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Exploring Loyalty Formation and Purchase Intentions for Private Label Products

Master thesis, 2023
Master of Science in Business Administration
University of Stavanger Business School
Specialization: Strategic Marketing and Analytics

Acknowledgments

I would like to thank my parents for their continuous support from afar. I am also grateful to my dear friend Raysa Dutra, whose friendship has been a constant and steady stream of support, helping me to stay motivated during challenging times. Additionally, I am thankful for having such an amazing boyfriend, Łukasz Piotrowski, whose love and belief in me made all of this possible. Last but not least, thank you Vladyslava Bakhno for the continuous collaboration throughout our studies, and for being the best thesis partner one could ask for.

Jade Cavalcanti

I would like to thank my dearest parents and siblings for their support, encouragement, and unwavering belief in my abilities. A special acknowledgment is in place to my significant other, Serhiy Deva, whose constant presence and guidance have been invaluable throughout my master's program. Finally, I would like to thank my thesis partner for our collaboration and commitment to the entire thesis process. I am truly fortunate to have had such an amazing partner throughout this journey.

Vladyslava Bakhno

Together, we would like to express our gratitude to our supervisor, Auke Hunneman, for his invaluable guidance, expertise, and unwavering support throughout the journey of our master's thesis. His insightful feedback, encouragement and dedication to our academic growth have been instrumental in shaping the direction and quality of this research.

Abstract

In the post-COVID 19 economic landscape, characterized by price sensitivity and evolving consumer preferences, retailers are increasingly prioritizing private labels to differentiate themselves and gain market share. Building on this trend, this paper investigates the influence of cross-category and multi-tier effects on the formation of customer loyalty towards private labels, utilizing a quantitative approach.

We examined purchasing data from a sample of 8,082 consumers in Norway, covering the period from April 2020 to May 2023. Through this analysis, we aimed to understand the customer loyalty formation and purchasing intentions towards private labels by observing their transitions between different subcategories and private label tiers.

Our findings revealed that consumers' prior experiences with both private labels and national brands have a significant impact on their loyalty formation and increased purchase intentions. Specifically, the results suggest that experiencing private labels increases customer loyalty towards them. On the other hand, loyal customers to national brands tend to remain loyal even during periods of economic contractions. Furthermore, our analysis provided valuable insights into the potential drivers of loyalty within private labels, including the influence of multi-tier and multi-category effects.

Keywords: private labels, store brands, multi-tier private labels, cross-category effects, national brands, customer loyalty, share of wallet, share of volume, purchase intention

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List of Abbreviations

PL	Private label
NB	National brand
SOW	Share of wallet
SOV	Share of volume

1. Introduction

Private labels (PLs), also known as store brands, have acquired significant market share across the globe in recent years. First introduced at the beginning of the last century, more precisely in post-war times, PLs gained enormous popularity in the US, Canada and Europe by the end of the previous century. Researchers have discussed the factors contributing to the rise of store brands in Europe. These factors often refer to high retail concentration, small market size that facilitates the dominance of fewer strong national brands (NBs), and a large variety of high-end products offered by retailers (Hoch and Banerji, 1993; Quelch and Harding, 1996).

Traditionally, PLs were perceived by consumers as lower quality alternatives to NBs. This perception stems from the fact that PLs were initially offered as products of acceptable quality, but their key differentiation emphasized competitive pricing (Fitzell, 1982; Hoch and Banerji, 1993; DelVecchio, 2001). However, the introduction of PLs across various product categories and markets, coupled with the implementation of multi-tier segmentation strategies by retailers, has played a significant role in reshaping consumer shopping behavior (Cuneo et al., 2019). These initiatives have effectively narrowed the quality gap between PLs and NBs. In fact, a recent report by McKinsey (2023) indicates that 84% of respondents perceive private labels to be of equal or higher quality than NBs.

The shift in perception towards private labels is supported by academic research, indicating that the availability of a diverse range of PLs increases the likelihood of consumers choosing them over NBs (Quelch and Harding, 1996; Geyskens et al., 2010; Partal and Benito, 2011; PLMA 2015). Furthermore, studies on brand extensions suggest that consumers often employ similar strategies and shopping patterns when purchasing products across related categories (Blattberg, 1976; Swaminathan, 2003). This can be seen as a spillover effect, where consumers' loyalty to one product within a brand's portfolio influences their decision to buy another product in a related or complementary category that falls under the same umbrella. In simple terms, when customers are loyal to one product, this positive sentiment carries over to the rest of the brand, making them more likely to consider purchasing other products offered by the same brand (Swaminathan, 2003; Richards et al., 2015). For example, a loyal Coca-Cola customer might be interested in trying new flavors like cherry, lime, and vanilla as part of the Coca-Cola's brand expansion strategy. As a result, some retailers have successfully applied this knowledge to expand product portfolios within related categories.

The growth of PLs can be attributed to their evolution from undifferentiated single-standard PL lines to multi-tier differentiation offerings (Fitzell, 1982; Kumar and Steenkamp, 2007; Geyskens et al., 2010; Ter Braak et al., 2013; Keller et al., 2022). This transition has allowed retailers to cater to the varying needs and preferences of consumers based on their perception of price, risk, and quality (Erdem et al., 2004). For example, by offering standard PLs, similar in quality and cost-effective NB's alternatives, retailers meet the needs of the value seeking consumers. At the same time, economy and premium PLs attract consumers who prioritize price over quality and vice versa (Keller et al., 2022). By implementing a multi-tier product differentiation strategy, retailers create different value propositions (Kumar and Steenkamp, 2007; Ter Braak et al., 2013; Keller et al., 2022), extending their reach to diverse consumer segments in both the lower and higher ends of the market.

1.2 Research Purpose

The world economy has been significantly impacted by various factors, including the COVID-19 pandemic, the Russian invasion of Ukraine, and the energy crisis worldwide. These events have resulted in heightened inflation and economic instability (Statista, 2023).

In times like these, researchers observed that PLs tend to thrive (Hoch and Banerji, 1993; Quelch and Harding, 1996; Lamey et al., 2007). During economic downturns, consumers often trade down and increase their consumption of PLs. Therefore, it is plausible that the economic environment plays a significant role in shaping consumers' purchasing intentions and loyalty towards PLs. However, it is important to acknowledge that recent changes in consumer behavior typically persist regardless of economic conditions, even during the post-recession period. This dispels the common misconception that PLs are of low-quality and suggests a long-term loyalty towards them.

Throughout our study, we identified a research gap regarding the interplay between PLs and their multi-tier offerings across different product categories. This area of investigation has received limited attention and requires further research. Notably, researchers have suggested that the umbrella-branding effect holds significance in related categories for PLs. To illustrate this point, Richards et al., (2015) comments that customers that purchase cereal usually buy milk of the same private label brand as these products are complementary to each other. Therefore, it is crucial to explore the impact of cross-category loyalty, specifically whether purchasing one subcategory influences a consumer's willingness to try another.

Most research on PLs treats all tiers as a single type, while providing general insights for retail managers. However, recent studies have focused on the differentiation of PL tiers, which include budget, standard, and premium tiers. These studies highlight the distinct positioning of each tier and its target audience (Ailawadi et al., 2008; Martos-Partal et al., 2013; Keller et al., 2022). Consequently, it is crucial to consider the characteristics and target audience of each tier (Ailawadi et al., 2008; Martos-Partal et al., 2013; Keller et al., 2022), when suggesting solutions for retailers. Building upon the existing research in these areas, this study aims to contribute to the current literature on PLs by addressing the limited research in cross-category and multi-tier PL research.

The primary objective of this master's thesis is to address the following three research questions:

Research Question 1: How does loyalty towards private labels (PLs) and national brands (NBs) impact the consumer's purchasing intentions during periods of economic contractions?

Research Question 2: How does loyalty to one subcategory of private label (PL) products influence the likelihood of trying out the same PL in another subcategory?

Research Question 3: How does loyalty to one private label tier influence customer loyalty building towards another private label tier?

By addressing these research questions, we aim to uncover opportunities so that retailers can penetrate the market with their PLs, effectively competing against NBs and acquiring more customers during periods of economic downturns. Additionally, we hope that our results will yield valuable insights into consumer purchasing intentions towards PLs, effectively showcasing the significance of cross-category and cross-tier effects in fostering brand loyalty. Through this study, we aim to provide retailers with strategic knowledge to strengthen their PLs' market presence and drive business growth.

We will examine whether consumers' purchasing intentions in one PL subcategory influences their likelihood to try out other subcategories. Additionally, we will investigate consumers' shopping patterns across different PL tiers to understand whether they tend to trade down or up between economy and premium PLs. Moreover, we will explore consumers' willingness to switch from NBs to PLs during periods of economic downturn. To accomplish these objectives, we will analyze consumer purchase data spanning from 2020 to 2023 in a popular food category at a prominent retailer in Norway. By examining this data, we aim to gain valuable insights that can guide retail managers worldwide in implementing effective strategies that will help them grow private labels' share.

2. Literature Review

This literature review aims to analyze and synthesize the existing research on the relationship between customer loyalty and share of wallet (SOW) formation for PLs. Here, we draw upon prior work on customer loyalty, national brands, private labels, and branding to understand the factors influencing consumer's loyalty towards PLs and how it impacts their purchasing intentions.

By reviewing relevant literature, we aim to (1) discuss the key determinants of customer loyalty towards PLs private labels and (2) uncover insights into the relationship between customer loyalty and the extent to which consumers allocate their spending to PL compared to other alternatives.

2.1 Private Labels

Private labels, defined as products owned and sold by a specific retail chain (Fitzell, 1982; Collins-Dodd, 2003; Hyman et al., 2009; Gielens et al., 2021), have also been referred to as "controlled brands" developed by organizations for distribution purposes (Schutte, 1969). Initially regarded as lower quality alternatives to national brands, PLs have undergone a significant transformation in their positioning (Quelch and Harding, 1996; Kumar and Steenkamp, 2007;

Partal and Benito, 2011; Beneke and Zimmerman, 2014; Keller et al., 2022). This evolution has propelled PLs from being relatively unknown to becoming widely recognized and accepted alternatives to NBs (Fitzell, 1982; Kumar and Steenkamp, 2007; Keller et al., 2020). By shifting their focus from price to quality, PLs have successfully altered consumer perceptions (Quelch and Harding, 1996; Kumar and Steenkamp, 2007; Partal and Benito, 2011; Beneke and Zimmerman, 2014; Keller et al., 2022).

While PLs have gained recognition in the market, many researchers agree that price sensitivity due to economic instability continues to influence consumers' purchasing decisions for PLs (Quelch and Harding, 1996; Lamey et al., 2007; Romero et al., 2014; Gielens et al., 2021). Interestingly, Kumar and Steenkamp (2007) emphasize that PLs experience a more rapid increase in market share during recessions compared to their decline during economic expansions. This suggests that price-conscious consumers are more likely to turn to PLs as a cost-effective alternative during challenging economic times. However, research supports the notion that as consumers learn more about PLs and their inferred quality, they tend to develop loyalty towards PLs (Quelch and Harding, 1996; Kumar and Steenkamp, 2007; Cuneo et al., 2019). This suggests that consumers, once they have a positive initial experience with PL products, tend to remain loyal to them and do not revert to NB counterparts, even in times of economic recovery.

Understanding the factors that influence customer loyalty and purchase behavior in relation to PLs becomes essential for retailers seeking to maximize their market share and build long-term loyalty (Fitzell, 1982; Kumar and Steenkamp, 2007; Lamey et al., 2007).

2.2 National Brands

According to Schutte (1969), national brands refer to branded products owned by manufacturers and marketed to wholesalers and retailers through mass-national advertising. NBs are often associated with high perceived quality and innovation in comparison to PLs (Quelch and Harding, 1996; Kumar and Steenkamp, 2010). Due to their established reputation and consistent quality, consumers generally place more trust in NBs (Kotler and Keller, 2011). This can be explained by the concept of brand equity which encompasses factors such as brand awareness, brand loyalty, perceived quality, and brand associations (Aaker, 1996). NBs, with their extensive advertising and strong market presence, tend to have higher levels of brand equity compared to

PLs. The investment in advertising and marketing activities helps NBs build awareness and loyalty among consumers, leading to a higher perception of quality and trustworthiness.

Sethuraman (2000) confirms that NBs heavily rely on advertising to build brand equity and attract consumers. The perceptions and practices surrounding NBs present an interesting contrast to those of PLs. The strong association of high perceived quality and reputation with NBs, driven by advertising, often leads consumers to be willing to pay a premium, even if the actual quality may be minimal. However, if consumers experience a low-quality product that has been heavily advertised, they may become frustrated and transition to a different brand.

During economic downturns, NBs typically reduce marketing expenses to offset slow demand and protect short-term profits (Picard, 2001). Lamey et al. (2007) speculate that NBs can mitigate the negative impact on their market shares during economic contractions by maintaining their marketing investments, aiming to limit the growth opportunities for PLs. However, such a strategy is rarely implemented by manufacturers of NBs. Therefore, researchers suggest that retailers should seize the opportunity to heavily invest in their own PL brands, as NBs are less likely to regain consumers (Kumar and Steenkamp, 2007).

2.3 Multi-tier PL strategy

As studies have shown, the evolution of PLs has resulted in more nuanced and segmented brands (Fitzell, 1982; Quelch and Harding, 1996; Gielens et al., 2021). Different PLs adopt different strategies, focusing on low prices or high quality. Some PLs target cost-conscious consumers, while others cater to quality-driven consumers seeking unique attributes such as premium ingredients, special features, or distinctive packaging (Kumar and Steenkamp, 2007). Moreover, socio-demographic factors play a crucial role in influencing consumer behavior. Ailawadi et al. (2001) defines two consumer segments: price-focused consumers and quality-image focused consumers. Similarly, Cuneo et al. (2019) highlight two distinct practices: (1) price sensitivity, relative quality, and acceptable reliability, and (2) the desire for quality and brand image. In general, PLs can be categorized into three tiers: generic, standard, and premium (Kumar and Steenkamp, 2007; Braak, 2014; Noorman, 2017; Geykens, 2010; Gielens et al., 2021). Generic (often referred to as “economy” or “budget”) PLs are basic, unbranded products with minimal packaging and lower prices. Standard PLs offer better quality at slightly higher prices to meet the needs of the average consumer. Premium PLs, positioned as high-end products, provide superior quality, special features, and higher price points (Kumar and Steenkamp, 2007; Braak, 2014; Noorman, 2017; Geykens, 2010; Gielens et al., 2021). Nevertheless, retailers can also introduce categories that fall between these tiers or combine elements from them (Fitzell, 1982; Kumar and Steenkamp, 2007; Gielens et al., 2021).

According to Kumar and Steenkamp (2007), PL shoppers come from diverse socioeconomic backgrounds and purchase products across various categories. As a result, lower-priced and less risky PL brands are more likely to attract consumers seeking cost savings, while higher-end premium brands are favored by consumers who prioritize quality (Cuneo et al., 2019).

The dynamic nature of PLs and consumer purchasing habits suggests that consumers are prone to brand switching based on changing needs. The multi-tier PL strategy enables retailers to compete against NBs and increase profitability (Quelch and Harding, 1996; Dunne and Narasimhan, 1999; Kumar and Steenkamp, 2007; Geykens et al., 2010). As the popularity of PLs, particularly premium ones, grows, NBs face mounting pressure to react and protect their market share (Kumar and Steenkamp, 2007). Premium PLs, with their higher gross margins, contribute significantly to profitability within specific categories (Ter Braak, 2014; Geykens et al., 2010).

While an increase in PLs' market share does not guarantee a corresponding increase in retailer profitability (Kumar & Steenkamp, 2007), certain groups of PL buyers, known as "heavy PL buyers," contribute significantly to retailer profits; however, not due to their commitment to a specific PL, but their loyalty to PLs in general (Ailawadi et al., 2008). In other words, these heavy PL buyers are often influenced by price sensitivity and the desire to save money. It is speculated that among the three groups of PL buyers, medium PL buyers are more likely to develop loyalty to a specific retailer whose PLs they purchase. Despite not always being the most profitable consumers, these consumers are considered a long-term source of profitability for retailers. This finding builds on Aaker's (1991) comprehensive view on brand loyalty, which suggests that loyalty manifests in different ways and can be expressed through various consumer profiles.

Ter Braak (2014) notes that the positioning of premium PLs differs from standard ones, with retailers introducing premium PLs in categories where consumers expect more variety and quality. This helps retailers enhance brand image, increase profitability and differentiate themselves from the competition (Keller et al., 2022). Thus, lower perceived risk and a strong brand image can positively influence consumers' purchase intentions and their share of wallet

(SOW) towards PLs. In contrast, budget PLs focus on achieving high sales volumes and compete with "hard discount" NBs in order to regain market share. Despite its large sales volume, the margins are still small due to the low wholesale price. Contrary to economy PLs, premium PLs drives PL share as well as profitability of retailers PLs portfolio.

2.4 Brand and customer loyalty

Within the existing body of literature, loyalty can be categorized into two main dimensions: customer loyalty and brand loyalty. Both dimensions play an important role in fostering consumer retention and driving profitability (Kumar and Shah, 2004; Gee et al., 2008; Keiningham et al., 2011). However, it is important to note that these two concepts have distinct definitions. While customer loyalty revolves around repeated or habitual purchases (Aaker, 1991; Hur et al., 2011), brand loyalty relates to the attitude and emotional connection an individual holds towards a brand (Dick and Basu, 1994; Baldinger and Rubinson, 1996; Oliver, 1999; Jones and Taylor, 2007; Ailawadi et al., 2014).

While academic discussions on loyalty have been often divided, there is a growing perspective that loyalty is a multidimensional concept that encompasses both attitude and purchase behavior (Dick and Basu, 1994; Baldinger and Rubinson, 1996; Jones and Taylor, 2007; Ailawadi et al., 2014). In fact, Garland and Gendall (2004) state that loyalty should be measured through both consumer attitude and behavior. Similarly, Srivastava and Kaul (2016) assert that attitudinal loyalty often generates behavioral loyalty, thus resulting in a better consumer experience, increased consumer spending and SOW growth.

According to Aaker (1991), loyal consumers can be divided into four large groups: committed buyer, likes the brand and considers it a friend, satisfied buyer with switching costs, satisfied and habitual buyer, and switchers (Aaker, 1991). However, there are more consumer profiles which appear in combination of these types. While most researchers have discovered that attributes focused on quality can enhance purchase intentions (Kumar and Steenkamp, 2007; Aaker, 1991; Kotler and Keller, 2011; PLMA, 2015), there are instances where brand loyalty emerges due to attributes such as a combination of low price and quality. This is because certain consumers are loyal not to the brand itself, but rather to its affordability (Ailawadi et al., 2008). Therefore, price conscious shoppers are usually less influenced by marketing and tend to be more discerning in their product selections. This observation emphasizes the concept that loyalty encompasses multiple dimensions.

In the context of PLs, one might hypothesize that premium PLs would generate customer loyalty since its quality is presumably higher. This indicates that different PL tiers (e.g., economy and premium) should be taken into consideration when researching customer loyalty and SOW formation. In other words, since consumer's habits and attitudes vary, understanding PL tiers can shed light on how consumers' preferences (quality vs. price) might affect their spending patterns and willingness to try other products within the PL spectrum. Similarly, Porral (2015), identified three critical factors that impact loyalty towards PLs: perceived quality, brand image, and purchase intentions. Achieving these factors require PLs to educate buyers about the products by providing information such as ingredients and production methods.

Kotler and Keller (2011) and Aaker (1996), discuss the importance of communicating brand value to generate brand awareness and forge the brand's image into consumers’ minds. Since PLs are often associated with a high-risk perception (Dick et al., 1995; González et al., 2006), consumer’s purchase intention towards PLs is low compared to NBs. Therefore, signaling quality can boost purchase intentions and encourage repeat purchases once consumers become more acquainted with the products. Thus, one may argue that retailers should invest more in advertising in order to compete with NBs (Ter Braak, 2014). By doing so, they can create a sense of familiarity and high-quality (González et al., 2006; Labeaga et al., 2007; Sheau-Fen, 2012; Porral, 2015). As consumers gain a deeper understanding of a brand’s offerings, the perceived risk associated with trying different products diminishes. Consequently, consumers are more likely to develop a connection and repeat purchases from a particular brand. In fact, research has shown that first-time PL consumers usually have a positive experience that leads to continued purchases (Quelch and Harding, 1996; Lamey et al., 2007; Romero et al., 2014; PLMA, 2015).

Loyalty is a key driver for retailers’ success as it helps them to gain a competitive advantage, build strong consumer relationships, and generate profits. Although PL profitability may vary across different product categories, retailers need to assess market dynamics and tailor their strategies according to consumers' loyalty orientation and segments (Oliver, 1999; Magi, 2003; Keiningham et al., 2007; Ailawadi et al., 2008). Despite extensive research on understanding the factors driving customer loyalty, there is no standard approach to developing loyalty, as it is influenced by individual characteristics and industry contexts (Oliver, 1999; Keiningham et al., 2007).

2.5 Brand extension

In this study, we have defined the product category as a group of products that share similar characteristics. In contrast, subcategories are seen as separate products that add complementary benefits to the overall product category and enhance the value proposition for consumers.

Apart from a distinct brand segmentation and value proposition (e.g. economy, standard, premium, etc), PLs often boast a rich product portfolio. This stretch in product categories can be defined as brand extensions (Aaker and Keller, 1990), allowing retailers to create economies of scope, where fixed costs are spread across all offered products. Moreover, adding different product categories under the same brand “umbrella” enables quality improvement of the products, domination of a specific sector against NBs, and the usage of cross-selling techniques (Goldhar and Jenilek, 1983; Hyman et al., 2009). Swaminathan (2003) states that brand loyalty occurs when the perceived fit of the brand extension is high, transferring brand equity throughout the entire product “umbrella”.

Blattberg (1976) highlights the similarities in consumer brand choice strategies across different product categories. The author suggests that consumers are more likely to use the same brand choice strategies for similar product categories. This implies that when purchasing products within a particular category, consumers tend to follow a similar decision-making process. In the same way, Aaker and Keller (1990) comment that brand extensions are important because they help to transfer quality between cross-product categories and showcase a firm’s skills in developing the products. In addition, the brand extensions that involve complementary or substitute products positively affect consumer’s purchase decisions.

3. Conceptual model and development of hypothesis

3.1 Development of hypothesis

Share of wallet (SOW) refers to a consumer's spending within a category from a specific brand, store, or firm (Keiningham et al., 2011). Retailers have a vested interest in analyzing the increase in SOW, to gain insights into consumer spending patterns across different brands, and product categories. This analysis helps determine customer loyalty to specific brands, or categories, allowing retailers to gain a competitive advantage. Increasing SOW of PLs generates additional revenue streams but also fosters loyalty towards these private label products. Retailers can leverage the growth of PLs to enhance SOW is a metric that measures the proportion of a consumer's spending within a specific category that is allocated to a particular brand, store, or firm (Keiningham et al., 2011). Retailers have a keen interest in analyzing and increasing their SOW to gain a deeper understanding of consumer spending behaviors across various stores, brands, and product categories. By increasing the SOW of PLs, retailers can not only generate additional revenue streams but also improve retail margins, cultivate loyalty among consumers, and enhance their ability to negotiate prices with NBs (Ailawadi and Harlam, 2004).

Consumer satisfaction plays an important role in the increase of SOW. When consumers are satisfied with a retailer's offerings, they are more likely to spend more at that retailer and reduce their visits to alternative retailers (Hunneman et al., 2015; Cuneo et al., 2019). This effect is also noticeable during economic downturns when consumer confidence is low.

Previous studies have used SOW as a metric to measure loyalty towards specific brands or categories (Bennett and Rundle-Thiele, 2002; Ailawadi et al., 2008; Keiningham et al., 2011; Hunneman et al., 2015). Srivastava and Kaul (2014) discovered that SOW is an indicator of loyalty. Similarly, Bennett and Rundle-Thiele (2002) found a significant correlation between SOW and consumers repurchase intention, indicating that SOW is an influential factor in building loyalty compared to other consumer attitudes and behavioral characteristics, including consumer satisfaction. Additionally, it has been observed that past SOW is a predictor of consumers' future SOW, more so than other tested consumer attitudes.

Furthermore, PLs products demonstrate different levels of success in driving the growth of SOW depending on product categories (Ailawadi et al., 2008). Therefore, retailers should investigate which categories positively influence the SOW, in order to stay profitable.

Given the unavailability of consumers' spending data for the studied retailer and other retailers they patronize, as well as the lack of information on promotional activities that may influence consumers' purchasing behavior, we will employ the volume of purchases to represent share of wallet (SOW). In this case, the share of volume (SOV) of purchases reflects the frequency of consumer transactions within a specific category of a specific retailer. By analyzing the SOV, retailers can gain insights into consumers' purchasing habits within a category and identify strategies to enhance their PL's SOV.

Research by Ailawadi et al (2008) supports the notion that as the share of PL products increases, consumers tend to maintain their loyalty to PLs. This finding suggests that consumers' loyalty to PLs can be reinforced over time, leading to repeat purchases. In fact, Hunneman et al. (2015) state that consumers are more likely to increase purchases when they are satisfied with a retailer's service. However, it is important to note that according to studies by Aaker (1996), Kotler and Keller (2011), and Ter Braak (2014), effective communication and advertising efforts can influence consumers' purchase intentions towards PLs. Thus, we can assume that customer loyalty is likely to be formed when consumers try PLs for the first time, especially in economic downturns (Quelch and Harding, 1996; Lamey et al., 2007).

H1. *Consumers are more likely to increase their SOV towards PLs during periods of economic contractions.*

Considering the literature findings on NBs, loyalty, and brand extensions, it is possible to hypothesize that consumers who developed loyalty towards NBs are less likely to switch to PLs. This is because NBs have traditionally taken advantage of a perceived high-quality level and innovation (Quelch and Harding, 1996; Kumar and Steenkamp, 2010). Brand equity, as described by Aaker (1996), considers brand awareness, loyalty, perceived quality, and associations. Such factors contribute to the differentiation, trust, and competitive advantage of NBs in the marketplace.

One could argue that NBs, with their heavy investment in advertising and established brand equity, foster a sense of loyalty that is challenging for PLs to disrupt (Sethuraman, 2000; Kotler and Keller, 2011). Furthermore, a study conducted by Cuneo et al. (2019) indicates that even during economic downturns, consumers remain loyal to their preferred brands even if this requires some financial "sacrifices". This loyalty can be attributed to either an emotional connection developed with the brand or a familiarity that consumers have grown accustomed to (Dick and Basu, 1994; Baldinger and Rubinson, 1996; Jones and Taylor, 2007; Ailawadi et al., 2014). Additionally, the transferability of brand equity to other products suggests that consumers may utilize the same decision-making process to choose familiar products, especially those associated with a brand they are already familiar with. Therefore, it can be argued that consumers may face challenges when transitioning from NBs to PLs due to their behavior and attitudinal loyalty towards NBs.

H2. *Consumers who are loyal to NB products are likely to remain loyal to NB products, despite the economic contractions.*

Previous research on brand extension assumes that customers' loyalty often extends beyond a single product or subcategory. This indicates that a positive experience with one product can shape the consumer's perception of other products within the same brand or product line (Blattberg, 1972; Swaminathan, 2003; Fetscherin et al., 2013; Romero et al., 2014). Consequently, brand extensions serve as a means to transfer quality across the entire product portfolio (Aaker and Keller, 1990). Therefore, even when consumers seek variety, they tend to employ the same brand choice strategies for similar products, particularly when the perceived fit of a brand's product portfolio is high. As mentioned before, the likelihood of increased purchases is higher when products are related (e.g., cereal and milk) or when they align with consumer perception (e.g., burger and fries).

Drawing on the literature discussed, we hypothesize that consumers who are loyal to one subcategory of PL products are more likely to try another subcategory within the same category. In other words, as retailers expand their offerings, consumers use a similar decision-making process to choose products which are complementary and relevant within a particular product category. The similarity in decision-making arises from the cultivated loyalty within one subcategory, leading to an increased sense of trust when exploring another subcategory of the same brand. This trust is also a result of the similar characteristics that subcategories share.

H3. *Consumers who are loyal to one subcategory of PL products are more likely to try out another subcategory of PL products within the same product category.*

Previous research has shed light on the notion that consumers who purchase premium PL products are more likely to explore other types of PL offerings (Kumar and Steenkamp, 2007; Ter Braak et al., 2013; Keller et al., 2022). This can be explained as premium PLs are positioned as offering higher quality, superior features, and a more upscale experience compared to their economy counterparts. Therefore, past literature suggests that once consumers gain a deeper understanding of the quality associated with PLs, they tend to remain loyal to them. In other words, when consumers have an initial positive experience with a PL product, the price vs. quality match motivates them to continue purchasing while perceived risk decreases (Quelch and Harding, 1996; Lamey et al., 2007; Romero et al., 2014; PLMA, 2015). Moreover, Aaker and Keller's (1990) discussion on brand extension further supports this hypothesis, as consumers are likely to purchase another product from the same brand "umbrella" due to a high brand equity and perceived quality transferred from the "parent" brand, or through complementary products.

The affordability-focused positioning of economy PL products tends to appeal to price-conscious consumers who prioritize cost savings while still expecting acceptable quality. As a result, these consumers generally exhibit a lower inclination to explore alternative types of PLs, as their primary focus is on obtaining economical options. A study by Ailawadi et al (2008) supports this notion, stating that price-conscious consumers prioritize low prices above all other factors. Considering that economy or budget PL products specifically target such consumer segments, it is reasonable to infer that, despite potentially higher quality, these consumers are unlikely to switch to other PL tiers.

H4. *Consumers who have purchased one of the private label tiers are more likely to try another private label tier.*

3.2 Conceptual framework

Based on the literature review, this thesis aims to develop a theoretical framework that incorporates the hypothesis outlined in the previous section.

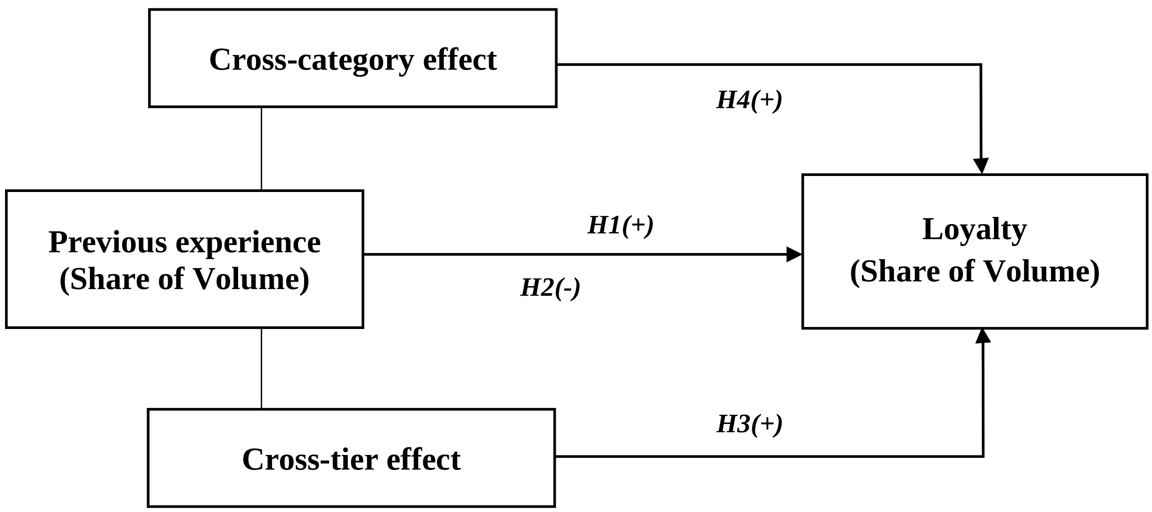

Figure 1: Conceptual framework.

The primary objective is to investigate the formation of loyalty towards private labels (PLs) by examining the share of private labels' volume in relation to consumers' overall purchasing intentions (as illustrated in Figure 1). To achieve this, we considered consumers' prior shopping experiences with NBs, as well as premium and economy PLs. By estimating the direct effect of the previous experience variable, we aim to understand whether consumers are more inclined to maintain loyalty to their preferred brands or if they are likely to change their shopping behavior during periods of economic downturns.

Importantly, we investigate the cross-category effect of whether consumers' prior loyalty to one subcategory influences their decision to experiment with another subcategory within the same brand. Similarly, we analyze premium and economy tiers separately to obtain unique insights about each PL tier. By examining the multi-tier effect, we explored whether consumers are more likely to try a new PL tier if they have already experienced and are familiar with one specific tier.

4. Research and Methodology

4.1. Description of Data

We obtained access to Norwegian consumer purchase data on a Tex-Mex food category. The dataset was collected through the retailer's loyalty app and consists of monthly purchasing data from May 2020 to April 2023, encompassing 9,251 individuals and a total of 76,739 records. Each record represents the volume of products purchased by individual consumers, including several national brands as well as a premium and an economy private label.

Before performing data analysis, we carefully investigated and cleaned the data. Given that the dataset covers the period between May 2020 and April 2023, we decided to aggregate the data by year. This enabled us to extract valuable insights for each year, facilitating the analysis of PL loyalty formation specifically in years of economic instability.

To ensure a focused analysis on PLs, we have excluded consumers who did not purchase PLs from the dataset. Hence, the number of consumers has been reduced to 8082. The remaining consumers have been categorized into light, medium, and heavy private label buyers based on the volume of Tex-Mex products they purchased over the observed period, following the approach outlined by Ailawadi et al (2008). Grouping consumers into three clusters offers several benefits, such identifying common patterns, gaining valuable insights, and simplifying the research process.

In the dataset, we sampled eight distinct Tex-Mex product subcategories, including tortillas, shells and tubs, chips, spices, toppings and dips, salsas, taco sauces and taco kits (Figure 2). To obtain these subcategories, we grouped articles that share similar characteristics and attributes. For instance, taco sauce mild and taco sauce hot were classified within the same category, as well as spices for taco of different brands.

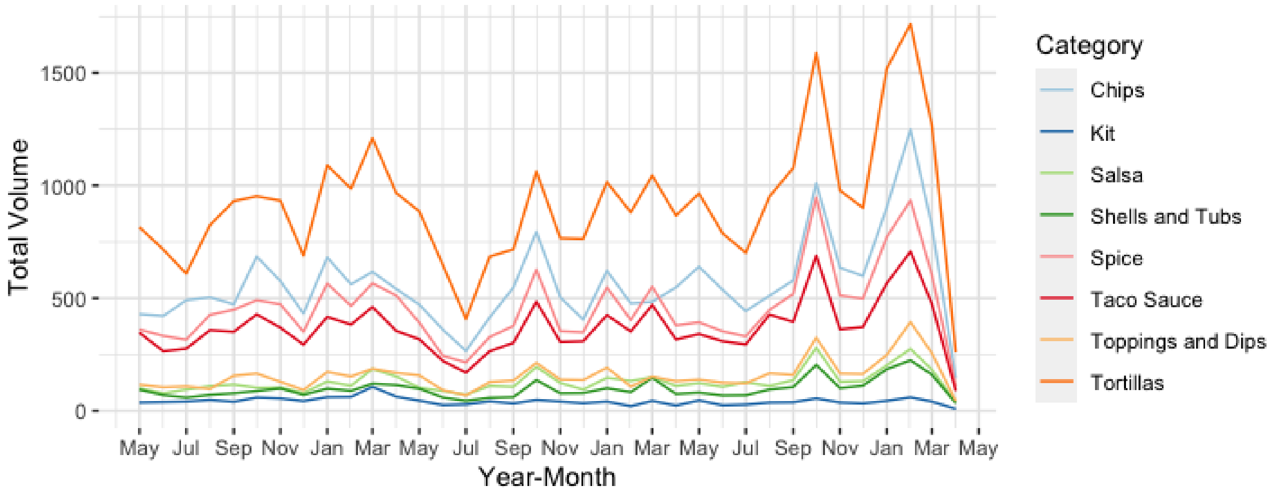

Figure 2: Volume of purchased Tex-Mex categories products over time

As seen in Table 1, the economy PL is only present in three categories: tortillas, spices and kit. consumers consistently exhibit a preference for premium PL offerings in all categories, except for spices where national brands are favored, and kits where premium PL options are not available. This preference is primarily influenced by factors like price and quality, aligning with findings from the existing literature.

Table 1. Distribution of National Brands and Private Labels Category purchases

Category	NBs	Premium PL	Economy PL
Tortillas	18,9 %	75,4 %	5,8 %
Chips	20,5 %	79,5 %	
Spice	71,6 %	20,2 %	8,2 %
Taco Sauce	39,9 %	60,1 %	
Toppings and Dips	41,1 %	58,9 %	
Salsa	31,7 %	68,3 %	
Shells and Tubs	41,2 %	58,8 %	
Kit	18,5 %		81,5 %

To measure loyalty, we utilized the share of volume as it determines the proportion of a consumer's total purchases allocated to a specific brand or product category (Figure 3). Using the SOV variable, we derived two additional variables: Previous Year Share of Total Volume and Next Year Share of Total Volume. In our analysis of changing purchasing behavior over time, we regarded the former variable as Previous Experience, reflecting past buying patterns, while the latter variable was considered as a measure of Loyalty towards a brand or subcategory.

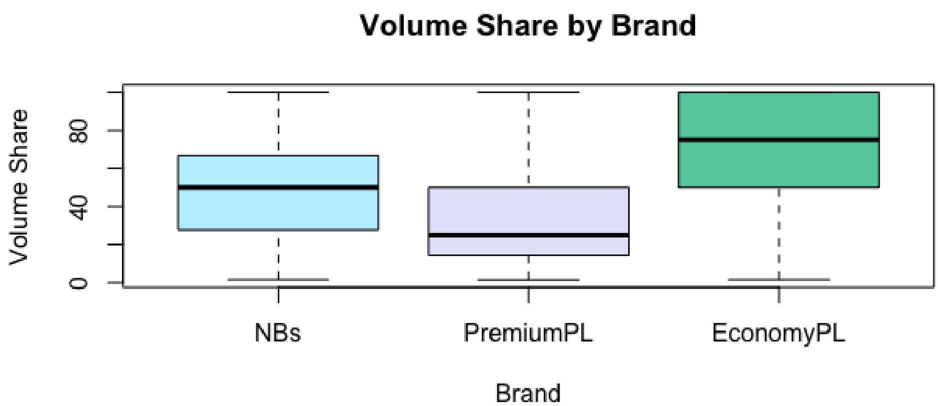

Figure 3: SOV boxplot for Tex-Mex brands

It is important to note that our consumer data is not balanced, as purchasing patterns vary between months and years due to various factors. For example, there may be due to the differences in loyalty levels towards the Tex-Mex category, as well as changes in consumer preferences or a shift to another retailer for Tex-Mex products. However, due to the limited context of the available data, we are unable to confirm these assumptions conclusively. To address the unbalanced nature of the data, we took this into account during our data analysis process.

4.2. Methodology

In this study, we chose to perform mixed effects modeling to examine our first and second hypotheses. This method is particularly effective in dealing with the imbalance nature of our dataset (Brown, 2021), effectively addressing the inherent dependence between observations and handling varying numbers of observations across individuals and time points. In addition, mixed effects modeling allows for simultaneous modeling of both fixed and random effects.

To investigate hypotheses three and four, we utilized a model-free evidence approach (Davis-Sramek et al., 2023). This involved employing descriptive methods to directly represent the observed patterns and trends in the data over time. Specifically, we utilized a Markov chain model to analyze the transition patterns between various product categories and private label tiers. By examining the probabilities of consumers switching between these categories and tiers, we gained valuable insights into the dynamics of consumers' behavior and purchasing intentions.

The data analysis was conducted using the R software. To estimate the linear mixed effects model, the lmer() function was employed, while the glmer() function was utilized for the logistic mixed effects model.

5. Results and Discussion

Figure 4 provides an insightful depiction of the dynamics in the consumption of NBs, premium and economy PLs over time. Initially, the premium PL exhibited nearly twice the consumption compared to NBs. However, a notable decline in overall consumption occurred from March 2021 to July 2021, affecting all brands, particularly premium PL. Subsequently, a noticeable shift took place whereby consumption of NBs began to rise. By March 2022, consumption levels for NBs and the premium PL reached the same point, and in the subsequent year, although the premium PL maintained a slight lead in terms of volume sold, the gap narrowed between NBs and premium PL.

As for economy PL, there were two distinct periods during which the consumption trend has been increasing. The first period, spanning from the start of observations in May 2020 until March 2021, aligns with the first year of the COVID-19 pandemic. During this time, Norwegian consumers were prompted to reassess their purchasing patterns due to the newly influenced perception of risk and willingness to pay. Following an inexplicable decline between March and July 2021, the consumption of economy PL demonstrated an upward trend, eventually reaching its highest level during the observed period in February 2023. Overall, this highlights a significant movement towards favoring premium PL.

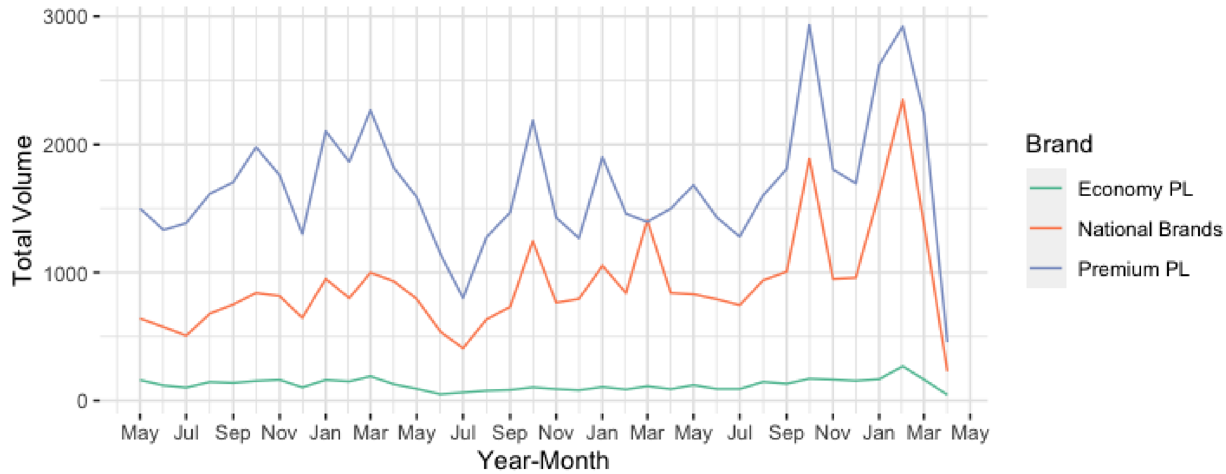

Figure 4: Volume of purchased Tex-Mex brands over time

Before conducting the analysis, we conducted a multicollinearity assessment among our key variables. Based on the correlation matrix in Table 4, it can be concluded that multicollinearity is not present among the variables. Therefore, there is no need to exclude any variables from the analysis, and mixed effects modeling can be performed without concern.

Table 3. Correlation matrix

	Year	**Brand**	**Total**	**SOV**	**LY SOV**	**NY SOV**
Year	1.000					
Brand	-0.314	1.000				
Total	-0.01	-0.013	1.000			
SOV	-0.085	-0.109	0.407	1.000		
LY SOV	0.229	-0.414	-0.288	-0.229	1.000	
NY SOV	-0.038	0.087	-0.229	-0.173	0.11	1.000

We developed a linear mixed effects model and a logistic effects model to test hypotheses 1 and 2. The first linear mixed effects model aimed to examine the relationship between customer loyalty, as expressed by the share of volume across NBs, premium and economy PLs, and the years from 2020 to 2023 and within clusters light, medium and heavy j (j=1,2,3).

We estimated reduced and full models, incorporating random and fixed effects, to determine the most suitable model with the best fit. First, we included the LYSOV variable, which stands for last year's SOV as the only independent variable. Through this approach, we investigated the impact of individuals' prior experiences with NBs, premium and economy PLs on the loyalty variable. Furthermore, we expanded the model by incorporating year and brand as independent variables to account for specific periods of economic downturns and brands. Subsequently, we considered possible interactions by controlling the LYSOV variable with year and brand variables.

For all models we allowed intercepts to differ across clusters but limited the variation of the slope parameter for LYSOV in the random model. After performing model comparison and evaluating the goodness of fit of each model, we prioritized a simple fixed full model without controlling for interactions. By following this approach, we identified the most appropriate model that captures the relationship between loyalty, expressed by SOV, and other relevant variables while considering the varying effects across clusters. The chosen model 1 is following:

$$\begin{aligned} Loyalty = \beta_{0j} + \beta_{1j}\, LYSOV_{ij} + \beta_{2j}\, NBs_{ij} + \beta_{3j}\, PremiumPL_{ij} + \beta_{4j}\, EconomyPL_{ij} \\ + \beta_{5j}\, Year1_{ij} + \beta_{6j}\, Year2_{ij} + \beta_{7j}\, Year3_{ij} + \beta_{8j}\, Year4_{ij} + \varepsilon_{ij} \end{aligned}$$

With this model, we aimed to test hypothesis 1, which examines whether consumers are inclined to increase the SOV for PLs during economic contractions. We summarize the preferred model 1 in Table 4. The intercept in our analysis is highly statistically significant, indicating that the average loyalty significantly deviates from zero when all other predictors are held constant.

Regarding the LYSOV variable, we found a positive and significant association with loyalty. Specifically, a one-unit increase in LYSOV is associated with an average increase of 0.1942 units in loyalty, while controlling for other variables. Comparing the impact of premium and economy PLs on loyalty, we observed that premium PL has a more significant effect. However, both types of PLs exhibit a significant positive influence on loyalty compared to the reference category, NBs. Although the output does not explicitly display the results for NBs, after releveling, we found that NBs have a negative impact on loyalty. Regarding the variable year, we observed that 2021 and 2022 have significant effects on loyalty compared to the reference category (2020), with the significance for 2022 being higher. On the other hand, the coefficient for the year 2023 is not statistically significant. However, it is important to note that since we do not have data for the full year of 2023 yet, the coefficient may still change as more data becomes available.

The significant positive effects observed for both LYSOV and PLs provide strong support for our hypothesis 1. These findings indicate that consumers' prior experience with brands, as represented by the LYSOV variable, positively impacts loyalty. Additionally, the significant positive effects of PLs suggest that consumers are indeed more likely to show loyalty towards PLs, after experiencing them before in times of economic contractions. These results confirm the validity of our hypothesis 1.

Table 4. Model 1 output

Variable	**Loyalty**				
	Estimate	Std. Erro	df	t value	Pr(>|t|)
(Intercept)	33.233	1.421	10.482	23.378	2.20e-10 ***
LYSOV	0.194	0.011	8695.829	17.185	< 2e-16 ***
PremPL	14.667	0.784	8787.189	18.707	< 2e-16 ***
EconPL	9.948	0.987	8565.972	10.082	< 2e-16 ***
Year2021	3.472	0.954	8787.988	3.640	0.000274 ***
Year2022	5.736	0.956	8787.934	5.997	2.08e-09 ***
Year2023	1.108	1.236	8787.704	0.897	0.370001
Number of observations	8795				
Groups: Clusters	3				

* $p < .05$. **$p < .01$. *** $p < .001$.

We employed the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) to compare different models and determine the most suitable one for explaining the relationships between our independent and dependent variables. Through this model comparison process, we found that presented model 1 provided the best fit to the data.

Compared to the null model, the predicted difference in model 1 at the 50th percentile was 4.456 units. This indicates that, on average, there is a median difference of 4.456 units between the groups or conditions being compared. Alternative models showed slightly lower predicted differences.

Furthermore, we examined the AIC and BIC values for all models. After analyzing the results, we found that the chosen model 1 had an AIC of 83397.81 and a BIC of 83461.55, while model 2 had an AIC of 83447.11 and a BIC of 83489.60, and model 3 had an AIC of 83409.25 and a BIC of 83494.23, respectively. Nevertheless, we opted for model 1 as it showed the lowest AIC and BIC values among the options.

We were unable to examine the loyalty of consumers who continue to patronize NBs during economic downturns with model 1. Therefore, to specifically test hypothesis 2, we utilized model 2, which explores whether consumers remain loyal towards NBs in such challenging economic contexts.

After using a logistic mixed effects model, where the LYSOV variable stands for previous year SOV of NBs and loyalty is represented as a dummy variable, we decided to proceed in favor of a fixed reduced model, prioritizing its goodness of fit. The model 2 is structured as follows:

$$\begin{aligned} Loyalty = \beta_{0j} + \beta_{1j}\, LYSOV_{ij} + \beta_{2j}\, NBs_{ij} + \beta_{3j}\, Year1_{ij} + \beta_{4j}\, Year2_{ij} + \beta_{5j}\, Year3_{ij} \\ + \beta_{6j}\, Year4_{ij} + \varepsilon_{ij} \end{aligned}$$

In Table 5 we present our model 2 output, which shows that the estimated coefficient for LYSOV is highly statistically significant. This suggests that an increase in LYSOV is associated with a substantial increase of 2.698 in the log-odds of being loyal to NBs.

All three years (2021, 2022, and 2023) are statistically significant regarding the effect of the years on NBs' loyalty. They significantly impact the log-odds of being loyal to NBs compared to the reference category (2020). Notably, the coefficient for 2023 is slightly higher than the coefficients for the other years. This could indicate that consumers have started to recover from the challenges posed by the COVID-19 pandemic and energy crisis in 2022-2023. Therefore, some consumers are now increasing their NBs' SOV, reflecting a potential shift in loyalty patterns. However, since the data for 2023 is still being collected, changes may be observed.

Table 5. Model 2 output

Variable	NB Loyalty				
	Estimate	Std. Erro	df	t value	Pr(>|t|)
(Intercept)	-18.434	3.545	-5.200	23.378	1.99e-07 ***
LYSOV	2.698	0.071	37.754	17.185	< 2e-16 ***
Year2021	15.882	3.544	4.482	3.640	7.40e-06 ***
Year2022	15.949	3.542	4.502	5.997	6.74e-06 ***
Year2023	16.064	3.543	4.534	0.897	5.79e-06 ***
Number of observations	8795				
Groups: Clusters	3				

* $p < .05$. ** $p < .01$. *** $p < .001$.

We performed model comparisons and used various information criteria to assess the quality of model 2. Our objective was to identify the best-fitting model for the data. We compared model 2 with alternative models and with the null model. When comparing the fixed and random models, we favored the fixed model 2 based on lower AIC (5721.3 vs. 5821.7) and BIC (5763.8 vs. 5857.1) values. The chi-square test results also supported the preference for the fixed model 2, as it showed a significant difference from the random model. Overall, fixed model 2, which includes both fixed and random effects, provides a significantly better fit to the data compared to random model 2.

To further evaluate the chosen model 2, we calculated the Nagelkerke Pseudo R-squared, which quantifies the proportion of variance explained by the model compared to the null model.

The calculated Nagelkerke Pseudo R-squared value was 0.402403, indicating that model 2 explains approximately 40.24% of the variation in the dependent variable, demonstrating its superior performance over the null model.

To examine the cross-category effect for hypothesis 3, we focused on the comparison between economy and premium PLs. After analyzing the data, we identified the most popular subcategories among our sample consumers. These subcategories include tortillas (1), chips (2), spices (3), and salsas (4). Collectively, these four subcategories account for approximately 83% of the purchases of PLs across all subcategories. By printing a frequency table, we were able to observe that the most preferred products across all clusters are tortillas, chips, and salsas.

Using a Markov chain transition matrix, we analyzed how consumers switch between the selected subcategories. The charts illustrate these switching patterns and probabilities (Figure 5). As shown in the images above, those that have purchased tortillas (1) are 33% more likely to try salsas (4) and around 16% more likely to try chips (2) and spices (3). Consumers that bought salsas (4), on the other hand, have a lower probability of 3% to try tortillas (1) but 30% probability to try spices (3), which aligns with the brand extension concept where consumers are more likely to try products that are complementary or related within the same subcategory (Swaminathan, 2003; Richards et al., 2015), supporting hypothesis 3.

Moreover, the results returned by the transition matrix suggest that consumers tend to repeat their purchases in most cases. For example, consumers who initially purchased tortillas (1) repeated their purchases in 12,891 cases, which corresponds to a probability of approximately 75%. Similarly, those who bought chips (2) repeated their purchases in 7,278 cases, representing a probability of around 65%. On the other hand, the subcategory of spices (3) and salsas (4) have slightly lower probabilities of 48% and 57%, respectively, for repeat purchases. These findings highlight the tendency of consumers to show repeat purchase behavior, particularly for certain subcategories. The higher probabilities of repeat purchases suggest a level of loyalty and satisfaction with above mentioned subcategories.

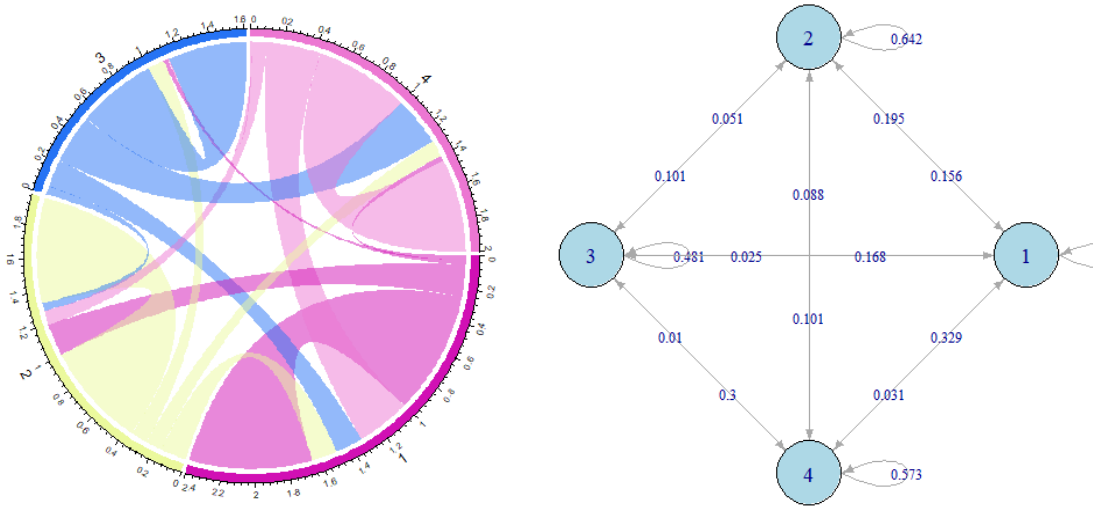

Figure 5: Markov chord diagram and Markov graph with probabilities for H3

Through a similar approach, we chose to employ another transition matrix to understand the likelihood of consumers trying different private label tiers and test our hypothesis 4. To refine our analysis and test the cross-tier effects, we included only the economy (2) and premium (3) PLs in the dataset. This allowed us to focus on these specific brand tiers and explore their distribution within different clusters. By counting the occurrences of each brand, we saw that premium PL appeared in 24,227 instances, while the economy PL appeared in 2,146 instances. To further understand the purchasing patterns, we examined a frequency table which revealed that light and medium buyers were more likely to purchase premium PL. Surprisingly, heavy buyers also demonstrated a stronger inclination towards the premium private label brand. This observation is not aligned with the notion that heavy buyers prioritize lower prices when making their purchasing decisions (Ailawadi et al., 2008).

Based on the findings from the transition matrix, we observed distinct patterns in repurchasing intention of premium and economy PLs (Figure 6). Specifically, there was a high probability of approximately 95% for repurchasing premium PL, indicating strong loyalty towards these products. On the other hand, the likelihood of repurchasing economy PL was lower at around 46%.

Additionally, the cross-tier analysis revealed interesting dynamics between the two tiers. There was a 53% probability of consumers trying economy PL after initially purchasing premium PL, suggesting that some consumers may explore more affordable options after experiencing premium products or shifting their initial biases of trying PLs. Conversely, the probability of trying premium PL after initially purchasing economy PL was significantly lower at only 4.7%, supporting hypothesis 4.

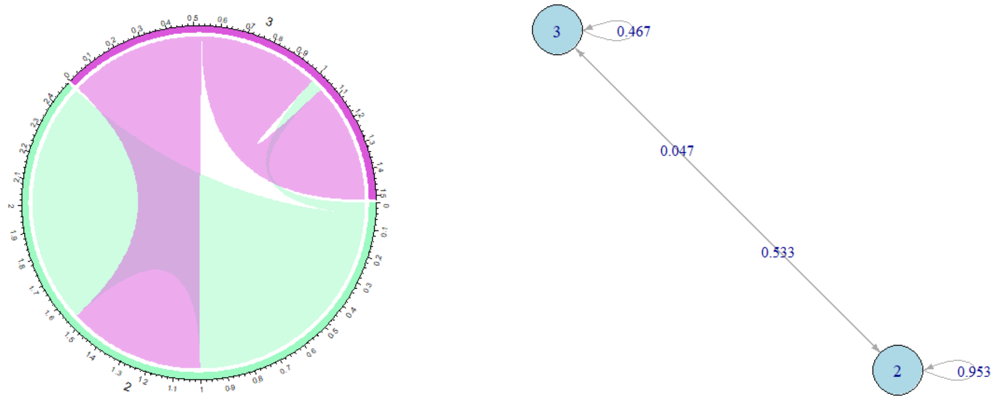

Figure 6: Markov chord diagram and Markov graph with probabilities for H4

These findings highlight a clear preference for repurchasing premium PL and a higher likelihood of transitioning from premium to economy PL.

6. Theoretical Implications

In this thesis, our contribution to the existing literature focuses on exploring loyalty towards private labels, specifically during periods of economic downturn. Our research aims to fill a gap in the literature by examining the cross-category impact of PLs on loyalty. Additionally, we aim to differentiate between different tiers of PLs to better understand their influence on loyalty formation.

Our research collected data during the COVID-19 pandemic, a period characterized by significant economic challenges. Our observations indicate that customers began to show signs of recovery starting in July 2021, with an increase in consumption of national brands. However, it is important to note that the consumption of premium PLs remains higher. Given the limited information available on customer purchasing intentions, we can infer that either some consumers are still experiencing the effects of the economic crisis, therefore continuing preferring a premium PL over NBs; or that consumers have developed loyalty towards the premium PL in the long run. Our research findings support two distinct theories: firstly, we confirm an increase in PLs' consumption during the studied period, aligning with the notion that consumers are more likely to turn to PLs during economic downturns (Ailawadi et al., 2008). Secondly, we observe that despite the rise in PLs consumption, a significant portion of customers continue to maintain loyalty towards NBs (Cuneo et al., 2019).

Furthermore, our research uncovered a strong cross-category effect among PL subcategories, aligning with the principles of brand extension theory. This indicates that when consumers try a specific PL subcategory, they are more likely to explore and experiment with other subcategories within the same PL category (e.g. Tex-Mex). This behavior can be attributed to the presence of complementarity and relevance among the products within the PL category (Swaminathan, 2003; Richards et al., 2015).

Finally, we found compelling evidence of a cross-tier effect between economy and premium PLs. Our findings indicate a stronger transition from premium to economy PL, compared to the reverse transition from economy to premium PL. These results align with previous research by Keller et al. (2022) and Aliawadi et al. (2008), which suggested a similar pattern of consumer behavior.

Our thesis presents evidence that challenges the assertion made by Ailawadi et al. (2008) by demonstrating that heavy PL buyers do not exhibit a higher consumption of economy PLs. In fact, our research reveals the opposite pattern, indicating that the heavy cluster tends to patronize a premium PL over economy PL. This suggests that the loyalty of heavy PL buyers lies more with premium PLs rather than economy PLs, contradicting the assumption that heavy buyers prioritize lower prices. Instead, it implies that the heavy cluster seeks quality beyond price when making their purchasing decisions. The preference for premium PLs among the heavy cluster may be attributed to the perceived features, attributes, and higher quality associated with these products.

7. Managerial Implications

Our empirical findings provide valuable insights for retailers, particularly in understanding the cross-category and multi-tier effects in loyalty formation towards PLs. The findings support the notion that during economic downturns, customers are more likely to increase their purchases of PLs. However, our analysis also reveals that some consumers remain loyal to NBs, indicating that brand awareness and risk perception still influence their decision-making process.

Since manufacturers tend to reduce their marketing expenditures during economic downturns, retailers should seize this opportunity to effectively promote PLs. This can help increase awareness and address any risk perception related to the quality of PLs. Implementing marketing tactics, such as communicating the use of high-quality ingredients and employing distinctive packaging, can help retailers attract and convert some of the loyal customers of NBs (Ter Braak, 2014).

Understanding why consumers are not repurchasing certain subcategories is crucial, especially considering the high repurchasing intention observed for the top four subcategories, particularly the essential ones. For instance, in our analysis, spices and salsas showed a lower repurchasing intention compared to tortillas and chips, potentially indicating that consumers perceive these specific PL subcategories to have lower quality or missing features compared to NBs.

Our analysis revealed that the cross-category effect varied across different subcategories. Interestingly, the probability of consumers trying another subcategory ranged from as high as 30% to less than 5% in certain cases. This finding suggests that retailers delve deeper into the underlying factors influencing these variations and develop effective strategies to promote subcategories with lower transition probabilities. Thus, retailers could consider creating bundles that include both high-performing and low-performing products. By bundling these products together, retailers can increase consumer's willingness to try another subcategory.

It is important to ensure that the bundled products are complementary and have a high perceived fit, so that it makes sense for consumers to purchase them together (Swaminathan, 2003). For instance, offering a bundle of chips and salsa can encourage consumers to explore the salsa subcategory in future purchases.

Our findings on the cross-tier effect suggests that consumers may be more inclined to try economy PL, but the reverse transition to upgrade to premium is less likely. As a result, retailers can see that once consumers try premium PLs, the perception of PLs in general improves. Retailers can leverage this insight to strategically position and promote their PL offerings. By encouraging initial trials of premium PLs, retailers can potentially enhance consumers' overall perception and acceptance of PLs, leading to increased engagement with other PL subcategories.

8. Study limitations

Our study has important limitations that need to be considered. Firstly, the sample consisted of individuals from Norway, which may limit the applicability of our findings to broader populations. Cultural, social, and economic factors specific to Norway can influence consumer behavior differently than in other regions or countries. Thus, caution should be exercised when applying our findings, and further research is necessary to extend our conclusions to more diverse samples. On another note, privacy concerns prevented us from collecting detailed demographic information, limiting our ability to study variations in private label dynamics across different demographic groups.

Secondly, the data we utilized was unbalanced, with variations in the number of observations across individuals and over time. This unbalanced nature of the data introduces potential bias and could restrict the generalizability of our findings. Furthermore, the dataset was derived from a loyalty app, which means some consumers may have forgotten to scan their purchases or encountered technical issues, resulting in missing data.

Moreover, we had limited access to predictors, which constrained our ability to predict certain outcomes in our analysis. Since we did not have access to spending data of consumers' preferred retailers, we used the share of volume concept instead of the share of wallet. Additionally, our analysis did not include data on price changes or promotional activities, which may significantly impact consumer decision-making.

It is important to note that we assumed the initial observations per customer in our data is treated as their first interaction with a specific brand, as we lacked access to previous data prior to 2020. Our study relied on monthly data intervals, potentially overlooking finer temporal variations and short-term dynamics of private labels.

Furthermore, the scarcity of prior studies focusing on PL tiers and their interactions across different product categories limited our ability to compare and benchmark our findings.

Lastly, the large sample size in our study, while providing statistical power, posed challenges in data and time management.

Considering these limitations is crucial for interpreting our results and understanding the scope and potential implications of our findings. Future research should address these limitations to further enhance our understanding of PL dynamics.

9. Future research

This thesis not only contributes to the current body of knowledge but also identifies potential areas for future research. While our study primarily focuses on loyalty formation during economic downturns, an important question remains unanswered: will customers maintain their loyalty to private labels once the economy fully recovers? Exploring this question is crucial for gaining deeper insights into the factors that influence loyalty towards PLs.

It is important to investigate whether the loyalty observed during economic downturns is driven by changing consumer perceptions or if it is contingent upon the prevailing economic conditions. Conducting further research to examine whether loyalty towards PLs persists after the economy recovers can provide valuable insights into the long-term sustainability of loyalty behaviors.

Furthermore, it is recommended to incorporate additional predictors when investigating consumer loyalty towards PLs. By integrating consumer data with survey responses, researchers can gain a better understanding of the demographics, socioeconomic status, and other underlying factors that influence consumers' purchasing intentions and brand preferences.

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