore, price sensitivity is typically greater for A-Brands rather than for PLs, as consumers may be more willing to accept price increases if they perceive the quality to be superior (Hwang et al., 2021). Based on the above literature review, the following hypotheses were formulated:

H7: Brand Loyalty towards A-Brands makes consumers less prone to switching that brand for an alternative PL food product.

H8: Price sensitivity has a negative effect on brand loyalty towards A-Brands.

2.5.5. Perceived Risk

Pinto et al. (2022) suggest that familiarity with PLs may reduce customers' perceptions of the risk associated with these commodities. Perceived risk is defined as customers' impression of the uncertainty and negative repercussions of engaging in a purchasing activity (Pathak & Pathak, 2017). Given that the risk is in consumers' minds, it is perceived rather than actual (Pathak & Pathak, 2017). The same authors note that, when customers perceive a high level of risk, they are less likely to acquire a specific product. As customers become more familiar with PL items and their quality, their perceived risk in purchasing them decreases, potentially leading to a greater propensity to prefering PL over A-Brands, particularly during economic downturns, when price sensitivity is heightened. This is consistent with the conclusions of Calvo-Porral and Lévy Mangin (2016), who argue that increased consumer confidence in PLs reduces perceived risk, making them more appealing alternatives to A-Brands, especially when PL products provide superior value.

Furthermore, Wyma et al. (2012) discovered that consumer preferences differ by product type, with basic food products performing better as PLs compared to luxury goods. As previously mentioned, during economic constraints, customers tend to be more price-conscious while still valuing quality, which may contribute to brand loyalty in certain types of products (Wyma et al., 2012). Nevertheless, PL items frequently face challenges that prevent them from exceeding consumer expectations, particularly regarding physical attributes such as simplistic packaging, limited variety, and insufficient advertising (Marlien et al., 2020). These obstacles may hinder the desire to develop a deeper relationship with these brands (Marlien et al., 2020).

Johnson (2023) claimed that, in light of the recessionary phase in the food sector, customers are compelled prioritize obtaining the greatest available value, resulting in a decreased brand loyalty. This indicates that brands can no longer rely entirely on image, heritage, and reputation to drive and sustain sales (Johnson, 2023). According to Alic et al. (2020), developing and sustaining a positive brand image in customers' mind is crucial for both A-Brands' and PLs' success. These authors argue that the more distinctive a brand is perceived to be, the greater its competitive advantage and reputation relative to others. As a result, whether it is well-known A-Brand or a regular PL Brand, having a strong brand image will enhance overall brand loyalty (Alic et al., 2020).

In addition, according to Gangwani et al. (2020), a trend is forming, fueled mostly by this current generation of potential customers, who appear exhibit less brand loyal and are eager to explore new brands and experiences. (Gangwani et al, 2020). Nonetheless, from a marketing perspective, the most concerning shift is the diminishing brand loyalty among consumers, which is often driven primarily by necessity (Charm et al., 2020). In this sense, the study suggests the following hypothesis:

H9: Consumers with lower perceived risk of PL Brands are more prone to choose them over A-Brands.

H10: Brand loyalty to A-Brands decreases when perceived risk of PL Brands is low.

2.6. Socio-demographic Conditions

As MacKinnon (2011) and Valaskova et al. (2018) stand out, socio-demographic characteristics may either strengthen or weaken the relationships among variables. It is, therefore, vital to consider these consumers conditions to better understand their involvement with certain brands (MacKinnon, 2011; Valaskova et al., 2018.). This dissertation discusses how age and income influence brand choice based through the relationship between the six interrelated factors described priorly.

Hoyo and Neumeier (2022) note that individuals, mainly those with limited economic understanding, tend to overestimate inflation. Consequently, lower-income consumers are more sensitive to price increases (Hoyo and Neumeier, 2022). Furthermore, Gündüz et al. (2020) assert that inflation is perceived to be substantially higher if it is assessed by individuals with lower financial capability, especially in regard to essential commodities. Kahneman and Tversky (1979) highlight that for low-income earners, even a slight increase in prices can be painful, suggesting a possible preference for PLs as a cheaper alternative. While research on the relationship between age and inflation perception is limited, Quaiyyum and Udoy (2021) studied that, found that younger generations, who have less experience with high inflation periods, tend to be more reactive to unexpected price changes compared to older consumers, who take a longer-term perspective. As so, younger consumers tend to be more sensitive to any inflation concerns, which might drive them towards PL Brands.

Income is frequently related with price sensitivity, especially during changing economic condition (Mehra & Singh, 2016; Nassar et al., 2021). As income levels decrease, affordability dictates demand, leading low-income customers to focus on perceived value, so their preference shifts toward PL Brands (Kamakura & Mazzon, 2013;

Costa et al., 2020). It is noteworthy that price sensitivity can drive consumers to switch to PL Brands when discounts are available (Nassar et al., 2021). Some consumers may adopt a hybrid approach, choosing premium brands for essential goods and PLs for less critical items (Costa et al., 2020). As so, frequent purchases amplify the effect of price variation for low-income earners' budget, making them more vulnerable to fluctuations (Costa et al., 2020). However, it is still unclear how exactly age can influence price sensitivity. For example, Nassar et al. (2021) consider that younger generations are less sensitive to prices, although these findings are not considered statistically significant. Following this pattern, older consumers might prefer well-established A-Brands for their perceived value (Lissitsa & Kol 2016), while for younger individuals may prioritize convenience and overall experience (Priporas et al. 2017).

Costa et al. (2020) mention that even low-income consumers can remain loyal to brands that they perceive as offering higher quality, despite higher prices. Age can also be associated with brand loyalty, as Helm & Landschulze (2011) research prove that an older consumer would favor a well-known and trusted brand due to positive past experiences, thus reducing the demand for innovative products. Also, brand loyalty among low-income groups is often driven by a desire of avoiding risky choices and stay whitin their comfort zone, minimizing the chances of unsatisfying purchases (Costa et al., 2020).

Lastly, perceived risk increases with age, making older consumers more cautious about trying new brands (Helm & Landschulze, 2011). Lower-income individuals may have less access to information, which can heighten perceived risk and foster greater reliance on familiar A-Brands (Hough & Contarini, 2023). Given the presented literature regarding age and income, the following hypothesis are suggested:

H11: The effect of perceived inflation on the choice of PL Brands over A-Brands is higher for (a) younger consumers and (b) individuals with lower income.

H12: The effect of price sensitivity on the choice of PL Brands over A-Brands is higher for (a) younger consumers and (b) individuals with lower income.

H13: The effect of perceived value on the choice of PL Brands over A-Brands is lower for (a) older Consumers and (b) individuals with lower income.

H14: The effect of perceived quality on the choice of PL Brands over A-Brands is lower for (a) older consumers and (b) individuals with lower income.

H15: The effect of brand loyalty to A-Brands on the choice of PL Brands over A-Brands is higher for (a) older consumers and (b) individuals with lower income.

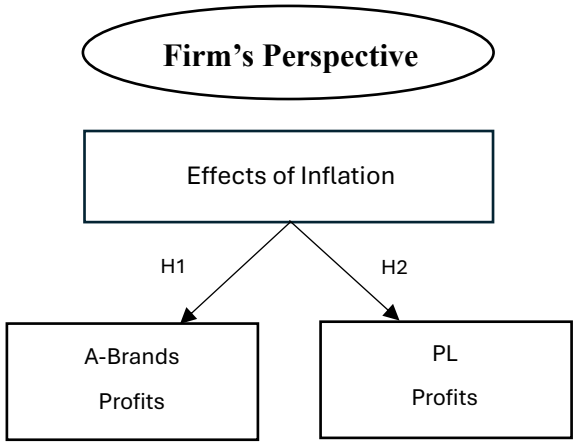
H16: The effect of perceived risk to PL Brands on the choice of PL Brands over A-Brands is higher for (a) older consumers and (b) individuals with lower income.

3. Conceptual Model

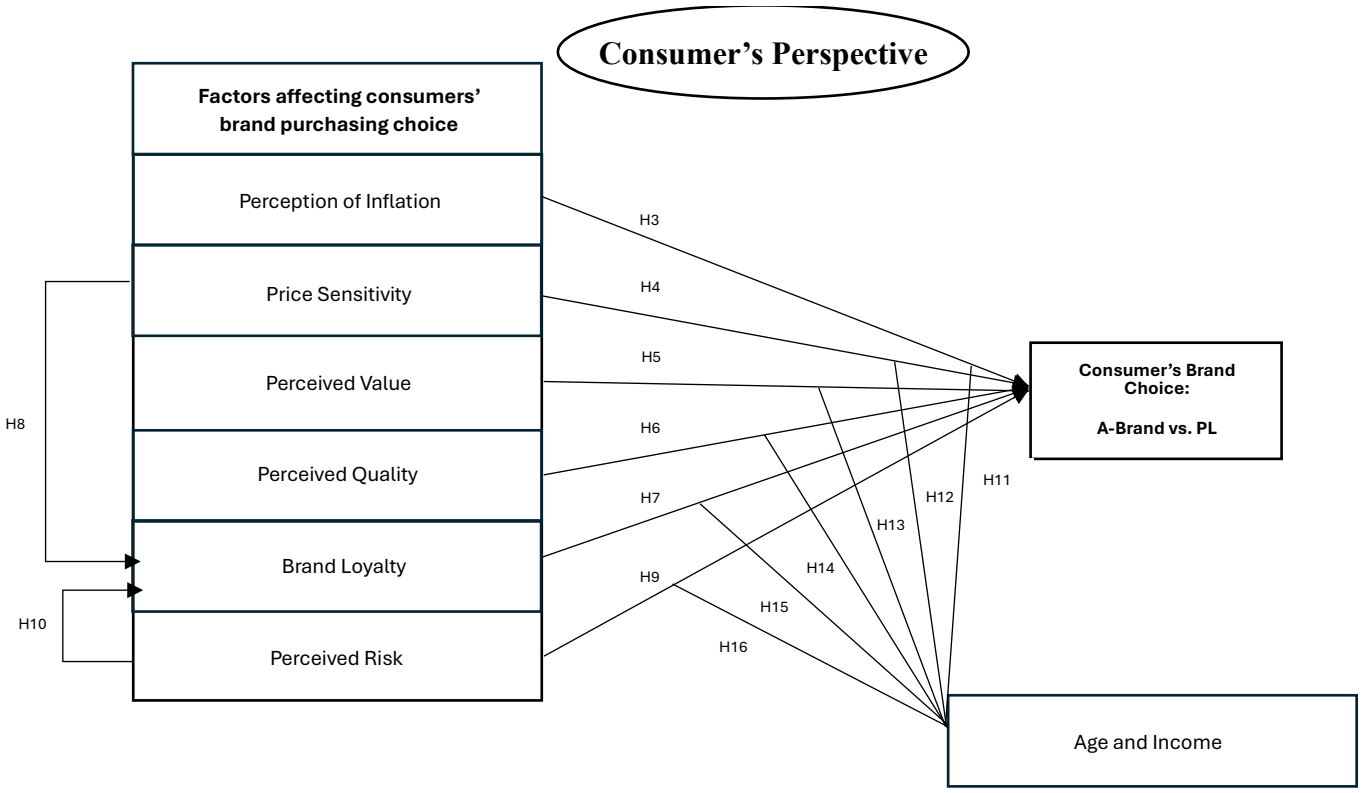
In order to respond to the research questions, a conceptual model (Figure 3) was designed and split into two parts. The first one assesses sales revenue from A-Brands and PL Brands through the lens of brand companies established in the Portuguese food retail sector and it is based on the conceptual model developed by Rizkallah and Miller (2015).

The second part was built based on consumer's perceptions and way of thinking as well as what are the most crucial factors affecting the choice of PL Brands over A-Brands. This model is designed taken into consideration the conceptual model developed by Beneke and Carter (2015).

Figure 3 - Proposed Conceptual Model



Source: Based on the model of Rizkallah and Miller (2015).



Source: Based on the model of Beneke and Carter (2015).

4. Methodology

4.1. Type of Study

The first part of the analysis aims elucidate the effect on the evolution in sales of A-Brands and PL Brands within the Retail categories of Cereals, Biscuits, Snacks, Coffee, and Sauces. These categories were chosen given the availability of information in the Nielsen Platform, which provided data since 2021 until June 2024. In this sense, this study seeks to prove how rising prices, along with reduced purchasing power, have led to a decline in A-Brand sales whereas PL revenues and market share have increased, compared to previous years. It also examines whether consumer value perceptions vary across product categories due to inflation.

The second half of the dissertation tests the selected external brand factors that shape consumer perceptions when comparing substitutable food products. In essence, the overall aim is to understand how rising inflation affects the factors influencing consumers' brand choice. The model posits a direct causal relationship between the intervening variables as depicted by the concept of explanandum (B) and explanans (A) by Imbeau et al. (2021).

This dissertation follows a deductive approach that aligns with the research questions. The hypotheses aim to identify which are the factors and understand how they impact consumers behaviour and brand perceptions. Thus, they are presented within a conceptual model, grounded in theoretical knowledge from existent literature (Saunders et al., 2016). A quantitative study was selected due to its strengths in accuracy and systemic data collection, and analysis. This framework allows for objective and rigorous hypothesis testing, which helps to validate current hypotheses and investigate causal relationships between variables (Saunders et al., 2016).

Regarding the temporal horizon, since this research is split into two momentums, data assessed from Brands' revenue variations follows a longitudinal approach since it aims to examine a given sample of Brands and its revenues fluctuations over a period of time (Caruana et al., 2015). The assessment of consumer's perception and factors affecting their choice of Brand happened between pre-determined dates and at a given moment in time, therefore it follows a cross-sectional study (Saunders et al., 2016).

4.2. Sample

The initial phase of this study involved a revenue analysis across six specific product categories: biscuits, cereals, snacks/chips, coffee capsules, tomato sauces, and other sauces. For the biscuits category, due to its broad scope, the analysis was further divided into three subcategories: sweet biscuits, salty biscuits, and traditional treats. In the cereal category, the profitability of Kellogg's and Nestlé was compared with that of competing PL brands. For snacks/chips, the revenue performance of Pringles, Lay's, and Ruffles was evaluated, with a focus on their respective PL brand competitors. In the coffee capsule market, the selected brands were L'OR and Buondi, which were compared against PL brand performance in the same segment. Lastly, in the sauces category, tomato pulp products from Guloso and Compal were analyzed within the tomato sauce segment. For

other sauces, specifically ketchup and mayonnaise, brands such as Heinz, Calvé, and Hellmann's were assessed in relation to the revenues of their PL competitors.

In the second stage, the questionnaire developed targeted individuals over the age of 18, who reside in Portugal and shop frequently and actively at any previously presented Portuguese supermarket chain. All the inquiries were required to have access to all the products and respective prices at physical stores. To define the sample size of this research, a non-probabilistic convenience sampling technique was employed, due to financial and time constraints (Saunders et al., 2016). However, this type of sample consists of selecting a sample from a population that is easily accessible but is not representative of the population and is susceptible to bias (Saunders et al., 2016).

4.3. Data Collection Method

Individuals' data was collected using an online questionnaire (Appendix 1) designed with the online survey software program Qualtrics XM. A broader variety of participants were able to take the survey as it was available in both English and Portuguese. Subsequently, it was shared on different social media: Instagram, Facebook, and LinkedIn. It was also internally presented to the employees of JMD - Brand We Know, a Portuguese food distribution company. Data collection lasted from the 28th of June 2024 to the 25th of July 2024, and reached a total of 295 responses.

4.4. Measurement Scale

To measure the components of this study, several scales were adapted from previously validated instruments, with all the items following Likert type scales. These scales were translated and adapted to better suit the purpose of this research (Appendix 2). Sociodemographic and behavioural variables were measured using nominal and ordinal scales (Saunders et al., 2016). The instrument employed for data collection was a self-administered questionnaire, consisting of ten sections and eighteen mandatory questions. The first section contained both the introductory message of the research and a filter question to guarantee that only individuals responsible for making food purchases for themselves or their households responded to the survey. The second section focused on shaping the perceptions of the Portuguese consumer regarding supermarket chains and A-Brands versus PL Brands, considering grocery shopping frequency and key factors influencing buying decisions. Sections three through nine adopted a comprehensive approach, analysing distinct constructs relevant to consumer behaviour. These constructs included perception of inflation, price sensitivity, perceived value, perceived quality, brand loyalty, and perceived risk. The last section gathered sociodemographic information used in the categorization and description of the sample. To assure participant privacy, the anonymity and confidentiality of all responses were guaranteed (Saunders et al., 2016). Additionally, a pre-test was carried out before to the questionnaire's release to ensure respondents could understand the meaning of each question. Seventeen individuals between the ages of 22 and 31, eleven females and six males, who purchase food products were chosen to be involved in this pre-test. From the chosen sample, fourteen answered the Portuguese version and three answered the English version. Suggestions were taken into consideration and language mistakes were corrected to create the final questionnaire.

4.5. Data Processing and Preliminary Analysis

To assure the validity of the statistical findings, the data underwent a thorough preliminary examination and processing. The cleaning of data was carried by using IBM SPSS Statistics 30 software in order to simplify and guarantee the quality of statistical results. A total of 295 answers were received, however, following data cleaning, 41 were removed since they did not fit into the target group (responsible for shopping for food products at supermarkets) and other 47 answers were removed because the data was incomplete. As a result, only 207 answers were regarded as valid for this study. After that, data coding and editing were carried out, and the minimum and maximum values were calculated to confirm if there were any discrepancies between the data and the questionnaire. Following examination, values ranging from 1 to 5 or 7 were judged to be normal and according to the measurement scales previously determined. Ultimately, an arithmetic mean of the items from the appropriate measuring scales was used to build six synthetic indices, which were then used to measure the constructs under research. A reliability analysis and principal component analysis (PCA) were necessary for this purpose and the results are presented in Appendix 3. The "Perception of Inflation" construct was the only one not included, as its scale consists of a single item. The Principal Component Analysis (PCA) was used to investigate the dimensionality of each index (Table I) in order to ensure the artificial indices produced accurately reflected the concepts being studied (Mooi & Sarstedt, 2014). The analysis also employed the Kaiser-Meyer-Olkin (KMO) statistic and Bartlett's sphericity test to confirm that the data was adequate. Accordingly, KMO values are between 0 and 1 (Pallant, 2016) and are required to be more than 0,5 to confirm that the correlation is sufficient (Mooi & Sarstedt, 2014). Consequently, for PCA to be considered sufficient, Bartlett's sphericity test results must be significant ($p<0,05$) ((Pallant, 2016). In this sense, results follow these parameters.

Table I - Principal Component Analysis and Reliability Analysis

Indice	KMO	Total Explained Variance (% of Variance)	Bartlett's Test of Sphericity		Cronbach's Alpha
			Aprox. $\chi 2$	Sig.	
Price Sensivity	0,723	57,591	195,531	<0,001	0,748
Perceived Value	0,795	62,026	434,853	<0,001	0,844
Perceived Quality	0,495	42,011	160,428	<0,001	0,538
Brand Loyalty	0,765	60,635	231,648	<0,001	0,781
Perceived Risk	0,650	58,662	268,353	<0,001	0,756

Focusing on the constructs, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy varied from 0,495 to 0,844. Perceived quality reached the lowest limit of acceptability (0,495), indicating that the data for this construct would not be as suitable for factor analysis as the other constructs. Nonetheless, this result must be interpreted in context. According to Taber (2014), a strict reliance on thresholds without consideration of the research context may be misleading. Perceived quality can still be considered

adequate to further analyze, by the support of other adequacy indicators such as significant Bartlett's test of sphericity ($p < 0,05$) and sufficient communalities (above 30%). These complementary statistical measures, as suggested by Taber (2014), reinforce the validity of continuing with the analysis despite the low KMO value for this construct. All other constructs showed adequate values for factor analysis (above 0,5). The use of component analysis was justified given that Bartlett's test of sphericity revealed significant differences between the correlation matrices and identity matrices ($p < 0,01$) for all constructs, indicating the adequacy of the PCA analysis. Also, it is possible to conclude that through the Component Matrix (Appendix 4), the items are sufficiently correlated (Communalities higher than 30%). Across all constructs, the percentage of total variance explained by the principal components varied, with Perceived Value demonstrating the highest explained variance (62,026 %) and Perceived Quality the lowest (42,011%).

Furthermore, Cronbach's Alpha coefficient was computed in order to evaluate the indices' internal consistency (Table III). The findings demonstrate that the alpha values for the indices "Price Sensitivity," "Perceived Value," "Brand Loyalty," and "Perceived Risk" were over 0,7, showing strong internal consistency and the consistency with which the items that make up each scale measure the same construct. Nonetheless, the "Perceived Quality" index's Cronbach's alpha value was 0,538, which is just less than the 0,600, suggesting that the internal consistency of this variable's scale is quite low. This result could mean that the items in this scale do not measure the same construct as consistently as the other indices, however, can be considered within an acceptable range, taking into consideration the potential complications of the construct and the limited number of items in the scale. According to Taber (2017) it is important to consider the broader context and limitations of this metric, as Cronbach's Alpha can be affected by several factors such as number of items, the complexity of the construct and the sample characteristics. Perceived quality is a much more complex and multifaceted when compared to other constructs, with underlying dimensions that may not be fully captured by the current scale. This perception can vary significantly depending on the context, making it more difficult to develop a universally applicable measure. Also, this construct has a high character of subjectivity since can be influenced by personal experiences and preferences. In this sense, this variable will be considered as valid for the hypothesis testing.

5. Data Analysis

5.1. Sample Characterization

The sample of this study is composed by 207 individuals who are responsible for purchasing food product at Portuguese supermarket chains for them and/or their household. Table II provides further information on participants demographics, starting off with gender, 70,0% are Female, 28,5% are Male and a minor percentage (1.0%) identify as Other(s). Based on the age distribution, the majority of the sample is between the ages of 18 and 25 (34,3%) and 26–35 age range coming in second (23,2%). Smaller proportions of respondents fall within the age ranges of 36- 45 (13,0%), 46-55 (18,8%) and over 55 (10,6%). In terms of educational background, 8,2% of participants have less than a 12th grade education, while 37,7% of participants have a Bachelor's Degree, being the most common option chosen. Furthermore, 24,2% of the population has a Master's Degree, and just 1,4% of the population has a PhD or above. When considering individual

monthly net income, 15,9% of respondents said they have no income, 13.5% make between 500 and 1000 euros, and 31,4% said they made between 1001 and 1500 euros. 7,7% make between 2001 and 2500 euros, a lower percentage (16,4%) earn between 1501 and 2000 euros, and an equal percentage earn more than 2500 euros. Just 4,8% of respondents preferred not to disclose their income. The majority of respondents shop for food products once a week (43,0%) or multiple times a week (35,3%) and just 4,8% go to the supermarket every day. Just 1,0% of individuals shop fewer than twice a month, and 15,9% shop two to three times per week. Continente (71,0%) and Pingo Doce (68,6%) are the most popular grocery chains, followed by Lidl (27,5%) and Mercadona (19,3%). Auchan (12,1%), Minipreço (4,3%), and Intermarché (4,3%) are preferred among smaller groups. When buying food products, price (54,6%), quality (45,4%) and the price-quality ratio (70,0%) are the most crucial criteria. Just 2,9% of respondents give the brand name priority- Additionally, 19,8% and 41,5% of respondents, respectively, cite brand familiarity and prior experience as other influencing factors. Furthermore, 13,0% consider all these factors important. A minor percentage of 1,0% chose the option "Other" and emphasized "Environmental Concerns" as a relevant factors while assessing food products. Finally, the top three categories chosen as more likely to prefer PL Brands over A-Brands were Biscuits (58,0%), Snacks and Chips (47,8%) and Tomato Pulp (46,9%).

Table II - Sociodemographic and Behavioural Characterization of the Sample

Indicator	Response Options	%	n
Gender	Male	28,5	59
(N=207)	Female	70,0	145
	Other (s)	1,4	3
Age	18-25	34,3	71
(N=207)	26-35	23,2	48
	36-45	13,0	27
	46-55	18,8	39
	>55	10,6	22
Highest level of education completed	Less than 12th grade	8,2	17
(N=207)	12th grade or equivalente	19,8	41
	Bachelor's Degree	37,7	78
	Postgraduate	8,7	18
	Master's Degree	24,2	50
	Phd or higher	1,4	3
Professional Situation	Student	17,4	36
(N=207)	Student – Worker	5,8	12
	Employed	57,5	119
	Self-employed	10,1	21
	Unemployed	3,9	8
	Retired	2,9	6
	Other	2,4	5
Individual monthly net income	No income	15,9	33
(N=207)	Less than 500€	2,4	5
	500€ - 1000€	13,5	28
	1001€ - 1500€	31,4	65

Indicator	Response Options	%	n
Individual monthly net income (N=207)	1501€ - 2000€	16,4	34
	2001€ - 2500€	7,7	16
	More than 2500€	7,7	16
	Prefer not to answer	4,8	10
Purchasing Frequency of food products (N=207)	Several times a week	35,3	73
	Once a week	43,0	89
	2 to 3 times a week	15,9	33
	Less than twice per month	1,0	2
Preferred Supermarket Chain (N=207)	Pingo Doce	68,6	142
	Continente	71,0	147
	Lidl	27,5	57
	Mercadona	19,3	40
	Auchan	12,1	25
	Minipreço	4,3	9
	Intermarché	4,3	9
Relevant factors for purchasing food products (N=207)	Price	54,6	113
	Brand Name	2,9	6
	Quality	45,4	94
	Quality/Price Ratio	70,0	145
	Barnd familiarity	19,8	41
	Previous brand experience	41,5	86
	All of the above	13,0	27
	Others	1,0	2
Categories Favoring PL Brands (N=207)	Cereals	43,5	90
	Coffe Capsules	23,2	48
	Biscuits	58,0	120
	Snacks/Chips	47,8	99
	Tomato Pulps	46,9	97
	Sauces	27,1	56

5.2. Descriptive Statistics of the Indices

Regarding Descriptive Statistics (Table III), it is showed that Perceived Quality (M=5,142; SD=1,371) is the index with the highest mean. On the other hand, Perceived Risk has the lowest mean index (M=2,413; SD=1,015). With a comparatively high mean (M=4,850) and the lowest standard deviation (SD=0,532), Perception of Inflation exhibits the most consistent answers. However, given their higher standard deviations (SD=1,563 and SD=1,525, respectively), Price Sensitivity and Brand Loyalty show greater variability. Appendix 5 has comprehensive information on the descriptive statistics.

Table III - Descriptive Statistics of the Indices

Indices	Minimum	Maximum	Mean ($\bar{x}$)	Standard Deviation (SD)
Perception of Inflation	1	5	4,850	0,532
Price Sensitivity	1	7	4,923	1,563
Perceived Value	1	7	4,726	1,374
Perceived Quality	1	7	5,142	1,371
Brand Loyalty	1	7	3,513	1,525
Perceived Risk	1	5	2,413	1,015

5.3. Hypothesis Testing

To examine the first two hypotheses, which followed a firm-level perspective, Nielsen data was analyzed, from 2020 until 2024, focusing on market share percentages and sales variations in both value and volume. Subsequently, multiple linear regression analyses were conducted to test hypotheses H3 to H16, with a significance level of 5%. Prior to each regression, diagnostic tests were performed to ensure adherence to the assumptions of homoscedasticity, linearity, absence of multicollinearity, autocorrelation, and a zero-mean error. Mooi and Sarstedt (2014) and Pallant (2016) provided a framework for these diagnostic checks.

5.3.1. Sales Analysis of A-Brands and PL Brands

1) Cereal Category

The present research delves deeper into two leading A-Brands, Kellogg's and Nestlé, alongside their direct PL competitors in the Portuguese cereal market. This market showed a contraction in 2020-2021 due to COVID-19 pandemic. Nonetheless, after this period, it began to slowly recover, with an evident increase in sales value.

Nestlé, owner of several familiar sub-brands at the supermarket such as Chocapic, Nesquik, Cheerios and Fitness, remained the market leader among A-Brands, with a 23,2% Share Of Market (SOM) in 2023. Despite this, its dominance has been challenged, as it experienced stagnant growth and market share losses (-5,0pp in 2022 and -2,8pp in 2023), especially within the children's segment, due to aggressive and cheaper PL competitors. Furthermore, the sales value for the first half of 2024 showed a small increase, while the volume has decreased which suggests Nestlé is keeping or slightly raising pricing to offset the decreasing sales volume. Additionally, Kellogg's has also experienced setbacks, losing market share (-2,5pp in 2022 and -1,4pp in 2023) due to performance issues and product discontinuations. Over this time frame, Kellogg's sales volume and value have decreased, with a noteworthy dip in 2023 (-4,9%), after a small surge in 2022. Current data with latest update in June 2024 points to ongoing difficulties since Kellogg's market share has been declining, reflecting the brand’s struggles in maintaining its position in the market. Meanwhile, PL brands rebounded from 2021 with a very strong sales increase, showing an increase of +19,5% in 2022 and +19,0% in 2023, reaching a share of 54,4% by the end of 2023. This trend has continued during 2024, driven by consumers increased price sensitivity and a notable rise in demand for larger value packs (1kg).

2) Tomato Pulps Category

The tomato products market is expanding steadily, with the tomato pulp category increasing from €33,6M in 2020 to €52,8M in 2023. After the retraction in volume in 2021, the market regained growth with a 5,2% increase in 2023.The Portuguese tomato pulp market is dominated by three main players, including Guloso, Compal, and PL Brands, while smaller brands like Cister, Heinz, and Mutti contribute to category innovation. Price is a differentiator for this commodity-driven market, making the first move in an important advantage.

Guloso is the Portuguese A-brand leader, increasing its sales value between 2022 and 2023, however experiencing a slight decline in market share, maintaining a 17% share. Supply chain disruption in 2022 forced this company to revise its strategy, pulling various SKUs [1]out of the market, which dampened their potential for more growth. Although Compal is the smallest company of the three, it is still growing in sales and SOM. Its pricing strategy includes a 35% lower price for liter pulp compared to Guloso in 2022, helping it gain traction but still falling behind Guloso. Ultimately, this category has been dominated by PLs since 2020, which in 2023 held a 63,3% market share. Although this increase in margin is slight, PL Brands have maintained a strong market presence due to stable prices and consistent sales.

3) Sauces Category

- Ketchup

The ketchup market in Portugal is a case study in price sensitivity, with highly competitive brands and strategic marketing playing crucial roles. This analysis provides an in-depth view of the interactions between Heinz, the global A-Brand, Calvé, a strong local player, and PL which offers value-for-money alternatives.

Since 2022, this market has expanded in both value and volume, with a 33,0% increase in value during 2023, driven primarily by price increases from brands. While in 2022 Heinz kept its share stable at 30%, the company surged +25,2% in value and +7,9% in volume in 2023, likely due to competitive pricing and effective marketing strategies. Calvé held a strong share of 35% in 2020 and through 2021, however, it dropped its share to 29,4% in 2022-2023 due to its inability to manage price increases and adapt to consumers' new desires. It was further weakened when some of its key products were delisted. After an initial decline in 2020-2021, PL ketchup brands bounced back energetically in 2022-2023 with respective surges of +40,3% and +62,2%, taking the lead in the market by capitalizing on A-Brand price increases. Overall, data explored reveals a noticeable change in market share over time. Whilst Heinz and Calvé commanded a combined share of the market (32,4%) in 2023, PLs emerged as a formidable competitor and capitalized on rising major brand prices, capturing a larger market share.

- Mayonnaise

Over the past four and a half years, the mayonnaise market in Portugal has experienced stagnation, price-driven growth, and brand migration. Key players include

[1] SKU – Stock keeping Unit

A-Brands such as Calvé, Hellmann's, and Heinz, alongside with strongly growing PL Brands. During the two-year period of 2020-2021, the market was flat, although in value it managed to see a positive result of +0,1% in 2021, reflecting that the market had reached maturity. In 2022, however, sales surged +32,4%, largely driven by price increases as manufacturers passed on rising costs to consumers. In 2024, the market continued to grow, recording a value increase of +4,6% and a volume growth of +6,5%, supported by an increase in demand for condiments. Hellmann's, after a notable growth in 2021 at +10,4%, faced one of the biggest losses in market share by 2023, showing a decrease of -4,9pp, and losing leadership to PLs. Heinz gained the most market share in 2023, benefiting from offering larger product sizes, while Calvé has constantly lost share despite its regular promotion strategies. By late 2023, PLs had gained the lead, with a +8,1pp market share increase, underlining price sensitivity among consumers and their shift to more affordable options. PL reduced promotions are also indicative of its value-led approach.

4) Snacks/Chips Category

The Portuguese snack market experienced rapid growth, reaching €204M in 2023 (an increase of 96,6% since 2020). While this category has shown clear upward trends, growth slowed from 26.5% in 2022 to 16.9% in 2023, likely due to market sensitivity and potential saturation. Lay's, the leading A-Brand, peaked in sales in 2020 and has seen incremental growth through 2023, although projected declines are expected in 2024. Pringles similarly faced fluctuations, showing a decline in 2020 followed by strong 2021 and 2022 growth due to the "Passport" SKUs. Nonetheless, unit sales declined in 2023 due to distribution constrains. Ruffles continued growing steadily, with a 7,4% increase in value during 2021 and peaking in 2022 with a growth of +28,1%. While volume data for previous years are not available, in 2023, volume decreased by -3,4%, followed by a resurgence of 16.6% growth in 2024. In 2023, the overall growth of the snack market was significantly influenced by Private Label (PL) Brands, which saw an increase of +31.7%. This reflects price hikes from A-brands that are pushing consumers towards more affordable alternatives. In terms of market share, all A-brands declined in 2023, while PL Brands gained +5.2%, indicating a shift in consumer preference towards affordable yet innovative options.

5) Biscuits Category

The following category is split into an analysis of three segments: Healthy Sweet (HSW), Healthy Salty (HS), and Traditional Treats (TT) of the Portuguese biscuit market.

The first segment is illustrated as a healthier option, normally produced with whole grains, higher fiber, or with reduced sugar. The category of HSW reported significant growth, increasing from €31,46M in 2020 to €40,33M in 2023 (+28,1%). Nevertheless, leaders such as Gullon and Belvita continued to struggle against fast-growing PL Brands. In 2020, Gullon was market leader with a market share of 33,2%, and a little behind was Belvita owing 16,8% of the market. Their evolution throughout this time frame indicates struggles with maintaining or growing consumers base as well as difficulties facing competition against PLs, which have exhibited a consistent growth of share, surpassing these brands in 2022, with 37% of share.

Regarding the HS segment, it remained relatively stable, keeping a market value of €25,74M in 2021, increasing by +10,4% to €28,42M in 2022, and growing slightly to €28,52M in 2023. Meanwhile, A-Brand Cem Porcento led this segment with a 30,4% market share in 2020 but lost -7,4 percentual points (pp) by 2023, ceding market share to PL Brands, which grew by +6,6pp. Finally, focusing on the TT segment, it is highlighted that PLs led the 2022 market with a share of 77,7% from the previous reported share of 38,9% in 2021 and reaching 80,3% by 2023. Additionally, Cuetara recovered from 3,5% in 2021 with launched successful products, catching up to 32,9% in 2022 and falling back to 15,5% in 2023 despite new innovations. On the other hand, Loacker decreased by -11,8% in 2021 and -2,3% in 2022, partly recovering in 2023 with a growth of 3,1% in the intense competition against PL products.

In conclusion, PL Brands emerged as the fastest-growing category in the Portuguese biscuit market, driven by their affordability and diverse offerings, significantly influencing consumer choices.

6) Coffee Capsules Category

Over the assessed years, the coffee market saw considerable variations in market shares among key A-Brands and PL products, alongside distinct trends whitin the market. From 2020 until 2021, the market value increased significantly, driven by the surge of PL Brands which registered an outstanding growth (+58,4%). Other major A-Brands such as L'OR and Buondi also recorded notable value gains. While many markets immediately lost sales due to the Covid-19 consequences, the coffee sector fared much better as more individuals began drinking coffee at home, since coffee shops were closed. In 2022, the market continued with exceptional performances, specifically +10,7% continued growth of PL Brands. Contrarily, some A-Brands such as Nicola and Illy registered declines. The top two A-Brands of this market are Buondi and L'OR. For Buondi, regular value growth has resulted from successful product launches and marketing activities that fulfilled the demand of the target audience. On the other hand, while L'OR started to grow in the post-COVID-19 period, Buondi's and PL products' strong competition subsequently took its toll on this A-Brand, resulting in a decline in share. By 2023, PL Brands increased their market share from 18.5% to 29.2%, indicating a substantial shift in consumer preference towards more accessible and affordable options amid ongoing economic pressures. Data through June 2024 indicate that consumers continue to gravitate towards Ps, pushing up their market share. A-Brands like Buondi managed to innovate and adapt to trends achieving an impressive growth of +30,3% in value and +35,3% in volume.

In this sense, the analysis across all categories consistently supports both hypotheses, H1 and H2. Due to the decline of customer purchasing power and heightened competition from more reasonably priced PL Brands, higher inflation rates typically resulted in lower earnings for A-Brands. Parallelly, as consumers look for more affordable options, higher inflation rates raise PL Brands' earnings and improve their market share and sales. All in all, data unequivocally demonstrates a trend in which inflationary pressures drive consumers to PL Brands, diminishing the revenues of A-Brands whilst helping PL Brands. There is an evident correlation between both brands' data sources and answers to question 4 of the conducted questionnaire that give greater emphasis to the categories of Biscuits, Snacks and Chips, Cereals and Tomato Pulp as the ones which suffer the most against PL pressure. Further values and volume sales as well as variations and market share percentages are showed in Appendix 3.

5.3.2. Relation between factors affecting consumers' brand purchasing choice and Consumer Brand Choice (A-Brands vs PL Brands)

To test the hypotheses H3, H4, H5, H6, H7 and H9, and consequently to ascertain if the independent variables affect Consumer Brand Choice (PL Brands over A-Brands), a multiple regression was performed. Appendix 6 has comprehensive details on the outcomes, including an initial examination of the assumptions required to conduct a linear regression. In this analysis, "Perception of Inflation", "Price Sensitivity", "Perceived Quality", "Perceived Value", "Brand Loyalty" and "Perceived Risk" were established as dependent variables. Findings showed that the independent variables explained roughly 31,5% of the variation in the dependent variable (Adjusted R^2 = 0,315), and that the regression model fit the data reasonably well ($F(6,200) = 16,784$; $p < 0,001$).

When the effects of each independent variable were examined, it was observed that Perceived Quality (β=0,100; p=0,129) and Perceived Risk (β=-0,020; p=0,738) were not statistically significant predictors of Consumer Brand Choice. The other variables proved to be relevant in explaining the dependent variable. Particularly, Perceived Value (β = 0,309; $p < 0,001$) demonstrated the strongest positive correlation with Consumer Brand Choice, suggesting that consumers are more likely to select PL Brands over A-Brands when Perceived Value is higher. Also, Consumer Brand Choice was found to have a negative connection with Brand Loyalty (β = -0,238; $p < 0,001$), indicating that picking PL Brands is a less likely scenario when individuals have a higher level of loyalty to A-Brands. Even though Price Sensitivity (β = 0,164; p = 0,018) and Perception of Inflation (β = -0,100; p = 0,093) showed weaker effects than Perceived Value and Brand Loyalty, they were still considered as statistically significant and predictors of Consumer Brand Choice. In conclusion, H3, H4, H5 and H7 were validated and H6 and H9 were rejected.

Table IV - Predictors of Consumer's Brand Choice

Summary of Linear Multiple Regression		Model	P-Value
Independet Variables	Perception of Inflation	-0,100***	0,093
	Price Sensivity	0,164**	0,018
	Perceived Value	0,309*	<0,001
	Perceived Quality	0,100	0,129
	Brand Loyalty	-0,238*	<0,001
	Perceived Risk	-0,020	0,738
Summary of Model	F (6, 200)	16,784*	
	Adjusted R^2	0,315	
*p≤0,001; **p≤0,05; ***p≤0,10			

5.3.3. Relation between Price Sensitivity, Perceived Risk and Brand Loyalty

To test H8 and H10, a multiple regression analysis was performed to analyze the effects of Price Sensitivity and Perceived Risk on Brand Loyalty. Appendix 7 has comprehensive details on the outcomes. The overall model was significant at $F (2, 200) = 101,350$ ($p < 0,001$), explaining 19,5% of variance in Brand Loyalty (Adjusted R^2 = 0,195). All the assessed variables are proven to be relevant in explaining the dependent variable. Price Sensitivity negatively influences Brand Loyalty (β = - 0,237; $p < 0,001$),

indicating that with increased sensitivity to variation in price, loyalty toward a brand is reduced. Contrariwise, Perceived Risk has a positive influence on Brand Loyalty (β = 0,523; $p < 0,001$), implying that the higher the perceived risk of a purchase, the more consumer loyalty will be inclined to a brand they already trust. Therefore, H8 and H10 are supported.

Table V - Predictor of Brand Loyalty

Summary of Linear Multiple Regression		Model	P-Value
Independent Variable	Price Sensivity	0,031*	<0,001
	Perceived Risk	0,045*	<0,001
Summary of Model	F (1, 205)	101,350*	
	Adjusted R^2	0,195	
p≤0,001*			

5.4.5. The Moderating Effect of Age and Income in the relationship between Perception of Inflation and Consumer's Brand Choice

To access H11, a linear regression analysis using the Macro Process tool was carried out to evaluate firstly the impact of age as a moderating factor on the selection of PL Brands over A-Brands (dependent variable) and the perception of inflation (independent variable). With only 0,5% of the total variance explained by the model, it was not considered statistically significant ($F(3, 203) = 0,360$, $p = 0,782$, $\alpha = 0,05$) suggesting that the variance in brand choice explained by perceived inflation and its interaction with age is minimal. With respect to the impact of the independent variable on the dependent one, there was no statistically significant interaction found between age and perception of inflation ($\beta = -0,095$, $t = -1,019$, $p = 0,310$, $\alpha = 0,05$) therefore, the relation between perception of inflation and consumer's brand choice is not moderated by age and consequently, the hypothesis H11a remains unconfirmed. Similarly, the model including income as a moderator only explained 2,4% of the total variation and was not statistically significant ($F(3, 203) = 1,695$, $p = 0,169$, $\alpha = 0,05$). Additionally, there was no statistically significant interaction between income and perception of inflation ($\beta = -0,122$, $t = -1,601$, $p = 0,111$, $\alpha = 0,05$) enabling the confirmation of hypothesis H11b. Appendix 8 provides a more detailed presentation of the results of this analysis.

5.4.6. The Moderating Effect of Age and Income in the relationship between Price Sensitivity and Consumer's Brand Choice

To test H12 a linear regression analysis using the Macro Process tool was carried out to evaluate the impact of age as a moderating factor on the selection of PL Brands over A-Brands (dependent variable) and Price Sensitivity (independent variable). The model explained 15,9% of the total variation and was statistically significant ($F(3, 203) = 12,755$, $p < 0,001$, $\alpha = 0,05$). However, there was no statistically significant interaction found between price sensitivity and age ($\beta = -0,077$, $t = -0,998$, $p = 0,319$, $\alpha = 0,05$). As a result, hypothesis H12a is not verified. Also, the model was statistically significant ($F(3, 203) = 12,529$, $p < 0,001$, $\alpha = 0,05$) for income as a moderator, explaining 15,6% of the total variation. Nevertheless, there was no significant interaction found between price sensitivity and income ($\beta = 0,025$, $t = 0,319$, $p = 0,750$, $\alpha = 0,05$). Consequently, the hypothesis H12b is not accepted. Appendix 9 provides a more detailed presentation of the results of this analysis.

5.4.7. The Moderating Effect of Age and Income in the relationship between Perceived Value and Consumer's Brand Choice

To test H13 a linear regression analysis using the Macro Process tool was carried out to evaluate the impact of age as a moderating factor on the selection of PL Brands over A-Brands (dependent variable) and Perceived Value (independent variable). The model explained for 24,9% of the total variance and was statistically significant ($F(3, 203) = 22{,}384$, $p < 0{,}001$, $\alpha = 0{,}05$). There was no statistically significant interaction between perceived value and age ($\beta = 0{,}127$, $t = 1{,}414$, $p = 0{,}159$, $\alpha = 0{,}05$) and as such, the hypothesis H13a is not confirmed. Regarding income as a moderator, the model was statistically significant ($F(3, 203) = 22{,}533$, $p < 0{,}001$, $\alpha = 0{,}05$), explaining 25% of the total variation. Nonetheless, there was no significant interaction between perceived value and income ($\beta = 0{,}064$, $t = 0{,}807$, $p = 0{,}421$, $\alpha = 0{,}05$), thereby, the hypothesis H13b is not accepted. Appendix 10 provides a more detailed presentation of the results of this analysis.

5.4.8. The Moderating Effect of Age and Income in the relationship between Perceived Quality and Consumer's Brand Choice

In order to access H14, a linear regression analysis using the Macro Process tool was carried out to evaluate the impact of age as a moderating factor on the selection of PL Brands over A-Brands (dependent variable) and the perception of quality (independent variable). This analysis revealed that the model was statistically significant ($F(3, 203) = 7{,}437$, $p < 0{,}001$, $\alpha = 0{,}05$), explaining 9,9% of the total variance. However, there was no statistically significant interaction found between perceived quality and age ($\beta = 0{,}113$, $t = 1{,}253$, $p = 0{,}211$, $\alpha = 0{,}05$). It follows that hypothesis H14a is unconfirmed. The model explained 11,4% of the total variation when taking income into account, and it was statistically significant ($F(3, 203) = 8{,}682$, $p < 0{,}001$, $\alpha = 0{,}05$). Nevertheless, there was no significant interaction found between perceived quality and income ($\beta = -0{,}123$, $t = -1{,}429$, $p = 0{,}154$, $\alpha = 0{,}05$). Consequently, the hypothesis H14b remains unconfirmed. Appendix 11 provides a more detailed presentation of the results of this analysis.

5.4.9. The Moderating Effect of Age and Income in the relationship between Brand Loyalty and Consumer's Brand Choice

To test H15 a linear regression analysis using the Macro Process tool was carried out to evaluate the impact of age as a moderating factor on the selection of PL Brands over A-Brands (dependent variable) and Brand Loyalty (independent variable). The model was found to be statistically significant ($F(3, 203) = 11{,}667$, $p < 0{,}001$, $\alpha = 0{,}05$), explaining 14,7% of the total variance. Yet, the interaction between age and brand loyalty ($\beta = -0{,}124$, $t = -1{,}541$, $p = 0{,}125$, $\alpha = 0{,}05$) was not statistically significant. Thus, hypothesis H15a is not confirmed. Considering income, the model explained 14,9% of the total variation and was statistically significant ($F(3, 203) = 11{,}882$, $p < 0{,}001$, $\alpha = 0{,}05$). Income and brand loyalty did not, however, interact significantly ($\beta = -0{,}107$, $t = -1{,}273$, $p = 0{,}204$, $\alpha = 0{,}05$). Consequently, the hypothesis H15b is not accepted. Appendix 12 provides a more detailed presentation of the results of this analysis.

5.4.10. The Moderating Effect of Age and Income in the relationship between Perceived Risk and Consumer's Brand Choice

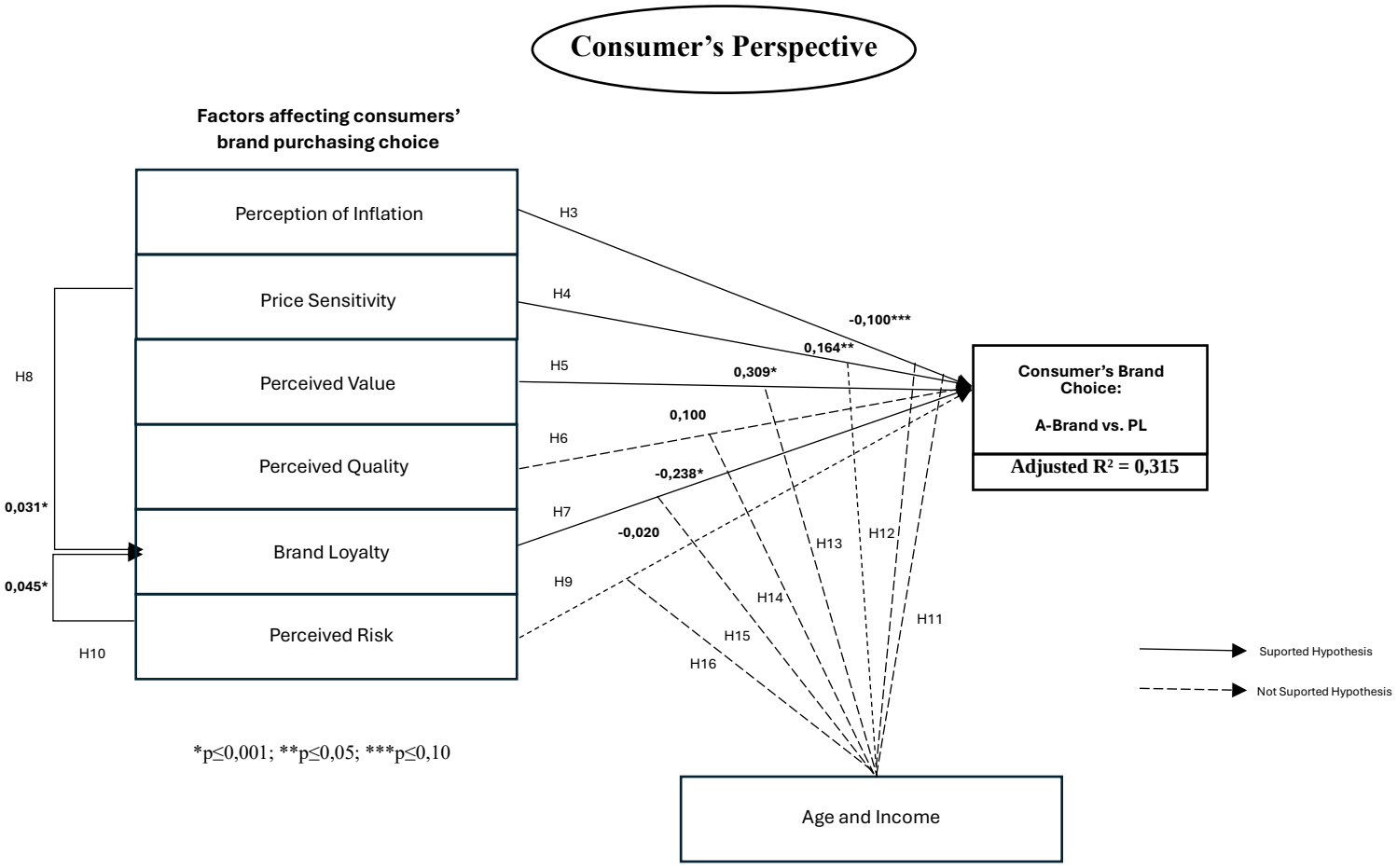
To test H16, a linear regression analysis utilizing the Macro Process tool was conducted to assess the moderating effects of age and income on the relationship between

perceived risk (independent variable) and consumer brand choice (dependent variable). The model for age as a moderator explained 2,1% of the total variation and was statistically significant (F(3,203)=1,472, P=0,223, α = 0,05). Nonetheless, no statistical significance was found between perceived risk and age (β = -0.031, t = -0.349, p = 0.728, α = 0,05). As a result, H12a is not supported. Regarding income, the model developed as a moderator explained 4,2% of the total variation as was statistically significant (F(3,203)=2,983, p=0,032, α = 0,05). However, no significant interaction was found between perceived risk and income (β = -0.106, t = -1,207, p = 0.229, α = 0,05). In this sense, H12b is rejected.

5.5. Summary of the obtained results

Figure 4 presents the conceptual model along with the standardized coefficients (β) and their significance, along with the Adjusted R^2 values for each multiple regression that was carried out.

Figure 4 - Validation of the Conceptual Model



Based on the analysis of the results, Table VI presents the validation of the hypotheses proposed in this study.

Table VI - Validation of the Research Hypotheses

Hypothesis	Description	Result
H1	Higher inflation levels lead to a decrease in A-Brand profits.	**Suported**
H2	Higher inflation levels lead to an increase in PL Brands' profits.	**Suported**
H3	Higher perception of inflation influences consumer to buy PL over A-Brand food products.	**Supported**
H4	Price sensitivity influences consumers to choose PL Brands over A-Brands.	**Suported**
H5	Consumers that perceive PL Brands to have more value than A-Brands will choose them over the other brand type.	**Suported**
H6	Consumers who perceive PL Brands to have similar or higher quality than A-brands, are more prone to purchase them over the other brand type.	**Not Suported**
H7	Brand Loyalty towards A-Brands makes consumers less prone to switching that brand for an alternative PL food product.	**Supported**
H8	Price sensitivity has a negative effect on brand loyalty towards A-Brands.	**Suported**
H9	Consumers with lower perceived risk of PL Brands are more prone to choose them over A-Brands.	**Not Supported**
H10	Brand loyalty to A-Brands decreases when perceived risk of PL Brands is low.	**Suported**
H11	The effect of perceived inflation on the choice of PL Brands over A-Brands is higher for (a) younger consumers and (b) individuals with lower income.	**Not Supported**
H12	The effect of price sensitivity on the choice of PL Brands over A-Brands is higher for (a) younger consumers and (b) individuals with lower income.	**Not Supported**
H13	The effect of perceived value on the choice of PL Brands over A-Brands is lower for (a) older Consumers and (b) individuals with lower income.	**Not Supported**
H14	The effect of perceived quality on the choice of PL Brands over A-Brands is lower for (a) older consumers and (b) individuals with lower income.	**Not Supported**
H15	The effect of brand loyalty to A-Brands on the choice of PL Brands over A-Brands is higher for (a) older consumers and (b) individuals with lower income.	**Not Supported**
H16	The effect of perceived risk to PL Brands on the choice of PL Brands over A-Brands is higher for (a) older consumers and (b) individuals with lower income.	**Not Supported**

6. Discussion and Conclusions

The two main research questions of this dissertation assess how inflation influences the revenues of Portuguese food brands and simultaneously, the brand choices of consumers, particularly when comparing A-Brands with PL Brands. For this purpose, a conceptual model was developed, based on an extensive literature review, focusing on key factors such as perception of inflation, price sensitivity, perceived value and quality, brand loyalty, and perceived risk. Moreover, related variables such as age and income, were analyzed, aiming to uncover their impact on changes in consumer behaviour. This study discusses the main conclusions in response to these issues, comparing the results with the existing literature after presenting the empirical analysis. Finally, the contributions of the study, its limitations, and suggestions for future research are discussed.

6.1 Brand Profits

Findings from the statistical analyses performed supported the proposed scenario that the inflationary environment, seen since 2021, has altered consumer behaviour towards more affordable options, favoring PL Brands and simultaneously increasing pressure on A-Brands. In several categories, A-Brands have encountered significant challenges due to rising inflation levels. For instance, in the cereal and sauces markets, leading A-Brands such as Nestlé, Kellogg's, Heinz, and Calvé are experiencing a decline both in market share and profits. This trend can be associated with their higher price points, which makes them less attractive to price-conscious customers. Therefore, the results of this study further corroborate the literature reviewed from Nielsen (2023) and IMF (2023) and highlight that higher inflation levels lead to a decrease in A-Brand profits. Parallelly to this decline, PL Brands have experienced significant growth both in profitability and market share across nearly every examined category, with greater highlight to cereals, tomato pulps, snacks and biscuits. These findings are consistent with prior literature found, particularly with Cuneo et al. (2015), who demonstrated that PL brands benefit from inflationary strains by capturing share of market and increasing sales as individuals seek for more affordable alternatives. Despite price increases, PLs continue to expand both in volume and value, suggesting their success in meeting consumer demand for cost-effective substitutable alter.

6.2. Factors affecting Consumer's Brand Choice

The present study on consumer behavior in an inflationary environment has helped achieve the second objective by offering insights into how consumers respond against rising prices and identifying the key factors and predictors influencing such decisions. In this sense, the results obtained show that perceived value is positively related and is the best predictor for consumer brand choice, emerging as the most relevant determinant in PLs purchasing decisions compared to A-Brands. These findings corroborate research by Pinto et al. (2022), showing that as long as consumers perceive PL Brands to offer better value for their money, they are more likely to choose this brand type. It is highlighted that consumers assess brand based on the benefits it offers relative to its cost, further confirming the TCV explored by Tanrikulu (2021) and Sheth et al. (1991), indicating that consumers would tend towards PL Brands over A-Brands when they perceive PL Brands as more valuable. On the same note, brand loyalty is another

critical factor in customer choice and is considered also as a high predictor of decision making, as highlighted by Pinto et al. (2022). In this sense, there is evidence to verify that the greater the brand loyalty towards A-Brands, the lower the likelihood of switching to any substitutable PL Brands. This may be attributed to deep emotional attachment and trust consumers develop with A-Brands, which can diminish the importance of price. This study also assessed whether price sensitivity weakens brand loyalty, as discussed by Hwang et al. (2021) and Calvo-Porral and Lévy Mangin (2016). The findings corroborated this idea, particularly in the context of budget constraints. As a result, it is confirmed that higher price sensitivity decreases brand loyalty towards A-Brands, therefore consumers may be more willing to switch to Private Label (PL) Brands that offer lower prices, even if they have previously been loyal to A-Brands. Furthermore, this study examined the relationship between brand loyalty and perceived risk. Results also demonstrated a positive link between these two factors indicating that consumers' tendency to stick with A-brands diminishes when PLs are perceived as to carry less risk. The increased transparency and improved perceptions of PLs can perhaps create a sense of security for consumers. Consequently, the perceived lower risk associated with PL Brands encourages consumers to explore alternatives, thereby eroding brand loyalty toward A-Brands.

Additionally, prior research of Scholdra et al. (2022), Arioli et al. (2016), and Tulwin (2014), stated that higher perception of inflation should lead to a higher preference for PLs. This study found that this perception can influence consumer brand choice, however its impact is less substantial when compared to other factors such as Perceived Value and Brand Loyalty. Although inflation's influence on decision-making remains strong, it is perhaps overshadowed by these two more dominant factors, which consistently drive consumer choices. Similarly, Price Sensitivity was confirmed as a significant factor influencing consumer brand choice, in line with prior research developed by Van Loo et al. (2021). Consumers who are more sensitive to price changes are more likely to consider PL Brands as an alternative to A-Brands, especially in times of economic pressure. However, while Price Sensitivity also remains as an important predictor, its influence is not as strong as Perceived Value or Brand Loyalty. This suggests that while price remains a consideration, consumers may increasingly prioritize perceived value, making decisions based not solely on price but on the overall benefit they perceive from a brand. These findings indicate that consumers nowadays are more knowledgeable and discerning regarding food options, evaluating brands based on a steady balance between price and value, quality and loyalty, emphasizing a shift from purely price-driven decisions that previous literature suggests (Van Loo et al., 2021).

Moreover, it was concluded that Perceived Quality alone does not significantly influence the preference for PL Brands over A-Brands since results does not show a substantial effect on purchasing decision making and further denies Brochado et al. (2015) assessments priorly mentioned. This can be linked to the examined economic pressures that further intensifies the gap of prices between A-Brands and PLs, making it impossible for some consumers to fully satisfy their quality desires and shifting their focus into perhaps perceived quality as a way to get the best value for money in their purchases. Perceived risk, cannot also be considered a predictor of consumer brand choice, suggesting that there is no significant correlation between consumers' decisions

to purchase A-Brands or PL Brands and their perception of risk associated mainly with PLs. Consequently, it is impossible to support literature presented by Pinto et al. (2022) and Calvo-Porral and Lévy Mangin (2016), which underlined that a lower perceived risk of PL Brands enhances the likelihood of choosing PL Brands over A-Brands. Perceived Risk was the weakest predictor of consumer purchasing decisions. This perhaps can be attributed to the fact that more information is available to consumers, especially through online reviews. These sources make them more aware of the characteristics of a product and performance, reducing thereby the chances of disappointment or dissatisfaction. This awareness can boost consumers desire to try more frequently unknown products that offer a better price point.

Lastly, it was possible to underscore that the link between perceived inflation, price sensitivity, perceived value, perceived quality, brand loyalty, and perceived risk in affecting the decision between PL and A-brands is not significantly moderated by age or income. These findings also go against studies by Hayo and Neumeier (2022), Gündüz et al. (2020), and Quaiyyum and Udoy (2021), whose hypothesis state that during periods of inflation, socioeconomic characteristics such as age and income might have an impact on brand preferences and the sensitivity to price changes. The results of this study also contrasted with literature developed by Kahneman and Tversky (1979) arguing that people with lower incomes might consider inflation in another dimension and, therefore, may be more sensitive to price increases. Furthermore, it was discovered that the association between perceived value, perceived quality, brand loyalty and perceived risk is not significantly moderated by age or income, in contrast to the findings of Mehra and Singh (2016) and Singh and Kathuria (2016). That would imply that age and income have a lower influence level on brand purchasing choices rather than overall value and quality perceptions. The lack of correlation can perhaps be rationalized on the basis that there is increasing homogenization of consumer choices across groups based on age and income since technology, globalization, and media have brought about a single consumer culture which reduces the influence of traditional demographic variables in influencing purchase decisions.

6.3 Theoretical Contributions

On an academic level, this dissertation contributes to literature regarding the growing rivalry between A-Brands and PL Brands, examining both firm and consumer perspectives within a specific time frame marked by macroeconomic oscillations. It analyzes the potential predictors of consumer brand choice in food products. Previous studies have identified key variables which directly affect consumers' perceptions and decision-making regarding food brand choices, mainly assessing price, quality and brand loyalty to A-Brands and comparing it with PL Brands. However, it is crucial to stand out that this research delves deeper through incorporating additional constructs, specifically the linkage with sociodemographic characteristics as a moderating effect as well as targeting a country and its economic situation over a defined period. Additionally, this study differentiates itself by providing empirical evidence of A-Brands and PL Brands' revenues (2020-2024), including variations of sales both in value and volume. The objective is to compare the profitability of these types of brands across different categories and to forecast future behavioural trends. Even though some assessed factor, such as perceived quality, perceived risk, age, and income did not show the anticipated

correlations with brand choice, findings enabled to conclude that perceived value is considered to the most relevant and impacting factor in consumer's mind while deciding between A-Brands and PL Brands, during inflationary periods.

6.4 Practical Contributions

This dissertation is particularly relevant in the current context of inflation and economic pressures, which are reconfiguring consumer behavior and testing market dynamics. It has become imperative for companies operating with A-Brands to re-think their strategies in order to survive in a highly competitive environment where PLs are gaining substantial ground. Historically, quality and brand awareness have been strong pillars of consumer loyalty towards A-Brands, however, the effect of inflation is now much more visible and long-lasting, and consumers are resorting to cheaper options. Consequently, this requires for A-Brands to devise innovative tactics to sustain their consumers. This study shows evidence that A-Brands need to reevaluate their pricing and marketing strategies in order to provide consumers with high-quality products and perceived value, which will help them make decisions in situations where price sensitivity is higher. Therefore, whilst reevaluating their market offerings, A-Brand companies should prioritize adding value above and beyond price and to stop the decline in customer loyalty. They could consider introducing value-oriented product lines or stepping up their promotional efforts. It is also essential for A-Brands to assure the investments in transparent communication regarding their selling points in order to maintain the high caliber and confidence that customers have in the brand. Furthermore, this context offers PL Brands a huge strategic advantage. These brands, who have already seen an increase in market share, ought to keep raising the bar on quality and broadening their product choices in order to draw in customers who would typically choose A-Brands. PLs should, in the long run, cultivate value perception that transforms a temporary choice into a long-lasting preference. In this regard, the findings of the dissertation also yield managers of PL and A-Brands with empirical evidence to adjust their marketing strategies to the evolving consumer behavior. PL Brands must seize the advantage to seal and solidify their position in the market, while A-Brands should seek innovative approaches to retain customer loyalty. Thus, both types of brands can thrive with the shifting economic situation in addition to surviving.

6.5 Study Limitations and Suggestions for Future Research

Given time and financial restrictions, this research study faces certain limitations. Firstly, future research must take into consideration that results cannot be generalized since the sampling used was a non-probability convenience sample, which may not be representative of the population at large. This could introduce biases in the sampling method, especially since the sample is predominantly characterized by certain age range (18-25) and socioeconomic backgrounds (bachelor's degree). To improve the generalizability of the results, it would be beneficial to employ a probability sampling technique in subsequent research. This could provide marketers with a much stronger basis to develop marketing programs that could respond more effectively to niche markets. Additionally, the study's reliance on simple statistical methods, such as multiple linear regression, limited the depth of data analysis. The inability to utilize advanced techniques, like structural equation modeling, restricts insights into the relationships between variables, especially regarding consumer behavior in inflationary contexts.

Moreover, the focus on quantitative methods limits understanding; incorporating qualitative approaches could yield richer insights into consumer perceptions and motivations related to A-Brands and PL Brands during inflation. Finally, findings are also restricted to the particular historical context of high inflation and rapid economic change in which it was carried out. Future investigations ought to take into account the remake of this study in several economic environments to confirm the validity of results found. To further enhance marketing strategies and comprehension of market dynamics, it is essential to continue investigation in this area given the critical role that consumer behavior for several companies. It would be intriguing to investigate in greater detail the variables that impact consumers' assessments of the value of PL and A-Brands in inflationary times by examining the ways in which various components, such value communication, pricing positioning and promotional practices influence perceptions of brands. This analysis could gather useful information that businesses can use to modify their approach. Also, to confirm how customer behavior changes, future study could also consider comparative analysis across other market sectors and other product categories. For instance, comparing luxury or discretionary products to staple product categories and seeing how consumers respond to PL vs. A-Brands could provide crucial information for personalizing strategies. Another promising area of research would be the to examine how technology advancements and digitalization affect consumers' decisions between A-Brands and PL Brands. With the rise in e-commerce and the simplicity with which prices can be compared, it is critical to comprehend the ways in which these platforms affect price sensitivity and brand loyalty in various economic environments. Lastly, another good suggestion would be to carry out longitudinal research, which tracks the views and actions of customers over an extended period of time, particularly in reaction to changes in the economy and different inflation levels. Such research could be used to spot new trends and modify company plans in response to changing circumstances and meet new challenges. Overall, these future research directions will not only deepen academic understanding of consumer behavior during periods of inflation but also offer practical guidance for companies to remain competitive in a constantly changing market environment.

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Appendices

Appendix 1 - Online Questionnaire

Português

O questionário que se segue faz parte da minha Dissertação de Mestrado em Gestão e Estratégia Industrial no ISEG - Instituto Superior de Economia e Gestão da Universidade de Lisboa, que pretende avaliar de que forma a inflação, conjugada com outros fatores, afetam o comportamento do consumidor na escolha entre produtos alimentares de Marca de Fabricante e Marca Branca.

O objetivo deste estudo é exclusivamente académico e a confidencialidade e o anonimato dos dados estão assegurados. Não existem respostas corretas ou incorretas, pedindo-se apenas que responda com a maior honestidade e sinceridade possível.

O preenchimento do questionário demora cerca de 9 minutos. Se tiver alguma dúvida sobre o estudo ou o questionário, não hesite em contactar-me através do e-mail l58682@ain.iseg.ulisboa.pt.

Agradeço desde já a sua colaboração, sendo esta muito importante para o desenvolvimento deste estudo.

Mariana Pereira

- ○ Aceito participar no questionario
- ○ Não aceito participar no questionário

1 – Filtering Question

Q1. No sector alimentar Português, uma Marca de Fabricante consiste numa marca de produtos alimentares detidos e vendidos por empresas de renome, muitas vezes bem estabelecidas no mercado. Em contrapartida, o termo Marca Própria/Branca refere-se a qualquer artigo que seja propriedade exclusiva de um retalhista.

É responsável por tomar decisões de compras de supermercado para si ou para o seu agregado familiar?

- ○ Sim
- ○ Não

2 – Population Characterization

Q2. Quando vai às compras de produtos alimentares, qual é a cadeia de supermercados onde costuma comprar mais?
Selecione a(s) opções que mais se adequam.

- ☐ Pingo Doce
- ☐ Continente
- ☐ Lidl
- ☐ Mercadona
- ☐ Auchan
- ☐ Minipreço
- ☐ Intermarché

Q3. Com que frequência compra produtos alimentares para si ou para o seu agregado familiar numa cadeia de supermercados?

- ○ Diariamente
- ○ Várias vezes por semana
- ○ 1 vez por semana
- ○ 2 a 3 vezes por mês
- ○ Menos de 2 vezes por mês

Q4. Em qual/quais das seguintes categorias acha que é mais provável escolher um produto de Marca Branca do que um de Marca de Fabricante?
Selecione a(s) opções que mais se adequam.

- ☐ Cereais
- ☐ Café
- ☐ Bolachas
- ☐ Batatas Fritas
- ☐ Polpa de Tomate
- ☐ Molhos

Q5. Ao comprar produtos alimentares de ambos os tipos de marcas, quais são os fatores mais relevantes para si?
Selecione a(s) opções que mais se adequam.

- ☐ Preço
- ☐ Nome da marca
- ☐ Qualidade
- ☐ Relação qualidade/preço
- ☐ Familiaridade com a marca
- ☐ Experiência anterior com a marca
- ☐ Todas as anteriores
- ☐ Outros. Quais? _____

3 - Consumer's Brand Choice (PL Brands over A-Brands)

Q6. Indique o seu grau de concordância com cada uma das afirmações abaixo:

	Discordo totalmente	Discordo parcialmente	Nem concordo nem discordo	Concordo parcialmente	Concordo totalmente
1. Para a maior parte das categorias de produto, atualmente escolho mais marcas brancas do que marcas de fabricante.	○	○	○	○	○
2. Para a categoria de cereais, atualmente escolho mais marcas brancas do que marcas de fabricante.	○	○	○	○	○
3. Para a categoria de café, atualmente escolho mais marcas brancas do que marcas de fabricante.	○	○	○	○	○
4. Para a categoria de bolachas, atualmente escolho mais marcas brancas do que marcas de fabricante.	○	○	○	○	○
5. Para a categoria de batatas fritas, atualmente escolho mais marcas brancas do que marcas de fabricante.	○	○	○	○	○
6. Para a categoria de polpas de tomate, atualmente escolho mais marcas brancas do que marcas de fabricante.	○	○	○	○	○

4 – Perception of Inflation

Q7. Como acha que os preços dos produtos alimentares estão atualmente em comparação há 2/3 anos atrás?

- ○ Diminuíram significativamente
- ○ Diminuíram um pouco
- ○ Permaneceram mais ou menos na mesma
- ○ Aumentaram um pouco
- ○ Aumentaram significativamente

5 – Price Sensitivity

Q8. Indique o seu grau de concordância com cada uma das afirmações abaixo:

	Discordo totalmente	Discordo	Discordo parcialmente	Nem concordo nem discordo	Concordo parcialmente	Concordo	Concordo totalmente
1. Tenho tendência a comprar a marca mais barata que satisfaça as minhas necessidades.	○	○	○	○	○	○	○
2. Quando vou às compras, procuro sempre pela marca mais barata disponível.	○	○	○	○	○	○	○
3. No que diz respeito à compra de produtos alimentares de marca, o preço é um fator muito importante para mim.	○	○	○	○	○	○	○
4. O preço é o fator mais importante quando escolho uma marca de um produto alimentar.	○	○	○	○	○	○	○

6 – Perceived Value

Q9. Indique o seu grau de concordância com cada uma das afirmações abaixo:

	Discordo totalmente	Discordo	Discordo parcialmente	Nem concordo nem discordo	Concordo parcialmente	Concordo	Concordo totalmente
1. Gosto quando existem Marcas Brancas disponíveis para as categorias de produtos que compro.	○	○	○	○	○	○	○
2. Comprar Marcas Brancas deixa-me satisfeito (a).	○	○	○	○	○	○	○
3. Para a maioria das categorias de produto, a melhor compra costuma ser a Marca Branca.	○	○	○	○	○	○	○
4. Quando compro uma Marca Branca, sinto sempre que estou a fazer um bom negócio.	○	○	○	○	○	○	○
5. Tendo em conta o valor pelo dinheiro, prefiro Marcas Brancas a Marcas de Fabricante.	○	○	○	○	○	○	○

7 – Perceived Quality

Q10. Indique o seu grau de concordância com cada uma das afirmações abaixo:

	Discordo totalmente	Discordo	Discordo parcialmente	Nem concordo nem discordo	Concordo parcialmente	Concordo	Concordo totalmente
1. Em certas categorias, as Marcas Brancas são marcas de alta qualidade.	○	○	○	○	○	○	○
2. Em certas categorias, as Marcas Brancas têm qualidade inferior em comparação a Marcas de Fabricante.	○	○	○	○	○	○	○
3. Acredito que, em certas categorias, as Marcas Brancas não oferecem muita qualidade.	○	○	○	○	○	○	○
4. Em certas categorias, as Marcas Brancas oferecem um nível de qualidade muito semelhante ao das Marcas de Fabricante.	○	○	○	○	○	○	○

7 – Brand Loyalty

Q11. Indique o seu grau de concordância com cada uma das afirmações abaixo:

	Discordo totalmente	Discordo	Discordo parcialmente	Não concordo nem discordo	Concordo parcialmente	Concordo	Concordo totalmente
1. Considero-me leal a produtos alimentares de Marca de Fabricante.	○	○	○	○	○	○	○
2. Marcas de Fabricante são sempre a minha primeira escolha para produtos alimentares.	○	○	○	○	○	○	○
3. Não compraria outras marcas de produtos alimentares se as Marcas de Fabricante não estivessem disponíveis em loja.	○	○	○	○	○	○	○
4. Estou disposto (a) a pagar um preço mais alto por uma Marca de Fabricante do que pagaria por outras marcas.	○	○	○	○	○	○	○

8 – Perceived Risk

Q12. Indique o seu grau de concordância com cada uma das afirmações abaixo:

	Discordo totalmente	Discordo parcialmente	Nem concordo nem discordo	Concordo parcialmente	Concordo totalmente
1. A qualidade dos produtos alimentares de Marca Branca é discutível.	○	○	○	○	○
2. Os ingredientes usados no fabrico de produtos alimentares de Marca Branca são questionáveis.	○	○	○	○	○
3. Comprar produtos de Marca Branca não vale o dinheiro gasto.	○	○	○	○	○
4. Comprar produtos de Marca Branca não é uma forma sensata de gastar dinheiro em produtos alimentares.	○	○	○	○	○

9 – Sociodemographic Conditions

Q13. Género:

- ○ Homem
- ○ Mulher
- ○ Outro(s)

Q14. Idade:

- ○ 18-25
- ○ 26-35
- ○ 36-45
- ○ 46-55
- ○ > 55

Q15. Nível de ensino (nível de ensino mais elevado concluído):

- ○ Menos de 12° ano
- ○ 12° ano ou equivalente
- ○ Bacharelato ou Licenciatura
- ○ Diploma de pós-graduação
- ○ Mestrado
- ○ Doutoramento ou superior

Q16. Situação professional:

- ○ Estudante
- ○ Estudante-trabalhador
- ○ Empregado por conta de outrém
- ○ Trabalhador independente
- ○ Desempregado
- ○ Reformado
- ○ Outro

Q17. Rendimento Líquido mensal individual:

- ○ Sem rendimentos
- ○ Inferior a 500 euros
- ○ €500 - €1000
- ○ €1001 - 1500€
- ○ €1501 - 2000€
- ○ €2001 - 2500€
- ○ Mais do que 2500 euros
- ○ Prefiro não responder

Appendix 2 – Constructs' Measurement Scale

Construct	Dimension	Original Items	Adapted Items	Authors	Scale
Perception of Inflation		1.How do you think that prices are today compared to one year ago?	1.How do you think prices are today compared to 2/3 years ago?	(Abildgren & Kuchler, 2021)	Likert scale (1= a little lower and 5= much higher)
Price Sensitivity		1.I tend to buy the lowest-priced brand of category that will fit my needs. 2.When buying a brand of category, I look for the cheapest brand available. 3.When it comes to buying category, I rely heavily on price. 4.Price is the most important factor when I am choosing a brand of category	1.I tend to buy the lowest-priced brand that will fit my needs. 2.When buying a brand, I look for the cheapest brand available. 3.When it comes to buying food brand products, I rely heavily on price. 4.Price is the most important factor when I am choosing a brand of food products.	(Sinha, I & Batra, R., 1999)	Likert scale (1=totally disagree and 7= totally agree)
Perceived Value	Value for money	1. I love it when private label brands are available for the product categories I purchase. 2. Buying private label brands make me feel good. 3. For most product categories, the best buy is usually the private label brand. 4. When I buy a private label brand, I always feel that I am getting a good deal. 5. Considering value for the money, I prefer private label brands to national brands.	1. I love it when private label brands are available for the product categories I purchase. 2. Buying private label brands make me feel good. 3. For most product categories, the best buy is usually the private label brand. 4. When I buy a private label brand, I always feel that I am getting a good deal. 5. Considering value for the money, I prefer private label brands to national brands.	(Aykaç & Yılmaz, 2019)	Likert scale (1= strongly disagree and 7= totally agree)
Perceived Quality		1. Store brands of category are of high quality 2. With respect to category, private label's are inferior to national brands (R) 3. I doubt that store brands of category are a very high-grade product (R) 4.Private label brands of category are similar in quality to national brands	1. PL Brands are of high quality. 2. PL Brands are of inferior quality when compared to A-Brands. (R) 3. I believe that PL Brands do not offer very high quality (R) 4. PL Brands offer a very similar level of quality when compared to A-Brands.	(DelVecchio, D., 2001)	Likert scale (1=totally disagree and 7= totally agree)

Brand Loyalty	1. I consider myself loyal to Kellogg's breakfast cereal. 2. Kellogg's would be my first choice of breakfast cereal. 3. I would not buy other brands if Kellogg's is available at the store. 4. I am willing to pay a higher price for Kellogg's than I would for other brands.	1. I consider myself loyal to A-Brands food products. 2. A- Brands would be my first choice for food products. 3. I would not buy other food brands if A-Brands are not available at the store. 4. I am willing to pay a higher price for an A-Brand than I would for other brands.	(Beneke and Carter, 2015)	Likert scale (1=totally disagree and 7= totally agree)
Perceived Risk	1. The quality of this merchandise is suspicious. 2. The ingredients used in the manufacturing of these products are suspicious. 3. Buying this merchandise is not worth the money spent. Buying this merchandise is not a wise way to spend one's money.	1. The quality of PL food products is suspicious. 2. The ingredients used in the manufacturing of these products are suspicious. 3. Buying PL products is not worth the money spent. Buying PL products is not a wise way to spend one's money.	(Beneke and Carter, 2015)	Likert scale (1=totally disagree and 5= totally agree)

Appendix 3 – Sales Value and Sales Volume of Portugals' Top A-Brands vs PL Brands

Snacks and Chips Category

TOTAL MARKET VALUE (€)	FY 2020	FY 2021	% Var 21 vs. 20 Valor	% Var 21 vs. 20 Volume	FY 2022	% Var 22 vs. 21 Valor	% Var 22 vs. 21 Volume	FY 2023	% Var 23 vs. 22 Valor	% Var 23 vs. 22 Volume	YTD'23	YTD'24	% Var YTD'24 vs YTD'23 Valor	% Var YTD'24 vs YTD'23 Volume
CHEETOS	5 330 689	6 478 513	21,5%		10 371 128	27,9%		11 656 492	12,4%	-7,8%	6 036 212	6 044 950	0,1%	-3,7%
DORITOS	5 785 452	6 207 030	7,3%		9 626 458	24,1%		10 176 157	5,7%	-13,5%	5 503 989	5 175 661	-6,0%	-8,9%
PRINGLES	6 696 028	7 465 751	11,5%		11 169 377	29,4%		12 493 017	**11,9%**	**-2,3%**	6 853 918	6 882 076	0,4%	**-7,2%**
RUFFLES	9 684 323	10 405 659	7,4%		16 753 035	28,1%		18 101 220	**8,0%**	**-3,4%**	9 169 016	10 035 212	9,4%	**16,6%**
OTHER BRANDS	18 240 538	18 230 982	-0,1%		24 197 843	7,5%		25 156 753	4,0%	-13,6%	12 604 766	13 616 165	8,0%	1,1%
LAY'S	23 147 507	23 079 688	-0,3%		30 722 081	12,0%		31 899 165	**3,8%**	**-7,1%**	16 639 575	16 605 814	-0,2%	**2,8%**
PRIVATE LABEL	39 339 607	44 657 411	13,5%		72 215 727	41,9%		95 080 209	**31,7%**	**14,9%**	58 603 965	65 651 296	12,0%	**8,7%**
TOTAL CHIPS & SNACKS	**108 224 144**	**116 525 034**	**7,7%**		**175 055 649**	**26,5%**		**204 563 012**	**16,9%**	**4,3%**	**115 411 442**	**124 011 175**	**7,5%**	**6,4%**

MS	2020	2021	Var 21 vs 20	2022	Var 22 vs 21	2023	Var 23 vs 22
CHEETOS	4,9%	5,6%	0,6%	5,9%	0,4%	5,7%	-0,2%
DORITOS	5,3%	5,3%	0,0%	5,5%	0,2%	5,0%	-0,5%
PRINGLES	6,2%	6,4%	**0,2%**	6,4%	**0,0%**	6,1%	**-0,3%**
RUFFLES	8,9%	8,9%	**0,0%**	9,6%	**0,6%**	8,8%	**-0,7%**
OTHER BRANDS	16,9%	15,6%	-1,2%	13,8%	-1,8%	12,3%	-1,5%
LAY'S	21,4%	19,8%	**-1,6%**	17,5%	**-2,3%**	15,6%	**-2,0%**
PRIVATE LABEL	36,4%	38,3%	**2,0%**	41,3%	**2,9%**	46,5%	**5,2%**

Cereal Category

TOTAL MARKET VALUE (€)	FY 2020	FY 2021	% Var 21 vs. 20 Valor	% Var 21 vs. 20 Volume	FY 2022	% Var 22 vs. 21 Valor	% Var 22 vs. 21 Volume	FY 2023	% Var 23 vs. 22 Valor	% Var 23 vs. 22 Volume	YTD'23	YTD'24	% Var YTD'24 vs YTD'23 Valor	% Var YTD'24 vs YTD'23 Volume
PRIVATE LABEL	35 195	34 961	-0,7%	-3,0%	56 503	19,5%	2,2%	67 247	19,0%	4,9%	35 166	35 758	1,7%	7,0%
NESTLÉ	28 293	26 697	-5,6%	-8,0%	28 789	-1,0%	-10,1%	28 631	-0,5%	-8,6%	15 125	15 678	3,7%	-2,7%
KELLOGG'S	10 660	10 197	-4,3%	-3,0%	10 363	0,8%	-3,6%	9 856	-4,9%	-22,3%	5 707	5 061	-11,3%	-27,7%
CEREALIS	3 481	3 409	-2,1%	-5,0%	3 445	1,2%	-6,4%	5 309	54,1%	47,3%	2 979	3 057	2,6%	2,1%
IGNORAMUS	2 987	3 063	2,5%	2,0%	3 314	7,0%	0,2%	3 799	14,6%	3,2%	2 044	2 215	8,4%	10,6%
TOTAL CEREALS	**88 278**	**86 073**	**-2,5%**	**-4,0%**	**110 745**	**8,1%**	**-2,1%**	**123 556**	**11,6%**	**1,3%**	**66 299**	**67 033**	**1,1%**	**2,4%**

MS	2020	2021	Var 21 vs 20	2022	Var 22 vs 21	2023	Var 23 vs 22
PRIVATE LABEL	39,9%	40,6%	**0,7%**	51,0%	**10,4%**	54,4%	**3,4%**
NESTLÉ	32,0%	31,0%	**-1,0%**	26,0%	**-5,0%**	23,2%	**-2,8%**
KELLOGG'S	12,1%	11,8%	**-0,2%**	9,4%	**-2,5%**	8,0%	**-1,4%**
CEREALIS	3,9%	4,0%	0,0%	3,1%	-0,8%	4,3%	1,2%
IGNORAMUS	3,4%	3,6%	0,2%	3,0%	-0,6%	3,1%	0,1%

Appendix 3 – Sales Value and Sales Volume of Portugals' Top A-Brands vs PL Brands

Biscuits Category

TOTAL MARKET VALUE (€)	FY 2020	FY 2021	% Var 21 vs. 20 Valor	% Var 21 vs. 20 Volume	FY 2022	% Var 22 vs. 21 Valor	% Var 22 vs. 21 Volume	FY 2023	% Var 23 vs. 22 Valor	% Var 23 vs. 22 Volume	YTD'23	YTD'24	% Var YTD'24 vs YTD'23 Valor	% Var YTD'24 vs YTD'23 Volume
Healthy Sweet	**31 458 106**	**31 786 683**	1,0%		**37 152 424**	16,9%	-1,7%	**40 331 807**	8,6%	-1,7%	**20 890 844**	**22 213 601**	6,3%	7,3%
PRIVATE LABEL	6 734 832	7 817 612	16,1%		13 736 236	75,7%	14,6%	17 559 016	27,8%	14,6%	8 965 672	9 819 123	9,5%	12,6%
GULLON	10 430 087	10 435 091	0,0%		11 666 845	11,8%	-8,7%	12 183 614	4,4%	-8,7%	6 397 105	7 347 069	14,8%	10,3%
TRIUNFO	3 117 853	3 393 959	8,9%		3 906 730	15,1%	-16,1%	3 923 108	0,4%	-43,3%	2 013 926	1 839 808	-8,6%	-8,9%
BELVITA	5 272 695	4 483 737	-15,0%		5 200 766	16,0%	-43,3%	3 816 490	-26,6%	-16,1%	1 995 063	1 541 519	-22,7%	-3,4%
MC.VITIES	2 161 138	2 295 725	6,2%		2 641 848	15,1%	-12,8%	2 849 579	7,9%	-12,8%	1 519 078	1 666 081	9,7%	-27,7%
Healthy Salty	**25 774 980**	**25 743 456**	-0,1%		**28 422 142**	10,4%	-5,9%	**28 520 003**	0,3%	-5,9%	**15 023 249**	**14 386 489**	-4,2%	-2,5%
PRIVATE LABEL	7 512 251	7 056 284	-6,1%		10 851 911	53,8%	2,4%	12 768 289	17,7%	2,4%	6 537 263	6 595 693	0,9%	1,0%
CEM.PORCENTO	7 834 292	7 846 504	0,2%		9 560 656	21,8%	-26,4%	7 475 088	-21,8%	-26,4%	4 127 648	3 639 699	-11,8%	-11,4%
GRAN PAVESI	3 378 631	3 456 852	2,3%		4 389 107	27,0%	-14,4%	4 564 123	4,0%	-14,4%	2 430 879	2 394 491	-1,5%	-6,8%
VIEIRA	2 698 682	2 458 904	-8,9%		2 666 394	8,4%	-8,4%	2 791 028	4,7%	-8,4%	1 474 635	1 274 070	-13,6%	-15,7%
JACOB.S	500 361	461 492	-7,8%		536 775	16,3%	-29,8%	520 359	-3,1%	-29,8%	260 323	294 147	13,0%	14,0%
CARR.S	494 083	479 381	-3,0%		417 299	-13,0%	-24,9%	401 117	-3,9%	-24,9%	192 501	188 389	-2,1%	-4,4%
Treat Traditional	**30 073 474**	**30 589 304**	1,7%		**26 148 160**	-14,5%	14,2%	**33 366 604**	27,6%	17,7%	**16 418 574**	**17 702 259**	7,8%	5,2%
PRIVATE LABEL	11 465 778	11 891 128	3,7%		20 315 762	70,8%	22,2%	26 793 284	31,9%	21,6%	13 238 768	14 289 571	7,9%	5,2%
CUETARA	2 019 522	1 948 748	-3,5%		2 589 141	32,9%	26,8%	2 989 652	15,5%	-4,7%	1 454 177	1 576 581	8,4%	2,8%
LOACKER	1 444 686	1 274 006	-11,8%		1 244 505	-2,3%	-3,5%	1 282 464	3,1%	-5,2%	661 445	611 679	-7,5%	-10,7%
NACIONAL	775 529	699 193	-9,8%		779 673	11,5%	10,7%	820 035	5,2%	-5,5%	412 126	480 728	16,6%	21,9%
ANNA.S	276 628	229 333	-17,1%		346 563	51,1%	7,2%	646 033	86,4%	53,4%	268 043	349 586	30,4%	23,1%
DAILIDOCE	208 352	204 295	-1,9%		594 835	191,2%	91,0%	586 143	-1,5%	-5,4%	269 931	277 248	2,7%	1,8%
LOTUS	194 645	214 113	10,0%		277 680	29,7%	55,5%	248 992	-10,3%	-34,7%	114 085	116 866	2,4%	2,8%

	MS	2020	2021	Var 21 vs 20	2022	Var 22 vs 21	2023	Var 23 vs 22
HSW	**PRIVATE LABEL**	21,4%	24,6%	3,2%	37,0%	12,4%	43,5%	6,6%
	GULLON	33,2%	32,8%	-0,3%	31,4%	-1,4%	30,2%	-1,2%
	TRIUNFO	9,9%	10,7%	0,8%	10,5%	-0,2%	9,7%	-0,8%
	BELVITA	16,8%	14,1%	-2,7%	14,0%	-0,1%	9,5%	-4,5%
	MC.VITIES	6,9%	7,2%	0,4%	7,1%	-0,1%	7,1%	0,0%
HS	**PRIVATE LABEL**	29,1%	27,4%	-1,7%	38,2%	10,8%	44,8%	6,6%
	CEM.PORCENTO	30,4%	30,5%	0,1%	33,6%	3,2%	26,2%	-7,4%
	GRAN PAVESI	13,1%	13,4%	0,3%	15,4%	2,0%	16,0%	0,6%
	VIEIRA	10,5%	9,6%	-0,9%	9,4%	-0,2%	9,8%	0,4%
	JACOB.S	1,9%	1,8%	-0,1%	1,9%	0,1%	1,8%	-0,1%
	CARR.S	1,9%	1,9%	-0,1%	1,5%	-0,4%	1,4%	-0,1%
TT	**PRIVATE LABEL**	38,1%	38,9%	0,7%	77,7%	38,8%	80,3%	2,6%
	CUETARA	6,7%	6,4%	-0,3%	9,9%	3,5%	9,0%	-0,9%
	LOACKER	4,8%	4,2%	-0,6%	4,8%	0,6%	3,8%	-0,9%
	NACIONAL	2,6%	2,3%	-0,3%	3,0%	0,7%	2,5%	-0,5%
	ANNA.S	0,9%	0,7%	-0,2%	1,3%	0,6%	1,9%	0,6%
	DAILIDOCE	0,7%	0,7%	0,0%	2,3%	1,6%	1,8%	-0,5%
	LOTUS	0,6%	0,7%	0,1%	1,1%	0,4%	0,7%	-0,3%

Tomato Pulp Category

TOTAL MARKET VALUE (€)	FY 2020	FY 2021	% Var 21 vs. 20 Valor	% Var 21 vs. 20 Volume	FY 2022	% Var 22 vs. 21 Valor	% Var 22 vs. 21 Volume	FY 2023	% Var 23 vs. 22 Valor	% Var 23 vs. 22 Volume	YTD'23	YTD'24	% Var YTD'24 vs YTD'23 Valor	% Var YTD'24 vs YTD'23 Volume
GULOSO	5 895	5 815	-1,4%	-2,2%	6 782	16,6%	5,4%	8 911	31,3%	0,8%	3 931	4 626	17,7%	27,9%
COMPAL	3 409	3 341	-2,0%	-0,9%	4 329	29,6%	16,5%	6 373	46,6%	8,3%	2 784	3 116	11,9%	1,4%
PRIVATE LABEL	21 043	20 560	-2,3%	-7,5%	24 962	21,4%	-5,6%	33 359	52,0%	6,1%	19 007	20 173	6,1%	-1,0%
Tomato Products	**33 557**	**32 811**	**-2,2%**	**-6,8%**	**39 593**	**20,7%**	**-2,9%**	**52 834**	**44,4%**	**5,2%**	**27 327**	**29 378**	**7,5%**	**1,5%**

MS	2020	2021	Var 21 vs 20	2022	Var 22 vs 21	2023	Var 23 vs 22
GULOSO	17,6%	17,7%	0,2%	17,1%	-0,6%	16,9%	-0,3%
COMPAL	10,2%	10,2%	0,0%	10,9%	0,8%	12,1%	1,1%
PRIVATE LABEL	62,7%	62,7%	0,0%	63,0%	0,4%	63,1%	0,1%

Appendix 3 – Sales Value and Sales Volume of Portugals' Top A-Brands vs PL Brands

KETCHUP

TOTAL MARKET VALUE (€)	FY 2020	FY 2021	% Var 21 vs. 20 Valor	% Var 21 vs. 20 Volume	FY 2022	% Var 22 vs. 21 Valor	% Var 22 vs. 21 Volume	FY 2023	% Var 23 vs. 22 Valor	% Var 23 vs. 22 Volume	YTD'23	YTD'24	% Var YTD'24 vs YTD'23 Valor	% Var YTD'24 vs YTD'23 Volume
HEINZ	2 933	3 100	5,7%	10,5%	3 879	25,2%	7,9%	4 686	20,8%	-7,1%	2 023	2 629	30,0%	28,6%
CALVÉ	2 979	3 429	15,1%	19,6%	3 930	13,7%	-2,7%	4 613	17,4%	-19,5%	2 377	1 768	-25,6%	-30,6%
PL	2 433	2 217	-8,9%	-13,0%	3 129	40,3%	27,7%	5 075	62,2%	26,2%	2 668	3 319	24,4%	24,0%
TOTAL KETCHUP	**9 276**	**9 575**	**3,2%**	**-0,6%**	**11 825**	**22,9%**	**12,9%**	**15 676**	**33,0%**	**8,9%**	**7 068**	**7 716**	**9,7%**	**13,4%**

MS	2020	2021	Var 21 vs 20	2022	Var 22 vs 21	2023	Var 23 vs 22
HEINZ	31,6%	32,4%	**0,8%**	32,8%	**0,4%**	29,9%	**-2,9%**
CALVÉ	32,1%	35,8%	**3,7%**	33,2%	**-2,6%**	29,4%	**-3,8%**
PL	26,2%	23,2%	**-3,1%**	26,5%	**3,3%**	32,4%	**5,9%**

MAYONNAISE

TOTAL MARKET VALUE (€)	FY 2020	FY 2021	% Var 21 vs. 20 Valor	% Var 21 vs. 20 Volume	FY 2022	% Var 22 vs. 21 Valor	% Var 22 vs. 21 Volume	FY 2023	% Var 23 vs. 22 Valor	% Var 23 vs. 22 Volume	YTD'23	YTD'24	% Var YTD'24 vs YTD'23 Valor	% Var YTD'24 vs YTD'23 Volume
HEINZ	2 214	2 167	-2,1%	-7,4%	2 878	32,8%	4,6%	3 367	17,0%	-4,3%	1 372	1 417	3,3%	5,0%
CALVÉ	5 236	5 172	-1,2%	1,7%	6 657	28,7%	8,7%	7 269	9,2%	-10,5%	3 270	3 330	1,9%	-1,6%
HELLMANNS	5 485	6 057	10,4%	13,7%	8 019	32,4%	4,9%	8 145	1,6%	-29,3%	3 541	3 469	-2,1%	-1,3%
VIANEZA	989	645	-34,8%	-29,1%	810	25,6%	18,2%	818	1,0%	-20,3%	326	390	19,6%	25,6%
PL	5 894	5 908	0,2%	0,7%	8 185	38,5%	2,0%	12 761	55,9%	38,1%	6 944	7 073	1,9%	3,9%
TOTAL MAYO	**20 900**	**20 930**	**0,1%**	**0,7%**	**27 718**	**32,4%**	**4,0%**	**33 877**	**22,2%**	**4,8%**	**16 070**	**16 814**	**4,6%**	**6,5%**

MS	2020	2021	Var 21 vs 20	2022	Var 22 vs 21	2023	Var 23 vs 22
HEINZ	10,6%	10,4%	**-0,2%**	10,4%	**0,0%**	9,9%	**-0,4%**
CALVÉ	25,1%	24,7%	**-0,3%**	24,0%	**-0,7%**	21,5%	**-2,6%**
HELLMANNS	26,2%	28,9%	**2,7%**	28,9%	**0,0%**	24,0%	**-4,9%**
VIANEZA	4,7%	3,1%	-1,7%	2,9%	-0,2%	2,4%	-0,5%
PL	28,2%	28,2%	**0,0%**	29,5%	**1,3%**	37,7%	**8,1%**

Coffee Category

TOTAL MARKET VALUE (€)	FY 2020	FY 2021	% Var 21 vs. 20 Valor	% Var 21 vs. 20 Volume	FY 2022	% Var 22 vs. 21 Valor	% Var 22 vs. 21 Volume	FY 2023	% Var 23 vs. 22 Valor	% Var 23 vs. 22 Volume	YTD'23	YTD'24	% Var YTD'24 vs YTD'23 Valor	% Var YTD'24 vs YTD'23 Volume
Illy	391 754	399 890	2,1%		329 558	-17,6%	-28,0%	269 972	-18,1%	-17,6%	149 199	75 661	-49,3%	-51,6%
L'OR	12 804 470	16 540 580	**29,2%**		15 736 435	**-4,9%**	**-12,0%**	14 731 136	**-6,4%**	**-13,2%**	7 167 088	6 283 254	**-12,3%**	**-16,5%**
Nicola	9 949 334	7 510 976	-24,5%		7 450 076	-0,8%	-6,0%	7 038 554	-5,5%	-15,5%	3 667 526	3 281 887	-10,5%	-8,0%
Buondi	11 453 846	21 776 072	**90,1%**		22 339 381	**2,6%**	**-6,0%**	24 933 314	**11,6%**	**10,0%**	10 252 662	13 363 260	**30,3%**	**35,3%**
Starbucks	5 102 835	6 548 501	28,3%		5 691 418	-13,1%	-17,0%	5 644 271	-0,8%	-3,7%	2 659 131	2 379 056	-10,5%	-12,3%
PRIVATE LABEL	11 330 796	17 952 848	**58,4%**		19 870 747	**10,7%**	**11,0%**	26 341 105	**32,6%**	**30,7%**	18 729 774	19 255 698	**2,8%**	**8,2%**
Total Capsules Sistema Nespresso	**61 114 802**	**81 957 989**	**34,1%**		**82 903 401**	**1,2%**	**-2,5%**	90 147 264	**8,7%**	**7,6%**	**42 625 380**	**44 638 815**	**4,7%**	**7,6%**

MS	2020	2021	Var 21 vs 20	2022	Var 22 vs 21	2023	Var 23 vs 22
Illy	0,6%	0,5%	-0,2%	0,4%	-0,1%	0,3%	-0,1%
L'OR	21,0%	20,2%	**-0,8%**	19,0%	**-1,2%**	16,3%	**-2,6%**
Nicola	16,3%	9,2%	-7,1%	9,0%	-0,2%	7,8%	-1,2%
Buondi	18,7%	26,6%	**7,8%**	26,9%	**0,4%**	27,7%	**0,7%**
Starbucks	8,3%	8,0%	-0,4%	6,9%	-1,1%	6,3%	-0,6%
PRIVATE LABEL	18,5%	21,9%	**3,4%**	24,0%	**2,1%**	29,2%	**5,3%**

Appendix 4 - Reliability Analysis and Principal Component Analysis

Indice	Item	N	Reliability Analysis			Principal Components Analysis				Communalities		Component Matrix
				Total Item Statistics			Bartlett's Test of Sphericity		Total Explained Variance (% of Variance)			
			Cronbach's Alpha	Corrected item-total correlation	Cronbach's alpha if item excluded	KMO Measure	Aprox. $\chi 2$	Sig.		Initial	Extraction	Component 1
Perception of Inflation	PI	207	-	-	-	-	-	-	-	-	-	-
Price Sensivity	PS_1	207	0,748	0,581	0,668	0,723 (Acceptable)	195,531	<0,001	57,591	1,000	0,618	0,786
	PS_2			0,590	0,664					1,000	0,621	0,788
	PS_3			0,555	0,694					1,000	0,581	0,762
	PS_4			0,473	0,729					1,000	0,484	0,696
Perceived Value	PV_1	207	0,844	0,598	0,826	0,795 (Acceptable)	434,853	<0,001	62,026	1,000	0,562	0,750
	PV_2			0,681	0,805					1,000	0,657	0,811
	PV_3			0,572	0,835					1,000	0,511	0,715
	PV_4			0,675	0,807					1,000	0,643	0,802
	PV_5			0,744	0,785					1,000	0,727	0,853
Perceived Quality	PQ_1	207	0,538	0,290	0,494	0,495 (Bad)	160,428	<0,001	42,011	1,000	0,766	0,641
	PQ_2			0,335	0,460					1,000	0,798	-0,583
	PQ_3			0,411	0,385					1,000	0,792	-0,505
	PQ_4			0,270	0,510					1,000	0,774	0,666
Brand Loyalty	BL_1	207	0,781	0,622	0,710	0,765 (Acceptable)	231,648	<0,001	60,635	1,000	0,651	0,807
	BL_2			0,697	0,668					1,000	0,735	0,857
	BL_3			0,518	0,761					1,000	0,521	0,722
	BL_4			0,520	0,764					1,000	0,518	0,720
Perceived Risk	PR_1	207	0,756	0,387	0,789	0,650 (Reasonable)	268,353	<0,001	58,662	1,000	0,350	0,592
	PR_2			0,635	0,654					1,000	0,650	0,806
	PR_3			0,616	0,665					1,000	0,677	0,823
	PR_4			0,593	0,676					1,000	0,669	0,818a

Appendix 5 - Descriptive Statistics of the Indices and Their Respective Items

						Mean ($\bar{x}$)		Standard Deviation (SD)	
Indices	**Item**	**N**	**Minimum**	**Maximum**	**Median**	**Indice**	**Item**	**Indice**	**Item**
Perception of Inflation	PI	207	1	5	5	4,85	4,85	0,532	0,532
Price Sensivity	PS_1	207	1	7	6	4,923	5,14	1,563	1,634
	PS_2		1	7	5		4,31		1,758
	PS_3		1	7	6		5,55		1,264
	PS_4		1	7	5		4,69		1,595
Perceived Value	PV_1	207	1	7	6	4,726	5,64	1,374	1,261
	PV_2		1	7	5		5,03		1,312
	PV_3		1	7	4		3,94		1,465
	PV_4		1	7	5		4,57		1,282
	PV_5		1	7	5		4,45		1,551
Perceived Quality	PQ_1	207	1	7	6	5,142	5,36	1,371	1,257
	PQ_2		1	7	5		4,95		1,532
	PQ_3		1	7	5		4,92		1,456
	PQ_4		1	7	6		5,34		1,240
Brand Loyalty	BL_1	207	1	7	4	3,513	3,99	1,525	1,564
	BL_2		1	7	3		3,50		1,567
	BL_3		1	7	2		2,64		1,372
	BL_4		1	7	4		3,92		1,597
Perceived Risk	PR_1	207	1	5	3	2,413	3,09	1,015	1,060
	PR_2		1	5	3		2,59		0,980
	PR_3		1	5	2		2,02		0,980
	PR_4		1	5	2		1,95		1,039

Appendix 6 - Multiple Linear Regression: Predictors of Consumer's Brand Choice (A-Brand vs. PL Brand)

Variable	N	Normality Test		Independence of errors	Residual Statistics	Colinearity Statisctics	
		K-S	Sig.	Durbin-Watson	Residual Mean	Tolerance	VIF
(Constant)		-	-			-	-
Perception of Inflation		0,509	<0,001			0,944	1,060
Price Sensivity		0,225	<0,001			0,700	1,429
Perceived Value	207	0,244	<0,001	1,756	0,000	0,587	1,704
Perceived Quality		0,232	<0,001			0,771	1,297
Brand Loyalty		0,180	<0,001			0,837	1,194
Perceived Risk		0,225	<0,001			0,895	1,118

Predictors: (Constant), Perception of Inflation, Price Sensitivity, Perceived Quality, Perceived Value, Brand Loyalty, Perceived Risk.

Dependent Variable: Consumer's Brand Choice (A-Brands vs. PL Brands).

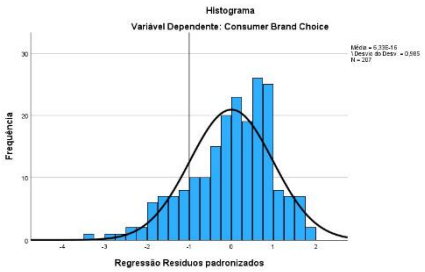
A significance level of 5% was used.

According to the Kolmogorov-Smirnov test (K-S), none of the variables follow a normal distribution in the population ($p<0.05$). However, the assumption of normality was guaranteed by the Central Limit Theorem (CLT) ($N=207>30$).

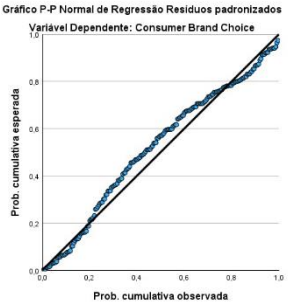
Through the Durbin-Watson test, it was verified that its value was close to 2, therefore, the assumption of no autocorrelation of the errors was satisfied.

The residual mean is zero therefore the assumption of the expected error mean being equal to zero was verified.

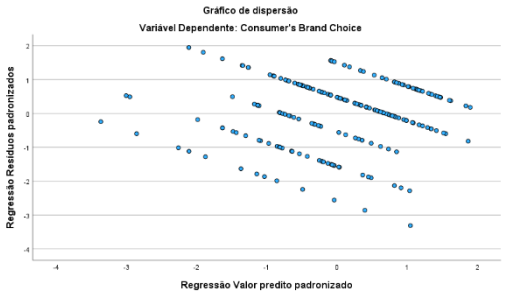
The values of Tolerance and Variance Inflation Factor (VIF) observed are all greater than 0.1 and less than 10, respectively, therefore the assumption of no multicollinearity was verified.



The graph suggests that the data are normally distributed.



The graph suggests that the errors are distributed along a reasonably straight diagonal line, indicating no significant deviations from normality.



The graph suggests a constant pattern of variability around 0, satisfying the assumption of homoscedasticity.

Variable	R^2	Adjusted R^2	Standard error of the estimate	ANOVA			Coeficients			
				F	df	Sig.	Unstandardized coefficients (β)	Standardized coefficients (β)	t	Sig.
(Constant)							2,654	-	3,669	<0,001
Perception of Inflation							-0,223	-0,100	-1,690	0,093
Price Sensivity							0,119	0,164	2,385	0,018
Perceived Value	0,335	0,315	0,978	16,784	6	<0,001	0,289	0,309	4,098	<0,001
Perceived Quality							0,094	0,100	1,525	0,129
Brand Loyalty							-0,180	-0,238	-3,778	<0,001
Perceived Risk							-0,023	-0,020	-0,335	0,738

Predictors: (Constant), Perception of Inflation, Price Sensitivity, Perceived Value, Perceived Quality, Brand Loyalty and Perceived Risk.

Dependent Variable: Consumer's Brand Choice.

A significance level of 5% ($\alpha = 0,05$) was considered in the analysis.

Appendix 7 - Multiple Linear Regression: Predictors of Brand Loyalty

Variable	N	Normality Test (1)		Error Independence (2)	Statistic Residual (3)	Colinearity Statisctics (4)	
		K-S	Sig.	Durbin-Watson	Residual Mean	Tolerance	VIF
(Constant)		-	-			-	-
Price Sensivity	207	0,228	<0,001	1,772	0,000	0,997	1,003
Perceived Risk		0,209	<0,001			0,997	1,003

Predictors: (Constant), Price Sensitivity and Perceived Risk.

Dependent Variable: Brand Loyalty

A significance level of 5% was used.

(1) According to the Kolmogorov-Smirnov test (K-S), none of the variables follow a normal distribution in the population ($p<0.05$).

However, the assumption of normality was guaranteed by the Central Limit Theorem (CLT) ($N=207>30$).

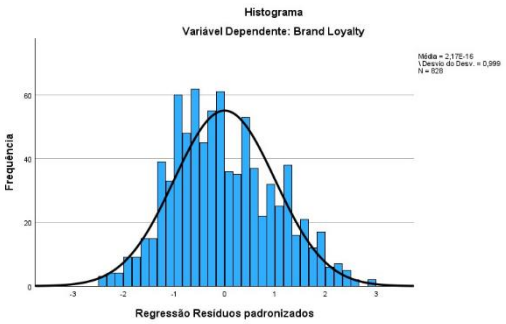
(2) Through the Durbin-Watson test, it was verified that its value was close to 2, therefore, the assumption of no autocorrelation of the

errors was satisfied.

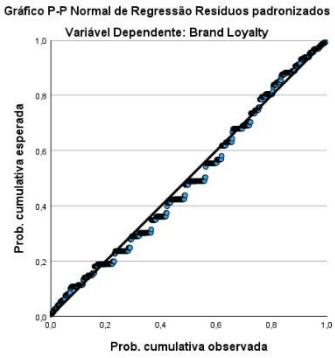
(3) The residual mean is zero therefore the assumption of the expected error mean being equal to zero was verified.

(4) The values of Tolerance and Variance Inflation Factor (VIF) observed are all greater than 0.1 and less than 10, respectively, therefore

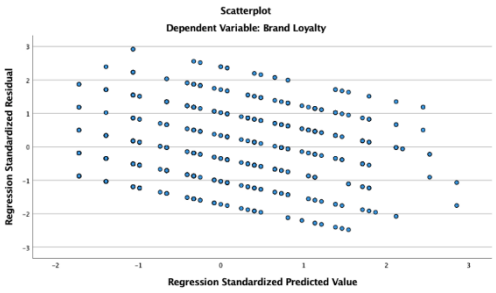
the assumption of no multicollinearity was verified.



The graph suggests that the data are normally distributed.



The graph suggests that the errors are distributed along a reasonably straight diagonal line, indicating no significant deviations from normality.



The graph suggests a constant pattern of variability around 0, satisfying the assumption of homoscedasticity.

Variable	R^2	Adjusted R^2	Estimated SD	ANOVA			Coeficients			
				F	df	Sig.	Unstandardized coefficients (β)	Standardized coefficients (β)	t	Sig.
(Constant)							3,416	0,198	17,213	<0,001
Price Sensivity	0,197	0,195	1,451	101,350	2	<0,001	-0,237	0,031	-7,678	<0,001
Perceived Risk							0,523	0,045	11,546	<0,001

Predictors: (Constant), Price Sensitivity and Perceived Risk

Dependent Variable: Brand Loyalty.

A significance level of 5% (α = 0,05) was considered in the analysis.

Appendix 8 – The Moderating Effect of Age and Income in the relationship between Perception of Inflation and Consumer's Brand Choice

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)							3,713	0,824	4,504	<0,001	2,087	5,338
Age							0,010	00,059	0,173	0,863	-0,107	0,127
Perception of Inflation	0,005	1,187	0,360	3	203	0,782	-0,041	0,168	-0,245	0,807	-0,373	0,291
Age x Perception of Inflation							-0,095	0,093	-1,019	0,310	-0,279	0,089

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)							4,073	0,815	5,000	<0,001	2,467	5,680
Income	0,024	1,176	1,695	3	203	0,169	-0,071	0,043	-1,631	0,105	-0,156	0,015
Perception of Inflation							-0,050	0,165	-0,307	0,759	-0,375	1,027
Income x Perception of Inflation							-0,122	0,076	-1,601	0,111	-0,272	0,028

Note: Significance level considered in the analysis: $\alpha = 0,05$.

Abbreviations: LLCI, lower limit confidence interval; ULCI, upper limit confidence interval.

Appendix 9 – The Moderating Effect of Age and Income in the relationship between Price Sensitivity and Consumer's Brand Choice

Variable	R^2	Standard Error of the Estimate (model)	F	df	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)	0,159	1,092	12,755	3	203	<0,001	1,914	0,301	6,348	<0,001	1,319	2,508
Age							0,051	0,056	0,920	0,359	-0,058	0,161
Price Sensitivity							0,289	0,047	6,159	<0,001	0,196	0,381
Age x Price Sensitivity							-0,077	0,077	-0,998	0,319	-0,229	0,075

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)	0,156	1,093	12,529	3	203	<0,001	2,278	0,319	7,131	<0,001	1,648	2,908
Income							-0,040	0,041	-0,978	0,329	-0,120	0,041
Price Sensitivity							0,276	0,047	5,887	<0,001	0,184	0,369
Income x Price Sensitivity							0,025	0,077	0,319	0,750	-0,127	0,176

Note: Significance level considered in the analysis: $\alpha = 0,05$.

Abbreviations: LLCI, lower limit confidence interval; ULCI, upper limit confidence interval.

Appendix 10 – The Moderating Effect of Age and Income in the relationship between Perceived Value and Consumer's Brand Choice

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)	0,249	1,032	22,384	3	203	<0,001	0,978	0,370	2,644	0,009	0,249	1,708
Age							-0,028	0,066	-0,429	0,669	-0,158	0,102
Perceived Value							0,466	0,057	8,145	<0,001	0,353	0,579
Age x Perceived Value							0,127	0,090	1,414	0,159	-0,050	0,303

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)	0,250	1,031	22,533	3	203	<0,001	1,248	0,378	3,293	0,001	0,501	1,995
Income							-0,073	0,044	-1,635	0,104	-0,160	0,015
Perceived Value							0,458	0,057	8,018	<0,001	0,345	0,570
Income x Perceived Value							0,064	0,079	0,807	0,421	-0,092	0,219

Note: Significance level considered in the analysis: $\alpha = 0,05$.

Abbreviations: LLCI, lower limit confidence interval; ULCI, upper limit confidence interval.

Appendix 11 – The Moderating Effect of Age and Income in the relationship between Perceived Quality and Consumer's Brand Choice

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)	0,099	1,130	7,437	3	203	<0,001	1,983	0,375	5,281	<0,001	1,242	2,723
Age							0,004	0,057	0,070	0,944	-0,108	0,116
Perceived Quality							0,288	0,063	4,591	<0,001	-0,164	0,411
Age x Perceived Quality							0,113	0,090	1,253	0,211	-0,065	0,290

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)	0,114	1,120	8,682	3	203	<0,001	2,295	0,378	6,068	<0,001	1,549	3,041
Income							-0,070	0,041	-1,698	0,091	-0,151	0,011
Perceived Quality							0,285	0,062	4,580	<0,001	0,162	0,407
Income x Perceived Quality							-0,123	0,086	-1,429	0,154	-0,292	0,047

Note: Significance level considered in the analysis: $\alpha = 0,05$.

Abbreviations: LLCI, lower limit confidence interval; ULCI, upper limit confidence interval.

Appendix 12 – The Moderating Effect of Age and Income in the relationship between Brand Loyalty and Consumer's Brand Choice

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)							4,486	0,246	18,268	<0,001	4,002	4,970
Age							0,066	0,058	1,134	0,258	-0,049	0,180
	0,147	1,099	11,667	3	203	<0,001						
Brand Loyalty							-0,277	0,049	-5,637	<0,001	-0,375	-0,180
Age x Brand Loyalty							-0,124	0,081	-1,541	0,125	-0,283	0,035

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)							4,745	0,271	17,504	<0,001	4,210	5,279
Income							-0,035	0,043	-0,811	0,418	-0,120	0,050
	0,149	1,098	11,882	3	203	<0,001						
Brand Loyalty							-0,267	0,049	-5,410	<0,001	-0,364	-0,170
Income x Brand Loyalty							-0,107	0,084	-1,273	0,204	-0,273	0,059

Note: Significance level considered in the analysis: $\alpha = 0,05$.

Abbreviations: LLCI, lower limit confidence interval; ULCI, upper limit confidence interval.

Appendix 13 – The Moderating Effect of Age and Income in the relationship between Perceived Risk and Consumer's Brand Choice

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)							3,985	0,318	12,535	<0,001	3,358	4,612
Age							0,014	0,069	0,209	0,835	-0,122	0,151
	0,021	1,177	1,472	3	203	0,223						
Perceived Risk							-0,159	0,078	-2,045	0,042	-0,312	-0,006
Age x Perceived Risk							-0,031	0,088	-0,349	0,728	-0,205	0,143

Variable	R^2	Standard Error of the Estimate (model)	F	df regression	df residual	Sig	Coefficient	Standard Error of the Estimate	t	Sig	LLCI	ULCI
(Constant)							4,232	0,338	12,520	<0,001	3,566	4,899
Income							-0,041	0,052	-0,787	0,432	-0,143	0,061
	0,042	1,165	2,983	3	203	0,032						
Perceived Risk							-0,176	0,077	-2,282	0,024	-0,327	-0,024
Income x Perceived Risk							-0,106	0,088	-1,207	0,229	-0,280	0,067

Note: Significance level considered in the analysis: $\alpha = 0,05$.

Abbreviations: LLCI, lower limit confidence interval; ULCI, upper limit confidence interval.