

**A New Era in Retail:
Private-Label Production by National-Brand Manufacturers and
Premium-Quality Private Labels**

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Proefschrift

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1. Introduction

Private labels (PLs) already account for around a third of grocery sales by value in most markets, while in Switzerland and the U.K., penetration rates are fast approaching half of all grocery sales (PlanetRetail 2010a). Absolute sales numbers are equally impressive. Wal-Mart’s PL sales, for example, top \$100 billion in 2010 (PlanetRetail 2010b). In 2010, IGD (2006) expected the value of the European PL market to reach €431 billion.

Given these impressive numbers, a lot of research has investigated the evolution of PLs. First, several studies have identified factors that explain PL success, such as an increased retail concentration (Steenkamp and Dekimpe 1997), a reduction in the perceived quality gap between the national brand (NB) and the PL (Hoch and Banerji 1993), a suffering economy (Lamey et al. 2007), increased retailer promotional support (Dhar and Hoch 1997), and the growing popularity of hard discounter formats (Steenkamp et al. 2004). Second, the demographic and psychographic characteristics of PL buyers have been studied extensively. According to Richardson, Jain, and Dick (1996), the typical PL consumer is price-, not image-, sensitive, middle-income, and educated. Their results were extended by Ailawadi, Neslin, and Gedenk (2001), who found that PL buyers are price-, not quality-conscious, store loyal, not impulsive, and highly motivated to conform.

Despite the enormous and still growing success of PLs, several issues remain largely unexplored. First, in the face of these large PL volumes, PL production issues arise. A substantial part of this production is accounted for by dedicated PL manufacturers such as, e.g., Cott Corporation (soft drinks) or McBride (household and personal care). However, in the U.S. alone,

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it has been estimated that over half of the NB manufacturers pursue a dual strategy, and engage in PL production next to their NB activities (Kumar and Steenkamp 2007). Moreover, while previously suppliers were only able to obtain arm's length contracts, according to a recent report by the Private Label Manufacturers Association (PLBuyer 2010), stronger PL supplier-retailer partnerships are now advanced by retailers to maintain and grow their PL market share. Despite "the richness of the phenomenon and the high level of managerial interest," PL production has received limited empirical attention in research to date (Sethuraman 2009, p. 771).

Second, although standard PLs are present in almost every product category (de Jong 2011), many retailers wish to expand their PL offerings even further. As a result, retailers nowadays, implement a differentiated three-tiered PL portfolio (Martos-Partal and González-Benito 2011), and include an economy and premium PL line in addition to the standard PL. Even though premium PLs are considered "one of the hottest trends in retailing" (Kumar and Steenkamp 2007, p. 41), prior research on premium PLs is limited.

In line with these observations, the major objective of this dissertation is to shed light on the consequences and/or antecedents of these two recent developments for retailers, NB manufacturers and dedicated PL suppliers. This dissertation starts, in §1.1, with a review of PL production from a manufacturer's and retailer's perspective, and subsequently discusses the increasing prevalence of premium PLs in §1.2. In §1.3 the major contributions of this dissertation are outlined. Finally, §1.4 concludes with a short overview of this dissertation.

1.1 Private-Label Production

Although retailers can produce PLs themselves, this hardly ever occurs (Mills 1995). They usually outsource their PL production to either dedicated PL manufacturers or NB manufacturers. Thus far, there is no consensus as to which strategy is preferable from both a manufacturer's and retailer's perspective. The question on who produces a retailer's PLs received only limited attention. This is not surprising, given that most NB manufacturers keep their involvement in PL production very confidential (de Jong 2007), out of fear that such knowledge may damage their carefully built-up image (Gomez-Ariaz and Bello-Acebron 2008). While a first set of papers has developed game-theoretic models to study the issue (see e.g. Kumar, Radhakrishnan, and Rao 2010; Gomez-Arias and Bello-Acebron 2008), none of the aforementioned studies provides empirical support for the various contentions.

From a Manufacturer's Perspective

Due to increased PL competition, NB manufacturers increasingly pursue a dual-branding strategy, although only a few companies, like Dole, Heinz, and Kraft, are willing to openly acknowledge this. In contrast, other NB manufacturers, like Coca-Cola, Heineken, Kellogg, and Gillette, explicitly state not to engage in PL production. Clearly, disagreement exists on whether PL production by NB manufacturers is beneficial to a NB manufacturer. The disagreement concerning PL production comes from the existence of several benefits and drawbacks that such production could entail for NB manufacturers, along with considerable ambiguity concerning the validity of these acclaimed benefits and drawbacks (Kumar and Steenkamp 2007). One of the benefits, and an important reason why NB manufacturers consider producing PLs, is that they assume it will improve their relationship with the retailer, and that they will benefit subsequently from the retailer goodwill that is created (Quelch and Harding 1996; Kumar and Steenkamp 2007). However, on this specific advantage of PL production, there is a lack of consensus. According to Dunne and Narasimhan (1999), PLs may represent a neglected opportunity for those who seek closer ties with retailers. Others argue that there is no evidence of PL production leading to preferential merchandising support (Quelch and Harding 1996; Kumar and Steenkamp 2007). Still others consider goodwill “a load of baloney!” (Lincoln and Thomassen 2008 p. 208), and believe PL production even results in “a long-term deterioration of the overall relationship [...] once the honeymoon is over” (Glemet and Mira 1993 p. 88). This lack of a definitive answer is disturbing, and more clarity on this issue is needed.

Next to this potential benefit, we will also look into a potential drawback of PL production by NB manufacturers. NB manufacturers are reluctant to produce PLs out of fear that the retailer will demand the lowest costs possible - otherwise it will simply shift to a cheaper manufacturer (Dunne and Narasimhan 1999). Most extant research indeed argues that PL manufacturers need to supply close to marginal costs as they have little market power and can easily be squeezed. However, dual branders offer more quality assurance (Sethuraman 2009) and innovative capacity (Kumar and Steenkamp 2007) than dedicated suppliers. Moreover, manufacturers historically only obtained arm's length contracts, while retailers nowadays develop more intense relationships with a select set of preferred PL suppliers (de Jong 2011). Hence, we argue that some PL suppliers may be in a position to leverage higher PL wholesale prices.

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Finally, next to the potential consequences, this dissertation will also provide insight into the drivers of why certain NB manufacturers are more likely to be involved in the production of PLs than their competitors. Gomez-Arias and Bello-Acebron (2008) derive that a NB manufacturer might be more or less willing to supply the PL depending on the quality positioning of the PL. A NB manufacturer's incentive to produce PLs is particularly high if the PL matches a manufacturer's NB quality, as NB manufacturers then have the ability to influence the PL's positioning. However, no empirical support is provided. The variation in willingness to produce PLs may also be driven by differences in the manufacturers' sales growth (Kumar and Steenkamp 2007), or in their level of brand image at stake (de Jong 2007). The decision of whether or not a NB manufacturer should engage in PL production is not an easy one. Hence, it is not surprising that most NB manufacturers are still struggling with the issue (de Jong 2007).

From a Retailer's Perspective

Retailers can either outsource their PL production to dedicated PL suppliers, or they can opt to work with dual branders. Moreover, a retailer also has to choose whether to build an intense relationship with an already existing supplier or to start a new one, as stronger PL supplier-retailer partnerships are becoming more and more essential for retailers to maintain and grow their PL market share (PLBuyer 2010). Finally, a retailer has to decide on its extent of multisourcing, i.e. how much to diversify its PL supply across several simultaneous suppliers.

A retailer may in some cases prefer to collaborate with (i) a dedicated supplier or a dual brander, and (ii) in the latter case, prefer to work with some NB manufacturers as opposed to others. Some suppliers may provide more quality assurance (Sethuraman 2009), have more innovative capacity (Kumar and Steenkamp 2007), or are perceived as more credible (Sudhir and Rao 2006) than others. In other instances (where these attributes are less important), the retailer may prefer to assign his PL production to a dedicated PL producer (who does not have any NBs of his own), rather than to a dual brander. While dedicated PL suppliers are believed to offer less flexibility and quality control than dual branders, they have the advantage of low-cost procurement (Kumar and Steenkamp 2007). Hence, they may, for example, be particularly well suited to deliver less differentiated commodity goods.

An important consequence for the retailer of this choice is reflected in a retailer's PL margins. Dedicated PL suppliers are high-volume producers which follow a price-led strategy

(Kumar and Steenkamp 2007). More NB-focused suppliers, in contrast, are thought to have a better negotiation position as also their NBs are valuable to a retailer. Because of this, a retailer's PL margins may depend on who physically produces the PL, i.e. a dedicated PL supplier or a dual brander. Further heterogeneity in the nature of the channel relationships between the retailer and his PL suppliers, e.g. in terms of its intensity, is expected to affect a retailer's PL margins as well.

1.2 Premium Private Labels

NBs suffer from PLs, which has led some NB manufacturers to engage in PL production. In the meanwhile, retailers have even further developed their PL portfolio. Premium PLs have emerged, which are classified as top-quality tier products (Kumar and Steenkamp 2007). They are positioned as close substitutes to premium-quality NBs (Geyskens, Gielens, and Gijsbrechts 2010), offering unique features in terms of taste, origin, and/or ingredients (Bazoche, Giraud-Héraud, and Soler 2005). Premium PLs have been introduced by, for example, Safeway (Safeway's Select) in the U.S., and by Albert Heijn (Albert Heijn's Excellent) in Europe. Of all PL tiers, the market shares of premium PLs have been growing the fastest (Dobson and Chakraborty 2009).

Previous PL research assumed that PLs offer less quality than the top NBs and are always priced at a discount (Dhar and Hoch 1997). Yet, currently, premium PLs offer better quality than leading NBs, and premium PL prices can exceed NB prices (Kumar and Steenkamp 2007). We assess the effect of a retailer's increased focus on PL differentiation on his PL margins.

Even though premium PLs are a key trend in retailing (Kumar and Steenkamp 2007), retailers apparently do not feel the need to extend premium PLs to every category in the store (IGD 2006). Retailers are selective in picking their battles with top-quality NBs (Kumar and Steenkamp 2007), especially since retailers are primarily interested in the performance of the category as a whole (Sayman and Raju 2004). While the drivers of standard PL offerings have been studied (e.g. Raju, Sethuraman, and Dhar 1995; Sayman and Raju 2004), the drivers of premium PL presence have not been investigated yet (Sethuraman 2009). The dissertation will address this.

1.3 Contribution of the Dissertation

Our objectives are twofold. First, we aim to contribute to the academic literature. As such, we will respond to Sethuraman's call (2009, pp. 771-773) for more empirical research on both the antecedents and consequences of PL sourcing. To this extent we will investigate in chapter 2 the determinants, as well as the effect on retailer goodwill, of NB manufacturers' engagement in PL production. Relatedly, we study the influence of PL supplier characteristics on a retailer's PL percentage margins in chapter 3. Moreover, we will investigate how the retailer's PL percentage margins differ for PL SKUs from different tiers in chapter 3. Hence, chapter 3 also contributes to the emerging stream of research on PL tiers. Chapter 4 will offer additional insights into why retailers offer premium PLs in some categories, but not in others. Faced with considerable uncertainty given the recency of the premium PL phenomenon, retailers may learn from the prevailing practices of other industry participants.

Our second contribution originates from the data we use and the setting of our studies. Chapter 2 focuses on the discounter format, and therefore contributes to the (thus far) limited empirical literature (Cleeren et al. 2010, Deleersnyder et al. 2007) on this fast-growing retail format. To provide insights on the recent phenomena previously discussed, we need information that typically is highly confidential. For example, getting access to data on the identity of PL suppliers, their relationship with the retailer, and retailer margins realized on PL SKUs is not a trivial task. We were fortunate to obtain such unique data.

1.4 Outline of the Dissertation

In sum, this dissertation consists of three main chapters that focus on the antecedents and/or consequences of (i) PL production by NB manufacturers, (ii) the nature of the supplier-retailer relationship, and (iii) premium PLs. An overview of the focus of these three chapters can be found in Table 1.1. Despite their common focus on recent PL developments, each chapter is self-contained and can be read independently. Each chapter starts with its own introduction and ends with a conclusion and/or discussion of the major findings.

Chapter 2 -- "Sleeping With the Enemy: Does Private-Label Production by National-Brand Manufacturers Create Discounter Goodwill?" -- studies the antecedents and consequences of PL production by NB manufacturers in a discounter setting. A major motivation for NB manufacturers to engage in PL production is to seek closer ties with their retailers, offering an

opportunity to create goodwill (Dunne and Narasimhan 1999). So far, there remains considerable controversy in the (largely anecdotal) literature as to whether PL production really creates goodwill, or whether this is just wishful thinking on the part of the NB manufacturers. We aim to provide a clear-cut answer to this question and develop a model that allows to test whether PL production by a NB manufacturer results in a more favorable position for obtaining shelf presence at a discounter relative to NB manufacturers that do not produce PLs for that discounter. Discounters have a PL dominated assortment where the limited spots for NBs are in high demand with NB manufacturers. This chapter also takes into account that there is substantial variety among NB manufacturers in their likelihood to produce PLs. A NB manufacturer’s willingness to produce PLs may, for example, be driven by their level of brand image at stake (de Jong 2007). Moreover, the retailer may be more inclined to collaborate with some NB manufacturers to produce its PLs than with others. Using data across 400+ manufacturer-category combinations with two different discounters, we not only theorize and empirically test whether PL production by NB manufacturers indeed creates retailer goodwill, we also consider the potential drivers of a NB manufacturer’s engagement in PL production, both from the manufacturer’s and from the discounter’s point of view.

**TABLE 1.1
FOCUS OF RESPECTIVE CHAPTERS**

| | | Chapter 2 | Chapter 3 | Chapter 4 |
|--|--------------|------------------|------------------|------------------|
| PL Supplier Type | Antecedents | √ | | |
| | Consequences | √ | √ | |
| PL Supplier-Retailer Relationship | Antecedents | | | |
| | Consequences | | √ | |
| PL Differentiation | Antecedents | | | √ |
| | Consequences | | √ | |

Chapter 3 -- “Why Retailer Private-Label Margins Differ Within Categories” -- considers another dimension of retailer goodwill. While PLs have been introduced in over 90% of all consumer packaged goods categories (Kumar and Steenkamp 2007), most retailers still wish to proliferate their PL offering even further, for example with a premium quality PL (as will also be discussed in chapter 4). An important reason for retailers to further invest in PLs is the high margins that PLs generate, which has been acknowledged in both the business and academic

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press. However, retailer PL percentage margins are not equally high across categories (Ailawadi and Harlam 2004). In this chapter, we aim to show that a retailer's PL percentage margins also differ within categories, given recent changes in the retail environment, including (i) closer relationships between some PL suppliers and retailers, (ii) PL differentiation across quality tiers, including premium PLs, and sizes, and (iii) the emergence of PL production by NB manufacturers. Using unique supplier and margin information on 1,545 PL SKUs in 211 product categories of a major European retailer, we theorize and empirically test how these factors cause a retailer's percentage margins to also differ substantially across PL SKUs in the same category.

Chapter 4 -- "Why Premium Private Label Presence Varies by Category" -- explores the premium PL trend in further detail. Despite their popularity, retailers do not extend their standard PL with a premium PL across the whole scope of categories in the store (IGD 2006). Retailers are selective in picking their battles with top-quality NBs (Kumar and Steenkamp 2007). Based on an analysis of four European retailers that already carry a premium PL line for several years, we provide insights into which categories are more or less conducive to premium PL listings. While several studies have investigated the drivers of standard PL offerings (e.g. Raju, Sethuraman, and Dhar 1995; Sayman and Raju 2004), conditions conducive to premium PLs have not been explored yet (Sethuraman 2009). In this chapter, we will argue whether and how the collective wisdom from the standard PL context can be extended to the premium PL context. We argue that such presence depends on (i) the category's market structure, (ii) the marketing conduct in the category, (iii) the pioneer's premium PL presence/absence in the category, (iv) the category's growth potential, and (v) the category's role for the retailer.

Chapter 5, finally, summarizes the main findings and provides general conclusions. In addition, the implications of the different studies for retailers, NB manufacturers, and PL suppliers are discussed. Finally, we conclude this chapter with a discussion of the limitations of this research, and offer potential avenues for future research.

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2. Sleeping With the Enemy: Does Private-Label Production by National-Brand Manufacturers Create Discounter Goodwill?

2.1 Introduction

PLs are becoming increasingly important in grocery retailing. They already account for 43% of the total consumer packaged goods (CPG) consumption in the U.K., for 32% in Germany, 31% in Spain, and 17% in the U.S. (ACNielsen 2011). Absolute sales numbers are equally impressive. Wal-Mart's PL sales, for example, amounted to \$132 billion in 2008 (PlanetRetail 2009, 2010a). By 2010, IGD (2006) expected the value of the European PL market to reach €431 billion. In the face of these large PL volumes, PL production opportunities arise. A substantial part of this production is accounted for by dedicated PL manufacturers. However, several NB manufacturers – such as Alcoa (which owns Reynolds Wrap aluminium foil), Parmalat, and H.J. Heinz – have adopted an “if you can't beat them, join them” attitude, and are engaging in PL production (Dunne and Narasimhan 1999; Quelch and Harding 1996). In the U.S., it has been estimated that over half of the NB manufacturers pursue a dual strategy, and engage in PL production next to their NB activities (Kumar and Steenkamp 2007).

A major motivation for NB manufacturers to engage in PL production is, as the former CEO of Ontario Foods testified, “to cultivate a better relation with retailers” (Littman 1992, p. 2). According to Dunne and Narasimhan (1999), PL production represents a neglected option for those who seek closer ties with their retailers, offering an opportunity to create retailer goodwill. IGD's European Private Label Survey revealed that 47% of all suppliers surveyed believe that strengthening their relationship with the retailer could be a major advantage of supplying PLs (IGD 2006). However, there is substantial variety in the willingness of NB manufacturers to

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produce PLs. While some NB manufacturers, like Dole and Kraft, are eager to produce PLs, other manufacturers, like Coca-Cola and Heineken, have explicitly stated to never engage in PL production. This variation in willingness to produce PLs may be driven by differences in the manufacturers' sales growth (Kumar and Steenkamp 2007), in their ability to influence the produced PL's quality (e.g. by lowering PL quality or by producing a PL that imitates a competitive NB to preserve their own sales) (Dunne 1999), or in their level of brand image at stake (de Jong 2007). Moreover, the retailer may be more inclined to collaborate with some NB manufacturers to produce its PLs than with others, as some may provide more quality assurance (Sethuraman 2009), or have higher innovative capacity (Kumar and Steenkamp 2007) than others. In other instances, the retailer may prefer to assign his PL production to a dedicated PL producer (who does not have any NBs of his own), rather than to a dual brander, as the former are known to be more cost-focused. Whether or not a given NB manufacturer produces PLs for a given retailer is therefore driven by manufacturer as well as retailer considerations. This will be reflected in our subsequent theorizing.

The antecedents and consequences of PL production by NB manufacturers have received limited empirical attention in research to date. Due to the secrecy surrounding who produces retailers' PLs, it is notoriously difficult to obtain the required data. We undertook a massive data collection effort, covering detailed information on over 400 manufacturer-category combinations and two retailers, to empirically test whether PL production by NB manufacturers indeed creates retailer goodwill, while also considering the potential drivers of this PL production.

We test our hypotheses in a discount setting, where we focus on the prototypical hard discounter, Aldi, and Europe's largest soft discounter, Mercadona. Discounters are characterized by a limited assortment that is dominated by PLs, relatively small shopping areas, and very competitive prices.¹ To offer lower prices, they typically use a simplified, 'no-frills', store format. Hard discounters typically offer fewer than 1,400 SKUs in stores of around 1,000 square meters. Soft discounters, in contrast, have a more extended range of between 1,400 and 7,000 SKUs, which are sold in stores of around 1,500 square meters. In addition, the store environment is somewhat better, and also the fraction of NBs in the assortment is larger compared to hard discounters (IGD 2002).

¹ As such, they are distinct from every-day-low-price (EDLP) retailers such as Wal-Mart in the U.S., and from large supermarkets as Carrefour and Tesco in Europe (Cleeren et al. 2010).

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We chose the discount setting for two reasons. First, it has clear contemporary value. Discounters are the fastest growing retail format, with worldwide revenues forecasted to increase by roughly 60% over the next five years (PlanetRetail 2010b; Steenkamp and Kumar 2009). Discounters de-emphasize NB offerings in their assortment, and focus predominantly on their PLs. Only recently, they have started to allow a limited number of NBs into their assortment (Deleersnyder et al. 2007).² Given their impressive market share growth, NB manufacturers have come to realize that they cannot afford the luxury of not doing business with discounters (Thomson Reuters 2009). This results in a very competitive setting with numerous candidate NB manufacturers competing for a limited number of spots (BusinessWeek 2005). One way in which NB manufacturers hope to gain a discounter's goodwill, and thereby improve the odds of obtaining shelf presence for their NBs, is by producing PLs for the discounter.

Second, the discount setting allows us to test our ideas in a more controlled, natural experiment-like, setting. While many alternative manifestations of retailer goodwill (besides shelf presence) should be taken into account at traditional retailers, such as reduced slotting allowances, lower promotional fees, a higher extent of pass-through, and/or more promotional feature/display support (most of which are also hard-to-get-data), this is not the case for discounters. Discounters typically do not charge slotting allowances or promotional fees, and their format is characterized by very limited promotional activity (PlanetRetail 2010b). Since especially one form of retailer goodwill (viz., shelf presence) is plausible for NB manufacturers dealing with discounters, the discount setting offers a cleaner and more controlled environment for studying the effects of PL production by NB manufacturers on retailer goodwill.

We develop a model that allows to test whether PL production by a NB manufacturer results in a more favorable position for obtaining shelf presence at a discounter relative to NB manufacturers that do not produce PLs for that discounter. Moreover, our model explains why certain NB manufacturers are more likely to do so than others by incorporating several observable drivers of a NB manufacturer's engagement in PL production, both from the manufacturer's and from the discounter's point of view: the extent of sales growth, the relative ease of producing high-quality products in the category, and the marketing tools used by the NB manufacturer to position his NBs. As also other characteristics may play a role, we correct for the influence of unobserved determinants through a selection model.

² Aldi relied even exclusively on its PLs for many years (PlanetRetail 2006a).

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The paper is organized as follows. First, we review the limited literature on PL production by NB manufacturers. Then, we present our conceptual framework and hypotheses. Next, we discuss the methodology, data, and empirical findings. The final section discusses implications for researchers and managers, and provides suggestions for further research.

2.2 Literature Review

Despite “the richness of the phenomenon and the high level of managerial interest,” surprisingly little research has studied PL production by NB manufacturers (Sethuraman 2009, p. 771). A first set of papers has developed game-theoretic models to study the issue. Kumar, Radhakrishnan, and Rao (2010), for example, consider the retailer’s decision to work with either a dedicated PL supplier or a dual brander. They focus on a two-level supply chain including a retailer, a NB manufacturer, and a dedicated (independent) manufacturer. Depending on whether the dedicated supplier or the NB manufacturer produces the retailer’s PLs, a two-vendor or one-vendor regime emerges. Based on the size of the retailer’s quality- versus price-sensitive customer segment, the retailer is shown to be better off with either the NB manufacturer or a dedicated (independent) PL manufacturer. Retailers with a large price-sensitive customer segment would not prefer a NB manufacturer to supply their PLs: NB manufacturers would lower PL quality (to preserve their own sales), and this is only profitable for the retailer if the quality-sensitive (NB prone) segment is large. Interestingly, Kumar, Radhakrishnan, and Rao (2010, p. 156) point out that their analysis does not apply to discount stores, as these are very much focused on the low-end, highly price-sensitive, segment.

Other studies have approached the PL production decision from the point of view of a manufacturer who has to decide whether or not to engage in PL production for a given retailer. Using a model of vertical differentiation, Gomez-Arias and Bello-Acebron (2008) derive that, depending on the PL’s quality positioning, a NB manufacturer might be more or less willing to supply the PL. They distinguish between high-quality and low-quality NB manufacturers. The pressure to produce PLs is the highest when the PL enters the market at a quality level similar to the manufacturer’s NB quality. Hence, a high-quality NB manufacturer wants to produce a high-quality PL to pre-empt competition and to be able to position the PL such that it competes with other NBs and not his own. Wu and Wang (2005), in turn, show analytically how PL production by one NB manufacturer can be used to mitigate promotional competition with other NB

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manufacturers. However, also this study may be less applicable in a typical EDLP-based discount setting, where promotions are largely absent to start with.

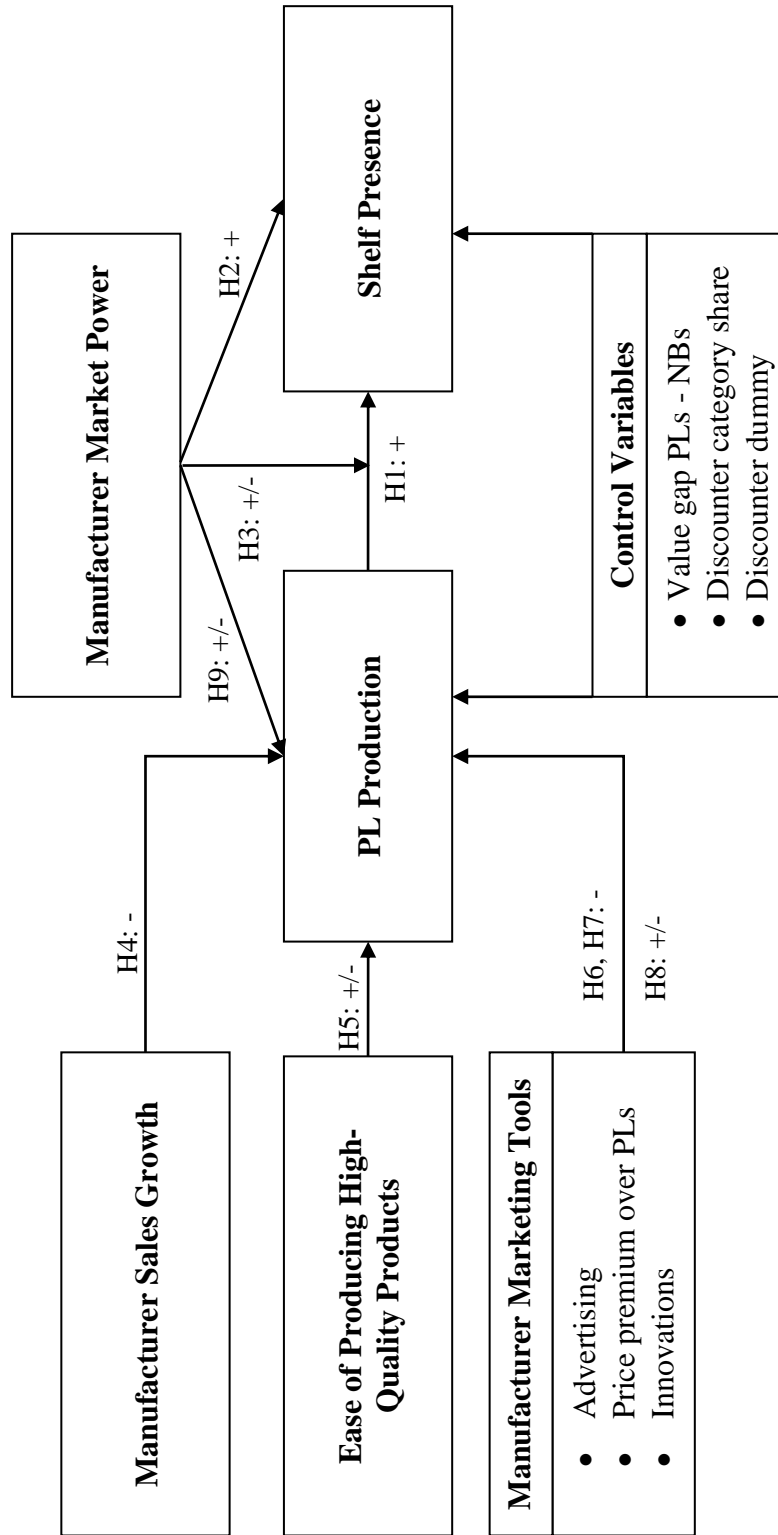
Moreover, none of the aforementioned studies provides empirical support for the various contentions. This is not surprising, given that most manufacturers keep their involvement in PL production confidential (de Jong 2007), out of fear for the impact that such knowledge may have on their main brands (Gomez-Ariaz and Bello-Acebron 2008). This makes empirical research on the topic difficult, and has prompted Sethuraman (2009, pp. 771-773) to call for more empirical research on both the *antecedents* and *consequences* of dual branding (i.e. the practice of NB manufacturers to also engage in PL production). In line with that call, Chen, Narasimhan, John, and Dhar (2010) estimated a structural model to derive the profit implications for various PL supply arrangements, and showed in the context of a single market (fluid milk) through a number of policy simulations how engagement in PL production may be beneficial to NB manufacturers.

Our analysis differs from the aforementioned studies in a number of ways. First, while previous studies (see e.g. Chen et al. 2010; Kumar, Radhakrishnan, and Rao 2010; Gomez-Arias and Bello-Acebron 2008) considered the (expected) profit consequences from various PL supply schemes, we focus on the potential goodwill creation of a PL production decision, which has been recognized as a key strategic consideration in both the academic literature (Dunne and Narasimhan 1999) and the business press (IGD 2006). Second, we empirically examine why certain NB manufacturers are more likely to be involved in the production of a discounter's PLs than their competitors, and this across a broad set of grocery categories and manufacturers. We study this problem at two leading discounters in Europe, and incorporate several observable drivers of PL production by a NB manufacturer. To the best of our knowledge, no such large-scale empirical research is available on the determinants of a manufacturer's engagement in PL production. Finally, several of the aforementioned analytical models (e.g. Kumar, Radhakrishnan, and Rao 2010; Wu and Wang 2005) are less suited in the context of an (EDLP-based) discount context. We focus on this retail format, and therefore contribute to the (thus far) limited empirical literature (Cleeren et al. 2010; Deleersnyder et al. 2007) on this fast-growing retail format.

2.3 Conceptual Framework

Figure 2.1 summarizes our theorizing, both on the relationship between PL production and shelf

**FIGURE 2.1
CONCEPTUAL FRAMEWORK**



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presence, and on the determinants of a NB manufacturer's participation in such production.

The Effect of PL Production on Shelf Presence

PL production by a NB manufacturer may be perceived as cooperative behavior (Dunne and Narasimhan 1999), and seen by the discounter as a pledge by the NB manufacturer. "Pledges" are actions undertaken by channel members that demonstrate good faith, and that bind channel members to the relationship (Anderson and Weitz 1992, p. 20). By making the pledge of PL production, the NB manufacturer creates an incentive to maintain the relationship (Gundlach, Achrol, and Mentzer 1995), and hopes that the discounter will respond in kind. Put differently, PL production may increase relational embeddedness, which has been shown to influence retail buyers in their selection of new products (Kaufman, Jayachandran, and Rose 2006). Following this logic, PL production may represent a good opportunity for NB manufacturers who seek closer ties with the discounter and enhance their likelihood of obtaining access to the discounter's most valued, yet scarce, resource, i.e., shelf presence. Hence:

H1: PL production by a NB manufacturer increases the likelihood of shelf presence.

The Effect of NB Manufacturer Market Power on Shelf Presence

When testing H1, we control for the intrinsic market power of the NB manufacturer. Following Shervani, Frazier, and Challagalla (2007), we define manufacturer market power as a manufacturer's ability to influence the actions of others in a product market. The industrial-organization literature has argued that a firm's market power is based upon the firm's market position, as reflected by its market share. If a firm operates in multiple product markets, its market power can vary considerably across them.³ Empirical research has shown that powerful firms are able to secure relatively high levels of influence on the behavior of related channel members (e.g. Anderson, Lodish, and Weitz 1987; Rao and McLaughlin 1989; Shervani, Frazier, and Challagalla 2007). In a similar vein, we argue that more powerful manufacturers – with a larger volume share in the category obtained from more and stronger brands – are generally in a

³ It is important to note that power has been examined at different levels in the strategy literature. In contrast to a firm's overall power position within the manufacturer-discounter interfirm relationship, our focus is on a firm's market power in a product market or product category (see Shervani, Frazier, and Challagalla 2007 for a similar approach).

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better position to secure shelf space. The addition of their NBs is expected to improve the discounter's perceived assortment quality and variety, as these brands will stand out more against an otherwise PL-dominated assortment (Deleersnyder et al. 2007). Because of their expected contribution to the discounter's financial goal attainment, discounters will be more receptive to brands offered by powerful NB manufacturers. We therefore postulate that a NB manufacturer's market power in terms of category share increases the likelihood of shelf presence.

H2: NB manufacturer market power increases the likelihood of shelf presence.

Moreover, this variable may interact with PL production. On the one hand, one could argue that manufacturer market power *enhances* the effect of PL production on shelf presence. As posited above, PL production may be perceived as a pledge to be rewarded with shelf presence. Given that powerful NB manufacturers put their competitive advantage on the line (de Jong 2007), PL production by a powerful manufacturer may be perceived as more of a pledge towards the discounter than PL production by a less powerful manufacturer. For minor players in the marketplace, PL production may be the only way to survive in the category (Kumar and Steenkamp 2007), making their actual production less impactful. As a result, PL production and manufacturer market power may act as complements, resulting in a synergistic effect. As such:

H3a: Manufacturer market power enhances (amplifies) the effect of PL production in increasing the likelihood of shelf presence for a NB manufacturer.

On the other hand, the positive effect of PL production on the likelihood of shelf presence may be more pronounced for less powerful NB manufacturers. Relationship quality has been shown to have a larger impact on new-product acceptance when products are moderately attractive than when they are very attractive (as when offered by the most successful manufacturer) (Kaufman, Jayachandran, and Rose 2006). In a similar vein, retailers have been found to prefer the leading NB manufacturer as category captain, *unless* smaller players can (or are willing to) offer a special service (Subramanian et al. 2010). As such, PL production can be used by smaller NB manufacturers as a tool to overcome an inherent market-power disadvantage. In other words, when a NB manufacturer's market power is smaller, the likelihood that a

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discounter will grant this NB manufacturer shelf presence increases considerably when the manufacturer establishes a strong relationship with this discounter (i.e., produces PLs for the discounter). When its market power is very high, a NB manufacturer is already likely to be granted shelf presence, regardless of PL production. The latter then has less incremental impact. Following this line of reasoning:

H3b: Manufacturer market power diminishes the effect of PL production in increasing the likelihood of shelf presence for a NB manufacturer.

Drivers of PL Production

We include three major drivers of PL production by a NB manufacturer for a discounter, reflecting three categories of motives: the extent of sales growth (profitability motive), the relative ease of producing high-quality products in the category (quality/positioning motive), and the marketing tools used to position the manufacturer's brands (brand-equity motive).

Manufacturer sales growth. PL production often starts on an opportunistic basis when a manufacturer has idle capacity (Gomez-Arias and Bello-Acebron 2008; Kumar and Steenkamp 2007). A PL order is then used to complement lower NB sales. PL production can increase NB manufacturers' total sales volumes, and thereby improves profits (Quelch and Harding 1996; Soberman and Parker 2006).

For the discounter, we could argue that (all else equal), he would prefer a manufacturer with lower NB sales growth. Indeed, such manufacturers could be perceived as an easier target to achieve good supply conditions, thereby increasing the discounter's profitability. However, manufacturers and retailers typically do not possess perfect information about each other's demand functions (Basuroy, Mantrala, and Walters 2001). Hence, a discounter only has information on the scarce (if any) number of NBs of a manufacturer that the discounter himself carries in his assortment. Given this lack of knowledge on the overall demand evolution for the NB manufacturer, we do not expect this factor to play a crucial role in the discounter's choice of a manufacturer.

We hypothesize that higher sales growth decreases a manufacturer's likelihood of engaging in PL production. Negative NB sales growth, in contrast, may lead to costly excess capacity for a manufacturer, and hence increases a manufacturer's likelihood of producing PLs.

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H4: Manufacturer sales growth decreases the likelihood of observing PL production by the manufacturer for the discounter.

Ease of producing high-quality products. A second key consideration for NB manufacturers is the possibility to manage/influence PL quality (Dunne 1999; Kumar and Steenkamp 2007). When it is difficult to produce high-quality products in the category, discounters will have a harder time to match the intrinsic quality of the NBs, which gives the latter a competitive advantage. To preserve that advantage, NB manufacturers will be reluctant to enter into a production relationship with a discounter. When it is relatively easy for discounters to match NB quality, in contrast, NB manufacturers will be more willing to produce, as there is no sustainable competitive advantage at stake. Gomez-Arias and Bello-Acebron (2008) showed that a NB manufacturer's incentive to produce PLs is particularly high if the PL matches a manufacturer's NB quality, which is more likely when ease of producing high-quality products is high. NB manufacturers then have the ability to influence the positioning of the PL (Gomez-Arias and Bello-Acebron 2008; Kumar, Radhakrishnan, and Rao 2010), for example by producing a PL that imitates a competitive NB to preserve their own sales (Sayman, Hoch, and Raju 2002). Moreover, if they do not produce a discounter's PL, a competitor is likely to do so, giving them an incentive to pre-empt the competition (Steenkamp and Dekimpe 1997).

However, to come to actual PL production for a given discounter, both the manufacturer and the discounter must agree. Indeed, the discounter must decide whether to work with a dedicated PL manufacturer (who does not sell any NBs) or to select a dual brander. Dual branders are said to have more innovative capacity (Kumar and Steenkamp 2007) and to offer more quality assurance (Sethuraman 2009) than dedicated manufacturers. Clearly, the second issue is especially relevant when it is difficult to produce high-quality products. Hence, when it is difficult to produce high-quality products, a discounter will more likely opt for a leading NB manufacturer for its PL production. Instead, when it is easy, the discounter may well opt for a dedicated manufacturer, who is more price-focused (Kumar and Steenkamp 2007).

Depending on the relative strength of both arguments, the observed choice will be driven more by manufacturer (positive association between ease of producing and PL production) or discounter (negative association between ease of producing and PL production) considerations. If the effect is positive, the manufacturer's point of view dominates, but if it is negative, the

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discounter's rationale prevails. In sum:

H5a/b: The higher the ease of producing high-quality products in the category, the lower/higher the likelihood of observing PL production by a NB manufacturer for the discounter.

Manufacturer marketing tools. Numerous studies discuss how NB manufacturers could battle PLs. According to Kumar and Steenkamp (2007), there are three distinct tools used by NB manufacturers to create winning value propositions for their NBs versus PLs. First, NB manufacturers may try to differentiate themselves from cheaper PL imitations by conveying unique emotional benefits and signaling future demand through advertising (Desai 2000; Herbert 2009; Steenkamp and Dekimpe 1997). However, this carefully built-up image may be damaged if their customer base would find out that they also produce PLs (Gomez and Benito 2008; Hoch 1996), making NB manufacturers that rely heavily on advertising reluctant to engage in PL production. Second, charging a hefty price premium in the market over PLs is another way to position the NBs away from PLs (Ailawadi, Lehmann, and Neslin 2003; Pauwels and Srinivasan 2009). Manufacturers may, again, not be willing to put this competitive advantage on the line by producing a cheaper variant for the discounter. Finally, they can introduce innovations, and thereby offer products that are distinct from any existing PL. Maintaining this quality edge curbs PL growth, as it puts retailers in the position of imitating yesterday's favorites (Lamey et al. 2007, 2011). NB manufacturers heavily involved in developing new products will be less inclined to produce PLs, as this may put them in a position where the discounter can exert pressure to share the latest technologies (Dunne and Narasimhan 1999), which would undermine their competitive advantage. Each of the marketing tools is therefore predicted to decrease the likelihood of observing PL production by that NB manufacturer for the discounter. As indicated before, some manufacturers motivate their willingness to participate in the PL production process through an "if you can't beat them, join them" reasoning. The three aforementioned arguments reflect this idea, in that they describe conditions where NB manufacturers are more/less able to withstand the impact of PL growth on their own performance.

Given the secrecy surrounding the identity of the actual producer of the PLs, discounters should not be concerned about the amount of advertising support given by the NB manufacturer

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to his own brands, nor about the price differential between a manufacturer's NBs and the discounter's PLs when deciding on their PL sourcing. However, given that dual branders are thought to provide more innovative capacity when producing PLs (Kumar and Steenkamp 2007), the innovativeness of a NB manufacturer may play an important part in the discounter's choice (i) between a dedicated supplier or a dual brander, and (ii) in case the latter option is selected, his preference for some NB manufacturers over others. The more innovative a manufacturer is, the higher a discounter's interest in that manufacturer as the preferred option to produce his PLs. In sum:

H6: The more a NB manufacturer advertises, the lower the likelihood of observing PL production by the manufacturer for the discounter.

H7: The higher the price premium a NB manufacturer charges over a discounter's PLs, the lower the likelihood of observing PL production by the manufacturer for the discounter.

H8a/b: The more innovative a NB manufacturer is, the lower/higher the likelihood of observing PL production by the manufacturer for the discounter.

For the latter hypothesis, depending on the relative strength of both arguments, the observed choice will be driven more by manufacturer (negative association between a manufacturer's innovativeness and PL production) or discounter (positive association between a manufacturer's innovativeness and PL production) considerations.

Manufacturer market power. Finally, we control for the effect of manufacturer market power on the PL production decision. We propose that manufacturer market power may have an impact on the NB manufacturer's willingness to produce PLs. According to Dunne and Narasimhan (1999), producing PLs is especially interesting for small manufacturers of non-leading NBs aiming to increase their sales volume. On the other hand, it has been argued that NB manufacturers that want to produce PLs for discounters need sufficient capacity (size) to handle the large volumes (IGD 2005). Because good arguments are available to support an increased likelihood of PL production for both lower and higher manufacturer market power, we advance competing hypotheses:

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H9a/b: The higher a NB manufacturer's market power, the lower/higher the likelihood of observing PL production by the manufacturer for the discounter.

2.4 Research Setting and Measures

Setting

Consumer packaged goods (CPG) companies regard Germany and Spain as two key European markets with respect to discounters (PlanetRetail 2010b). Germany is one of the largest consumer markets in Western Europe. Not only does the discount format originate from Germany, its current market share already exceeds 30% (PlanetRetail 2010c). Further, discounter share is rapidly increasing in Spain, where it sums up to around 30% (PlanetRetail 2010d).

In Germany, we study Aldi, the “mother of all discounters” (Wieloch 2009, p. 1). Aldi had a market share in Germany of 11.4% in 2009 (PlanetRetail 2010c). Across Europe, Aldi operates a total of 6,600 stores, in 14 countries. With current global sales of \$70 billion, Aldi is ranked among the top 10 grocery retailers in the world (PlanetRetail 2010a). Although Aldi's PL assortment differs *across* countries, it follows a centralized, national approach to its assortment management, with the same offering present in each outlet *within* a country (ACNielsen 2007).⁴ Traditionally, Aldi did not carry any NBs in its assortment (Brandes 2005). However, it recently started accepting NBs on a limited basis. Although more than 90% of Aldi's range still consists of PLs (PlanetRetail 2010c), recent NB additions in Germany include Snickers candy bars (Masterfoods), Del Monte canned fruit (Del Monte), and Quality Street sweets (Nestlé).

In Spain, we study the leading discounter Mercadona (IGD 2002). Mercadona has been the key winner in this country in recent years (IGD 2009). It is the largest grocery retailer in Spain, operating around 1,300 outlets, and was ranked the 9th most reputable company in the world in 2009 by Forbes Magazine. The firm's strategy is built around consistently offering value for money, rather than short-term price promotions (PlanetRetail 2010e). Its sales in Spain have almost doubled over the last five years and amount to \$20 billion (PlanetRetail 2010d). Currently, Mercadona sells around 2,000 PL products. NB shelf space is limited, as for most products Mercadona stocks only its PLs and one NB (Bain & Company 2008). While Mercadona can be classified as a soft discounter, Aldi is a prototypical hard discounter.

Clearly, shelf space is a scarce resource with both retailers, which is sought after by many

⁴ This feature is important when collecting data through store visits (cf. *infra*).

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NB manufacturers. Interestingly, discounters typically do not charge slotting allowances or promotional fees (PlanetRetail 2010b). Hence, these issues do not enter channel (goodwill) negotiations. Thus, concentrating on discounters allows for testing our ideas in a more controlled, natural experiment-like setting. By considering both Europe's leading hard (Aldi) and soft (Mercadona) discounter, we can also infer to what extent our findings differ (are common) across both format types.

Sample and Measures

Our unit of analysis is the NB manufacturer in a certain category at the discounter. We only consider categories that contained at least one NB and thus, where the discounter made the deliberate decision to extend its assortment with a NB offering. For Aldi, we collected data on 37 grocery categories. For each category, we determined the top 5 NB manufacturers in terms of their 2005 category purchases in Germany, based on panel data from GfK. For Mercadona, we obtained through Kantar Woldpanel data on 53 categories where at least one NB was available. We retained the top 5 NB manufacturers in terms of their 2009 category sales volume in Spain.⁵ To illustrate the range of products available in our dataset, we grouped the categories into broader product groups. Table 2.1 shows these groups, along with some illustrative examples of included categories. For each of the resulting 450 category-manufacturer combinations (the top 5 NB manufacturers for 90 categories),⁶ we combined a wide variety of data sources to operationalize our variables.

Shelf presence. We measure shelf presence on the basis of GfK/Kantar consumer panel data for Germany and Spain, which covers all grocery purchases made by a representative national sample of 20,000+ German and 8,000+ Spanish households. Shelf presence captures whether or not a NB owned by one of the top 5 NB manufacturers in a category was available in that category at the discounter. For Aldi, this information was available between January 2002 and June 2008 (1 = yes, 0 = no). In 23 of the 37 Aldi categories, at least one NB of a top 5 NB manufacturer was present.⁷ For the 185 (37*5) manufacturer-category combinations, we checked

⁵ For Aldi, PL production data covered the 2002-2008 period (cf. infra) – we determined the top 5 NB manufacturers for the midpoint of this time frame (2005). Since PL production data for Mercadona pertained to 2009, we determined the top 5 NB manufacturers for 2009. No PL production data on preceding years was available for Mercadona.

⁶ With 37*5 observations for Aldi, and 57*5 observations for Mercadona.

⁷ In the other 14 categories, a NB was present of a non-top 5 manufacturer.

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whether these NB manufacturers own a NB for which a purchase record in the category at Aldi could be found during the time frame of our data. We observed such shelf presence for 46 (out of 185) cases. For Mercadona, shelf presence was measured in the year 2009. In this case, shelf presence was observed for 139 (out of 265) cases. Proportionally, more instances of shelf presence for the top 5 NB manufacturers are seen with Mercadona, which is consistent with its positioning as a soft discounter.

TABLE 2.1
CATEGORY COVERAGE

| Product Group | Examples |
|----------------------|---|
| Assorted foods | noodles, jam, rice |
| Beverages | beer, mineral water, juice |
| Candy | candy bars, chocolate, bonbons |
| Canned/bottled foods | fish, beans, tomato |
| Care products | shampoo, diapers, toilet tissue |
| Cleaning products | bleach, detergent, fabric conditioner |
| Cooking fats | butter, olive oil, margarine |
| Dairy products | milk, yoghurt, ice cream |
| Household supplies | basket bin bags, toilet tablets, celluloses |
| Instant meals | ready desserts, ready meals, salad |
| Pastry | cakes, sweet biscuits |
| Pet products | wet dog food, dry dog food |
| Taste enhancers | ketchup, salad dressing, mayonnaise |

PL production. We measure “PL production” as a binary variable that is coded 1 if the NB manufacturer engaged in PL production for the discounter in the category, and 0 otherwise. In spite of the secrecy surrounding Aldi (Brandes 2005) and the reluctance to acknowledge PL production by NB manufacturers (de Jong 2007), we were able to obtain information on PL production for Aldi through extensive field research. Between January 2002 and June 2008, approximately 650 PLs were sold in the 37 categories under investigation at Aldi. For each of those 650 PLs, we determined the producer. Because this data was not readily available through conventional channels, various sources were consulted. As a starting point, we obtained four books with information on the manufacturers of 200 popular PLs sold at Aldi (Bertram 2006; Schaab and Eschenbek 2008; Schneider 2005, 2006). For the remaining 400+ products, we replicated their procedure to uncover the manufacturers of all PLs in the 37 categories studied. To that extent, we exploited the fact that Aldi is one of the rare retailers that states the address of

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the manufacturer on its packages (de Jong 2007). Specifically, for each PL, we recorded (through numerous store visits and online searches) the manufacturer's address, and then matched these addresses with those of NB manufacturers (see, for example, Bell and Zabriskie 1978 or Drummond 1995 for previous applications of such address matching). To extend and/or validate this information, we also consulted various websites (including www.ciao.de, www.yopi.de, www.discounter-archiv.de, and www.wer-zu-wem.de) devoted to consumer product reviews, company profiles, and/or discounter products. As such, for 68 (out of 185) cases, we found evidence of PL production for Aldi. For 63 (93%) of them, more than one data source was found confirming this PL production activity.

For Mercadona, we were fortunate to obtain, with the help of Kantar Worldpanel, internal category-level PL producer information for the year 2009. For 92 (out of 450) cases, we found evidence of PL production for Aldi or Mercadona (see Table 2.2).⁸ A simple bivariate χ^2 test provides initial evidence of a relationship between PL production and shelf presence ($\chi^2(1) = 11.34, p < .01$),⁹ a finding to be validated in our subsequent multivariate analyses.

TABLE 2.2
RELATION BETWEEN PL PRODUCTION AND NB SHELF PRESENCE

| | | NB Shelf Presence | | |
|---------------|-------|-------------------|------------|------------|
| | | Yes | No | Total |
| PL Production | Yes | 52 | 40 | 92 |
| | No | 133 | 225 | 358 |
| | Total | 185 | 265 | 450 |

Predictors

We measured the covariates for Aldi in the year preceding shelf presence. When no brand of the NB manufacturer was listed at Aldi, we used 2005 as the base year for the covariates. For

⁸ Examples for Aldi include Campina (yoghurt), Dr. Oetker (dessert), and Bonduelle (canned vegetables). For reasons of confidentiality, no Mercadona examples can be revealed.

⁹ Similar results were obtained for the individual retailers, i.e., $\chi^2(1) = 21.33 (p < .01)$ for Aldi and $\chi^2(1) = 16.27 (p < .01)$ for Mercadona.

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Mercadona, we measured the covariates in the year 2008 (i.e., the year before we observe shelf presence). For a complete overview of the timing, source, and operationalisation of our variables, we refer to Table 2.3.

Manufacturer sales growth. This is measured as the growth in a manufacturer's NB volume sales in the category from one year to the next, and obtained from the panel data.¹⁰ Whereas positive sales growth signals sufficient NB demand and perhaps the need for investment in additional production capacity, negative sales growth signals idle production capacity (Lieberman 1987).

Ease of producing high-quality products. We measure the perceived ease of producing high-quality products through a 5-point reverse-scored survey item: "In the category (XXX), making good quality products is difficult." We combined this country-specific information (i.e. from German consumers for the Aldi observations and from Spanish consumers for the Mercadona observations) from regular users of the category (where each consumer could provide information on at most 4 categories),¹¹ with information from four industry experts (who had to rate all categories).¹² Both groups had similar assessments, evidenced in a highly significant ($p < .01$) correlation between their respective averages.

Manufacturer marketing tools. We measure the extent of "advertising" support by means of the annual national advertising expenditures in the category by the NB manufacturer relative to the national advertising expenditures by the top 5 NB manufacturers in that category.¹³ The German advertising data is obtained from Thomson Media Control, a provider of market data on advertising spending across all media in Germany. The Spanish advertising data is obtained from InfoAdex, a company that measures advertising investments across the various media in Spain. Second, a manufacturer's "price premium over PLs" is obtained from the panel data, and measured as the market-share-weighted average national unit price of all NBs of a manufacturer

¹⁰ We also specified sales growth as a manufacturer's maximum sales growth for three consecutive years in the category (instead of two). Our results remained substantively the same.

¹¹ Consumer perceptions on the difficulty to make high-quality products in the category were also used in Aaker and Keller (1990) and Steenkamp, van Heerde, and Geyskens (2010), among others.

¹² Specifically, the chairman of IPLC (a consultancy firm specializing in international PL production issues), the director of Knowledge Management and Transfer from GfK, the director of the EFMI Business School (knowledge center for the food sector), and a knowledgeable practitioner with ample experience working on the PL supply side, participated.

¹³ The German advertising data were only available from 2005 onwards, so for some of the Aldi observations we could not use the year before the NB listing for this covariate. Instead, we used the year 2005 for all observations. However, in the years 2005-2007, the average correlation between the NB manufacturers' advertising spending in two consecutive years was $>.95$.

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in the category compared to the market-share-weighted average unit price of the discounter's PLs in the category (Pauwels and Srinivasan 2009). Finally, to measure a NB manufacturer's innovativeness, we counted the number of "innovations" launched in the category by the manufacturer in the German market (for the Aldi observations) or the Spanish market (for the observations from Mercadona) using data from Product Launch Analytics. Product Launch Analytics, formerly known as Productscan, is a subscription-based database that tracks CPG introductions (see e.g. Sorescu and Spanjol 2008 for an in-depth discussion on this data source). The vast majority of the NB manufacturers in our sample are characterized by either no innovation (62% of the sample) or one innovation (23%) in the relevant category per year. Only 15% of the sample had more than one innovation per year in the category.

Manufacturer market power. We measure manufacturer market power as the national "category share" of all brands of a NB manufacturer in terms of volume, using the panel data (Gielens and Steenkamp 2007). Given that we interact this variable with PL production, we grand-mean center it to facilitate interpretation (Irwin and McClelland 2001).¹⁴

Control variables. Apart from the above variables, we also control for the relative strength of PLs compared to NBs in the category and the relative strength of the specific discounter in the category. These two factors may affect a discounter's willingness to accept stronger or to prefer weaker NB opponents in its assortment. Moreover, they may affect a manufacturer's willingness to produce PLs in the category. To control for the relative strength of PLs compared to NBs, we add the consumers' perceived value gap between PLs and NBs to our model. We measure the perceived value gap between PLs and NBs through the difference between two survey items (we refer to Table 2.3 for details). To control for the relative strength of the discounter, we include the discounter's (volume) share of the total (national) sales in the category. Given that we want to control for a discounter's relative strength in a category (compared to the other categories), we centered this covariate within the discounter. Finally, we also control for differences between the two discounters by including a discounter dummy. The covariates are not the focus of our study, but controlling for them provides a stronger test of our hypotheses (Greene 2000).

¹⁴ We also used mean centering within a discounter; and all findings remained substantively the same.

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**TABLE 2.3
OVERVIEW VARIABLES**

| Variable | Operationalisation | Sources | | Timing | |
|---|---|--|-------------------|---|-----------|
| | | Aldi | Mercadona | Aldi | Mercadona |
| Shelf presence | Is a NB of the NB manufacturer present on the discounter shelves in the category? yes/no | GfK panel | Kantar Worldpanel | 2002-2008 | 2009 |
| PL production | Does the NB manufacturer engage in PL production for the discounter in the category? yes/no | Various (see 'sample and measures' section) | Kantar Worldpanel | 2002-2008 | 2009 |
| Manufacturer sales growth | Volume sales of all NBs of the NB manufacturer in the category in year t / volume sales of all NBs of the NB manufacturer in the category in year $t-1$ | GfK panel | Kantar Worldpanel | 2004/2005 or 2 years before NB shelf presence | 2007/2008 |
| Ease of producing high-quality products | 5-point reverse-scored survey item: "In the category (XXX), making good quality products is difficult" | - Consumers: Steenkamp, van Heerde, and Geyskens (2010) - Experts: primary data | | -- | |
| Advertising | Total national advertising expenditures of the NB manufacturer in the category / total advertising in the category by the top 5 NB manufacturers | Thomson Media Control | InfoAdex | 2005 | 2008 |
| Price premium | Market-share-weighted average national unit price of all NBs of the NB manufacturer in the category / market-share-weighted average PL unit price of the discounter in the category | GfK panel | Kantar Worldpanel | 2005 or the year before NB shelf presence | 2008 |
| Innovations | Number of innovations of the NB manufacturer in the category | Product Launch Analytics | | 2005 or the year before NB shelf presence | 2008 |
| Manufacturer market power | Volume sales of all NBs of the NB manufacturer in the category / national category volume sales | GfK panel | Kantar Worldpanel | 2005 or the year before NB shelf presence | 2008 |
| Value gap | Difference between two survey items: "In the category (XXX), shops' own labels provide excellent value for money" – "In the category (XXX), brands provide excellent value for money" | Steenkamp et al. (2004) | | -- | |
| Discounter category share | Volume sales of the discounter in the category / national category volume sales | GfK panel | Kantar Worldpanel | 2005 or the year before NB shelf presence | 2008 |

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Following common practice, we compute the natural logarithm of the ratio-scaled variables (sales growth, innovations, advertising, price premium, manufacturer market power, and discounter share)¹⁵ to reduce possible skewness in the data, and to avoid having a small number of extreme observations driving our empirical findings (Cohen et al. 2003). None of the VIF statistics exceeded 3, suggesting that multicollinearity is not an issue (Cohen et al. 2003).

2.5 Model

PL production is not a purely exogenous variable, but the result of strategic considerations from both a NB manufacturer's and the discounter's side. A failure to statistically correct for this endogeneity may not only lead to biased estimates, but also to faulty conclusions about our key propositions (Hamilton and Nickerson 2003). If manufacturers that produce PLs self-select themselves and/or are selected by the discounter, on the basis of other, unobservable, characteristics that affect both shelf presence and PL production, a problem of selection bias may arise.¹⁶ Selection bias can be corrected for through the traditional two-step estimation technique proposed by Heckman (1979) or, alternatively, by using Maximum Likelihood (ML) estimation on a system of equations. Since ML estimates are more efficient and have smaller standard errors than the two-stage estimates (Breen 1996), we opt for that procedure.

Preliminary pooling tests failed to reject the assumption of homogeneity across both discounters ($p > .05$) for all but three variables (the impact of manufacturer market power on shelf presence, and the impact of price premium and innovativeness on the PL production decision). Hence, we pool the data across the two discounters, but allow for discounter-specific effects for these three variables (along with a discounter-specific fixed-effects correction).

We estimate the following system of equations, where the first and the second equation are referred to as the outcome equation and the strategy-selection equation, respectively:

$$(2.1) \quad \text{PRESENCE}_{ijd} = \beta_0 + \beta'_0 \text{D_MERC}_d + \beta_1 \text{PLPROD}_{ijd} \\ + \beta_2 (\text{M_POWER}_{ijd} * \text{D_ALDI}_d) + \beta'_2 (\text{M_POWER}_{ijd} * \text{D_MERC}_d) \\ + \beta_3 (\text{PLPROD}_{ijd} * \text{M_POWER}_{ijd} * \text{D_ALDI}_d) + \beta'_3 (\text{PLPROD}_{ijd} * \text{M_POWER}_{ijd} \\ * \text{D_MERC}_d) + \gamma_1 \text{VALGAP}_{jd} + \gamma_2 \text{DISC_SHARE}_{jd} + \varepsilon_{ijd}$$

¹⁵ Since innovations could have a value of 0, the transformation $\ln(\text{innovations} + 1)$ was used. A similar transformation was used for the advertising expenditures.

¹⁶ For a marketing discussion on the topic, we refer to Chen, Ganesan, and Liu (2009).

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$$\begin{aligned}
 (2.2) \quad \text{PLPROD}_{ijd} = & \delta_0 + \delta'_0 \text{D_MERC}_d + \delta_1 \text{GROWTH}_{ijd} + \delta_2 \text{EASE}_{jd} + \delta_3 \text{ADV}_{ijd} \\
 & + \delta_4 (\text{PPREM}_{ijd} * \text{D_ALDI}_d) + \delta'_4 (\text{PPREM}_{ijd} * \text{D_MERC}_d) \\
 & + \delta_5 (\text{INNOV}_{ijd} * \text{D_ALDI}_d) + \delta'_5 (\text{INNOV}_{ijd} * \text{D_MERC}_d) \\
 & + \delta_6 \text{M_POWER}_{ijd} + \eta_1 \text{VALGAP}_{jd} + \eta_2 \text{DISC_SHARE}_{jd} + \varepsilon'_{ijd}
 \end{aligned}$$

In the outcome equation, PRESENCE_{ijd} captures whether NB manufacturer i obtained shelf presence in category j with discounter d . PLPROD_{ijd} reflects whether NB manufacturer i produces PLs in category j for discounter d . Moreover, this equation includes discounter-specific parameters for both the main effect (β_2 and β'_2) of a manufacturer's market power (M_POWER_{ijd}) and for its interaction (β_3 and β'_3) with PL production. In addition, the value gap between PLs and NBs (VALGAP_{jd}) and discounter category share (DISC_SHARE_{jd}) are included as control variables. Finally, we also control for a discounter-specific fixed effect by including a discounter dummy (D_MERC_d).

The strategy-selection equation includes the observable drivers of PL production by a NB manufacturer, viz. a manufacturer's category sales growth (GROWTH_{ijd}) in the country of discounter d , the perceived ease of producing high-quality products in the category (EASE_{jd}) in that country, and the marketing tools used by a NB manufacturer to position his NBs in each country: advertising (ADV_{ijd}), a manufacturer's price premium (PPREM_{ijd}), and a manufacturer's innovations (INNOV_{ijd}). Based on the preliminary pooling tests, this equation has discounter-specific parameters for both a manufacturer's price premium (δ_4 and δ'_4) and his innovation activity (δ_5 and δ'_5). We control for a manufacturer's market power (M_POWER_{ijd}), the value gap between PLs and NBs in the category (VALGAP_{jd}), and discounter category share (DISC_SHARE_{jd}). Again, we include a discounter-specific fixed effect.

The strategy-selection equation takes the form of a probit model. To reflect the dichotomous nature of shelf presence, the outcome equation is also estimated through a probit specification, so that the system of equations becomes a bivariate probit model. To allow for the possibility that unobserved characteristics drive both shelf presence and PL production, no restrictions are imposed on the correlation (ρ) between ε_{ijd} and ε'_{ijd} . Therefore, ρ can take on any value between -1 and 1. A significant ρ underscores the importance of explicitly considering selection. A positive (negative) ρ implies that the PL production effect estimated without the correction would be biased upward (downward) (Briggs 2004). When $\rho = 0$, there is no selection problem (Breen 1996).

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TABLE 2.4
PARAMETER ESTIMATES SHELF PRESENCE (N = 450)

| Variable | Coefficient | | (t-value) |
|--|--------------|-----|-----------|
| Outcome Equation (Shelf Presence) | | | |
| Intercept (β_0) | -1.46 | ††† | (-11.46) |
| PL production (β_1) | 2.21 | *** | (11.56) |
| Manufacturer market power Aldi (β_2) | -.10 | | (-1.31) |
| Manufacturer market power Mercadona (β'_2) | .48 | *** | (6.72) |
| PL production * Manufacturer market power Aldi (β_3) | .06 | | (.35) |
| PL production * Manufacturer market power Mercadona (β'_3) | -.62 | † | (-1.67) |
| Control variables | | | |
| Value gap (γ_1) | .03 | | (.12) |
| Discounter category share (γ_2) | .03 | | (.15) |
| Discounter dummy (0 = Aldi, 1 = Mercadona) (β'_0) | 1.35 | ††† | (8.99) |
| Strategy-Selection Equation (PL Production) | | | |
| Intercept (δ_0) | -2.51 | † | (-1.70) |
| Manufacturer sales growth (δ_1) | -.08 | | (-.46) |
| Ease of producing high-quality products (δ_2) | .73 | † | (1.65) |
| Manufacturer marketing tools | | | |
| Advertising (δ_3) | -.48 | * | (-1.53) |
| Price premium over PLs Aldi (δ_4) | -.96 | *** | (-3.36) |
| Price premium over PLs Mercadona (δ'_4) | .12 | | (.74) |
| Innovations Aldi (δ_5) | .07 | | (.37) |
| Innovations Mercadona (δ'_5) | -.51 | † | (-1.74) |
| Manufacturer market power (δ_6) | .28 | †† | (2.49) |
| Control variables | | | |
| Value gap (η_1) | .32 | | (.95) |
| Discounter category share (η_2) | .60 | †† | (2.01) |
| Discounter dummy (0 = Aldi, 1 = Mercadona) (δ'_0) | -1.09 | ††† | (-5.15) |
| Selection parameter (ρ) | -.90 | ††† | (-6.87) |
| Log-likelihood | | | -410.63 |
| AIC | | | 1.92 |

*** $p < .01$, ** $p < .05$, * $p < .10$ (one-sided). ††† $p < .01$, †† $p < .05$, † $p < .10$ (two-sided). Significant effects are indicated in bold.

2.6 Results

The significant error correlation ρ ($p < .01$) indicates that a selection correction is indeed needed. Table 2.4 reports the parameter estimates and model fit statistics.

Outcome Equation Estimates

Turning first to the outcome equation, we find that PL production by a NB manufacturer for a discounter leads, at the average level of manufacturer market power,¹⁷ to a significantly higher likelihood of obtaining shelf presence in the category at that discounter ($\beta_2 = 2.21, p < .01$), and this for both discounters.¹⁸ Hence, H1 is supported.

As to H2 and H3, for Aldi, no significant effect of manufacturer market power is found, neither in the produce condition ($\beta_2 + \beta_3 = -.04, p > .10$) nor in the no-produce condition ($\beta_2 = -.10, p > .10$). For Mercadona, in contrast, we do find a significant effect of manufacturer power in the no-produce condition ($\beta'_2 = .48, p < .01$). In the case of PL production, however, NB manufacturer power has no longer a significant effect on the likelihood of obtaining shelf presence with Mercadona ($\beta'_2 + \beta'_3 = -.14, p > .10$). Hence, manufacturer market power diminishes the effect of PL production in increasing the likelihood of shelf presence for a NB manufacturer, supporting H3b. As for the control variables, we find no effect of the value gap between PLs and NBs, nor an effect of discounter category share on shelf presence. We do find a significant positive discounter-specific fixed effect for Mercadona ($\beta'_0 = 1.35, p < .01$). This result is in line with the fact that Mercadona is a soft discounter, and thus, in general, more inclined to accept NBs than Aldi, a hard discounter. The predictive power of the outcome model is high given that it is able to correctly identify shelf presence in 93% of all cases.

Strategy-Selection Equation Estimates

Also the predictive power of the strategy-selection model is high, given that it is able to correctly identify PL production in 88% of all cases. In terms of the parameter estimates, we do not find evidence that a NB manufacturer's sales growth affects the PL production decision ($\delta_1 = -.08, p > .10$). Hence, we cannot support H4.

Ease of producing high-quality products in the category does have an impact. The easier

¹⁷ Note that manufacturer market power is mean-centered.

¹⁸ As indicated before, pooling tests showed that there was no need to allow for a differential effect of PL production between both discounters.

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it is to produce high-quality products, the higher the likelihood of observing PL production by a NB manufacturer for the discounter ($\delta_2 = .73$, $p < .10$). As such, H5b is supported for both discounters. This provides support for the manufacturer's rationale, as opposed to the discounter's rationale.

Concerning the marketing tools used by the NB manufacturer, we find that advertising expenditures have the expected negative effect. The likelihood that a NB manufacturer engages in PL production decreases as he spends more on advertising compared to its competitors ($\delta_3 = -.48$, $p < .10$). Thus, H6 is supported for both discounters. As to H7, a higher price premium over hard discounter Aldi's PLs reduces a manufacturer's probability of producing PLs ($\delta_4 = -.96$, $p < .01$). For soft discounter Mercadona, the price premium does not have an effect. Concerning H8, we find that the effect of the innovativeness of a NB manufacturer on the likelihood of PL production only has an effect for Mercadona ($\delta'_5 = -.51$, $p < .10$). Its negative sign shows that the manufacturer's rationale dominates the discounter's rationale.¹⁹

The effect of manufacturer market power provides some additional insights: the likelihood of observing that a NB manufacturer produces PLs increases when the NB manufacturer's category share increases ($\delta_6 = .28$, $p < .05$). Hence, H9b is supported. Finally, while manufacturers' probability to produce does not depend on the value gap between PLs and NBs ($\eta_1 = .32$, $p > .10$), the covariate related to discounter category share shows that the likelihood that a NB manufacturer engages in PL production in a certain category increases when the discounter has more share of the market in that category ($\eta_2 = .60$, $p < .05$), as there is more at stake for the manufacturer in his effort to obtain shelf presence.²⁰

Interestingly, we find, that the manufacturer's rationale for PL production prevails over the discounter's rationale. A summary of the arguments and the corresponding empirical evidence appears in Table 2.5.

Causality

In our theorizing and empirical analysis, we implicitly assumed that PL production influences

¹⁹ We also tested for a direct 'pull' effect of the marketing tools on shelf presence. Neither advertising ($p = .35$), nor price premium ($p = .82$), nor innovations ($p = .50$) significantly affected shelf presence.

²⁰ We also tested for an interaction effect of PL production and discounter category share in the outcome equation. However, this effect was found not to be significant ($p = .67$). Moreover, all other results remained stable. For ease of interpretation and because we had no theoretical foundation for the interaction with discounter category share, we only report the model with the interaction of PL production and manufacturer market power.

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shelf presence (rather than the other way around). Hence, the timing of PL production should precede NB shelf presence. For 398 (out of 450) observations, this was not an issue, as these NB manufacturers did not engage in PL production and/or never obtained shelf presence in the category. For the remaining 52 observations (where both PL production and shelf presence occurred), we made an extensive effort to resolve this issue and validate the assumed causal direction. We were able to contact the 30 NB manufacturers that produced PLs and obtained shelf presence at Aldi to determine unambiguously which event came first.²¹ In only 2 out of the 30 cases, the NB manufacturer indicated that their NB was already available at the discounter before they produced PLs for that discounter. Excluding these two cases from the analysis did not substantively alter our results.

TABLE 2.5
MANUFACTURER VERSUS DISCOUNTER RATIONALE FOR PL PRODUCTION

| | Manufacturer's Rationale | Discounter's Rationale | Empirical Finding |
|--|---------------------------------|-------------------------------|--------------------------|
| Manufacturer sales growth | - | | n.s. |
| Ease of producing high-quality products | + | - | + |
| Manufacturer marketing tools | | | |
| Advertising | - | | - |
| Price premium over PLs | - | | - |
| Innovations | - | + | - |
| Manufacturer market power | +/- | | + |

Note: For the manufacturer, a + (-) signifies the manufacturer is more (less) willing to produce PLs for the discounter. For the discounter, a + (-) signifies the discounter is more (less) interested to work with a particular leading NB manufacturer to produce its PLs. 'n.s.' means that no significant effect was observed.

2.7 Discussion

Faced with soaring PL shares and volumes, PL production has become increasingly attractive to CPG manufacturers, particularly in the light of the current economic downturn. The decision of whether or not a NB manufacturer should engage in PL production is, however, not an easy one. Hence, it is not surprising that most NB manufacturers are still struggling with the issue (de Jong 2007). In this article, we empirically investigated the determinants, as well as the effect on

²¹ Ideally, the exact dates (months/years) would be known. However, even though manufacturers could tell us which event came first, many of them could not (nor could our other data sources) provide the exact date. For Mercadona, contractual agreements with our data provider prevented us to contact individual manufacturers. This was not an issue with Aldi, where we determined the identity of its PL manufacturers through our own field research.

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discounter goodwill, of NB manufacturers' engagement in PL production. We tested our hypotheses on a sample of 450 NB manufacturer-category combinations for two leading discounters in the German and Spanish market, using a uniquely assembled dataset that combines extensive field research with various secondary data sources.

For *NB manufacturers*, we find substantial evidence that PL production for a discounter increases the likelihood of obtaining shelf presence with that discounter. NB manufacturers that refuse to engage in PL production should be aware of the fact that their refusal to do so may jeopardize their chances of gaining access to one of the fastest-growing retail formats. One in three European manufacturers now regards the discount sector as “an essential channel they proactively approach” (IGD 2005, p. 34). We find that PL production may be an important way to get a foot in the door in this channel. This finding applies both to Europe's leading hard discounter (Aldi) and to its leading soft discounter (Mercadona).

Different results are found, however, for the role of manufacturer market power. At Mercadona, more powerful NB manufacturers are intrinsically in a better position to secure shelf presence, while this is not the case with Aldi. As discussed in Deleersnyder et al. (2007), many practices that may be successful with conventional supermarkets may no longer apply when dealing with discounters. Given hard discounters' extreme focus on their PLs, they may have very limited experience with (or even interest in) NB manufacturers, and may therefore be less impressed by the latter's power. Soft discounters, in contrast, have more experience dealing with NB manufacturers (if only because they already have a larger fraction of NBs in their assortment, and this for a longer time). Because of these more frequent interactions, they may have become more sensitive to various characteristics of these NB manufacturers (as their market power), resulting in decision rules that are more in line with those reported for more conventional retailers as supermarkets (where manufacturer market power is a key consideration in new-product acceptance decisions; see e.g. Rao and McLaughlin 1989).

For *discounters*, and for retailers in general, it is important to understand the relevant considerations for PL production from the NB manufacturer's point of view. Our analysis helps discounters (retailers) to understand which NB manufacturers are more prone to engage in PL production – information that can be taken into account when negotiating with NB manufacturers on contractual agreements. First of all, despite discounter's increased interest in dual branders, NB manufacturers are less likely to produce PLs when it is more difficult to

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produce high-quality products in the category. For such categories, NB manufacturers do not want to give away their quality advantage. In contrast, when discounters can easily match the quality of NBs – because producing high-quality products in the category is easy – NB manufacturers are more likely to engage in PL production, since there is no unique competitive advantage at stake. Moreover, by producing PLs, NB manufacturers can attempt to actively manage PL quality (Dunne 1999), for example by lowering the produced PL's quality to preserve their own sales (Kumar, Radhakrishnan, and Rao 2010) or by producing a PL that imitates (characteristics of) a competitive NB (Sayman, Hoch, and Raju 2002).

Relatedly, we find that NB manufacturers that advertise more are less likely to produce PLs for a discounter. NB manufacturers that support their products by heavy advertising signal superior emotional benefits to customers. In addition, advertising is used to signal high future NB demand to retailers (Desai 2000). When consumers or other retailers would find out that these manufacturers produce PLs as well, this could tarnish the brand's image, making them loath to engage in PL production practices.

A NB manufacturer's price premium over a discounter's PLs negatively affects his likelihood of PL production for this discounter. When NB manufacturers are able to charge a large price premium over PLs, because consumers believe their NBs are worth that extra money, they do not want to put this at risk by producing cheaper PLs for the discounter. However, this effect was only found for manufacturers that face Aldi, a hard discounter. While hard discounters compete almost exclusively on the basis of very low prices, this is less so with soft discounters (PlanetRetail 2006b). Price differentials will thus be a more prominent attribute among hard-discount shoppers, leading to a more pronounced risk of brand devaluation when producing PLs in a hard discount setting. Consequently, a higher price premium leads to more reluctance to engage in PL production in such an environment.

Interestingly, we only find an effect of a manufacturer's innovativeness on his likelihood of producing PLs for soft discounter Mercadona. Hence, NB manufacturers heavily involved in developing new products will be less inclined to produce PLs for Mercadona, as this may put them in a position where the soft discounter can exert pressure to share the latest technologies. For Aldi, we found no such effect. This may result from the fact that innovations are less important in a hard discount setting. NB manufacturers may expect less pressure to share their latest technologies from a hard discounter (which mainly competes on price and whose

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assortment is typically low in innovation) than from a soft discounter. Indeed, for soft discounters, the assortment composition (and the innovativeness of its PLs) is more central to the chain's unique selling proposition.

Category power of a NB manufacturer positively affects his likelihood of PL production, as NB manufacturers that produce PLs for the discount channel need the capability to handle large volumes (IGD 2005). This applies to both hard and soft discounters. Finally, a discounter's national share in the category increases a NB manufacturer's willingness to produce PLs, again for both discounter types. This might stem from the fact that, given that PL production in a category increases the likelihood of obtaining NB shelf presence in that category, these categories are especially attractive to obtain that presence. As a result, NB manufacturers will be more likely to produce PLs in these categories.

Limitations and Further Research

Our research has several limitations that offer avenues for further research. First, in line with Kaufman, Jayachandran, and Rose (2006) and Ailawadi, Pauwels, and Steenkamp (2008), we considered two different retailers to test our hypotheses. It was encouraging to see that most of our findings generalized across both discounters, even though they have a different positioning (hard vs. soft discounter) and come from two different countries (Germany vs. Spain). Moreover, the three observed differences (i.e., the role of market power in the outcome equation, and the role of innovations and price premium in the selection equation) had considerable face validity in light of the discounters' different positioning. Still, it would be interesting to investigate to what extent our findings can be generalized to (i) other product categories, (ii) other countries, and (iii) other retail formats.

Since discounters operate with a limited assortment, shelf space given to NBs is presumably the most important dimension of retailer goodwill. For traditional retailers, shelf space might not be such a good measure of goodwill. To them, slotting allowances provided by NB manufacturers play a key role in a retailer's decision to carry a NB (Sudhir and Rao 2006), while they are rarely used in a discounter setting (PlanetRetail 2010b). Future research could investigate to what extent our findings generalize to traditional retail formats on other dimensions of retailer goodwill, such as the extent of pass-through of trade promotions (Ailawadi and Harlam 2009), promotional feature/display support by the retailer (Pauwels 2007), the size

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of the slotting allowances (Sudhir and Rao 2006), the NB manufacturer's influence on the retailer's promotional calendar (Dunne and Narasimhan 1999), and/or the likelihood of being appointed "category captain" (Subramanian et al. 2010).

Second, due to data limitations our data offer a historical snapshot. While we took great care to ensure that PL production precedes shelf presence, we did not have precise information on the starting dates of both events. The addition of a longitudinal dimension would undoubtedly offer additional insights. If this information would become available, future research could investigate changes in shelf space allocation for NBs as an additional indicator of retailer goodwill. Moreover, it would be interesting to study whether NB manufacturers change their advertising and pricing policies after engaging in PL production.

Furthermore, future research could investigate cross-retailer effects of NB manufacturers' PL production decisions. IGD (2005) reported that a concern mentioned by PL suppliers of the discount channel was how this engagement would impact their relation with other retailers. Although the goodwill of the discounter for which the NB manufacturer starts to produce may increase, this could come at the expense of deteriorated relations with other retailers. Similarly, should PL production be restricted to a single discounter? Such exclusivity could create even more goodwill with the focal discounter, but also the negative implications with other retailers (discounters) may become more pronounced.

Finally, future research could examine how PL production by NB manufacturers versus dedicated PL suppliers affects a retailer's performance. Is it true that a retailer benefits from the NB manufacturer's innovative technologies and expertise (de Jong 2007), which may lead to improved PL quality and image perceptions (Kumar and Steenkamp 2007, p. 157)? And how does using NB manufacturers versus dedicated PL suppliers translate into retailer margins? We have only begun to scratch the surface of research possibilities in an area that warrants more attention. We hope this article will provide a stimulus for more research on PL production.

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3. Why Retailer Private-Label Margins Differ Within Categories

3.1 Introduction

PLs have witnessed considerable growth in grocery retailing. Nowadays, PLs have been introduced in over 90% of all consumer packaged goods categories (Kumar and Steenkamp 2007). Still, most retailers wish to proliferate their PL offering even further. As a result, retailers are developing increasingly wide ranges of PL items, including multiple quality tiers and package sizes (Dobson and Chakraborty 2009).

There are three main reasons why retailers continue to push PLs. First, they introduce PLs to differentiate themselves from other retailers (Corstjens and Lal 2000), and thereby hope to create and/or increase store loyalty (Ailawadi, Pauwels, and Steenkamp 2008). Second, PLs provide retailers with negotiation leverage over NB manufacturers (Narasimhan and Wilcox 1998). Finally, retailers push PLs because they generate high margins (Ailawadi and Harlam 2004). This final reason for retailers to invest in PLs is the focus of this paper.

The fact that PLs generate high margins for retailers has been acknowledged in both the business and academic press. In a recent survey by IGD (2006, p. 43), 85% of the retailers surveyed rated “improved margins” as their main reason for investing in PLs. Likewise, academic researchers agree that there is a rationale for growing PLs, “especially from a margin perspective” (Ailawadi, Pauwels, and Steenkamp 2008, p. 27; see also Ailawadi and Harlam 2004).

Ailawadi and Harlam (2004) demonstrate that while a retailer’s PL percentage margins are high on average, these margins vary considerably across categories. Their analysis provides key insights into the role of category-level variables reflecting manufacturer and retailer power

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(such as category concentration) in affecting a retailer's margins on both PLs and NBs. However, by studying PL margins at the category level, they make abstraction from the fact that these margins may also vary substantially across PL SKUs within a category. Given recent changes in the retail environment, including the development of closer relationships between some PL suppliers and retailers, the introduction of multiple PL quality tiers and package sizes, and the emergence of dual branding (i.e. PL production by NB manufacturers), these within-category differences are expected to become more and more important.

Against this background, we contribute to three research streams. First, we build on and extend Ailawadi and Harlam's cross-category analysis, and consider how a retailer's PL margins vary within categories. Second, we contribute to the emerging stream of research on PL quality tiers, and investigate how the percentage margins differ for PL SKUs from different tiers in the same category. In the presence of across-tier cannibalization (evidenced in Geyskens, Gielens, and Gijsbrechts 2010), the distribution of the margins earned on different quality tiers becomes very important. Third, we respond to Sethuraman's (2009, p. 771) recent call for more empirical research on dual branding from a retailer's perspective, in that we study the influence of PL production by NB manufacturers on a retailer's PL margins. PL supplier selection is an important decision for retailers (Kumar, Radhakrishnan, and Rao 2010). When a retailer has to choose a PL supplier, e.g. a dedicated PL supplier versus a dual brander, it is important to know the potential implications in terms of the margins the retailer can realize on his PL products.

We compile a unique large-scale data set including margin and supplier information on 1,545 PL SKUs in 211 product categories, covering the complete PL assortment of a major European retailer. We supplement the proprietary margin and supplier information obtained from the retailer with category characteristics from other sources. The paper is organized as follows. We begin with a brief discussion of our conceptual model. Subsequently, we present our hypotheses. Next, we discuss the research methodology and data, and present our empirical findings. The final section discusses implications for researchers and managers, and provides suggestions for further research.

3.2 Conceptual Framework

Following Ailawadi and Harlam (2004), we define a retailer's gross percentage margin on a PL SKU as the difference between its retail price (the regular selling price) and wholesale price (the

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price paid by the retailer to acquire the PL from the supplier), expressed as a percentage of the retail price:

$$(3.1) \text{ retailer PL \% margin} = \frac{\text{PL retail price} - \text{PL wholesale price}}{\text{PL retail price}} \times 100$$

Historical Situation

Extant research on PL margins has documented that retailer PL percentage margins are high. For example, prior studies report average gross retailer PL margins of up to 30% (Kumar and Steenkamp 2007) and higher (Sethuraman 2006). These high retailer margins have been attributed to the fact that PL suppliers faced unfavorable channel conditions. Given that there were many competing PL suppliers within the same category, they were often able to only obtain arm's length contracts of no more than one or two years.²² Because PL suppliers had little market power (Ailawadi and Harlam 2004, p. 148; see also Narasimhan and Wilcox 1998), they could easily be squeezed by the more powerful retailer. Moreover, prior research argued that PL suppliers operated in a market with little or no product differentiation (Ailawadi 2001) where PLs were typically offered in one size or variant only (Kumar and Steenkamp 2007). As such, PL suppliers typically sold to retailers at wholesale prices that were close to marginal cost (Raju, Sethuraman, and Dhar 1995), which resulted in high retailer PL margins.

Current Situation

However, the retail environment has changed, and the above conjectures may have become outdated, causing retailer PL margins to vary substantially across PL SKUs within a category. First, as PLs have been around for a longer time, retailers have developed more intense relationships with a select set of preferred PL suppliers (Gomez-Arias and Bello-Acebron 2008). While many suppliers still deal with the retailer on an arm's length basis, others have developed "intensive partnerships" (de Jong 2011, p. 80). In addition, retailers have rationalized their PL supplier base by working with fewer suppliers simultaneously in a given category, making some suppliers less easily replaceable than others. The resulting heterogeneity in the nature of the channel relationships between the retailer and his PL suppliers is expected to cause retailer PL

²² Arm's length contracts or "discrete exchanges" are defined as transactions between two parties that are conducted on an ad hoc basis, as if they were unrelated, and constitute nothing more than the transfer of ownership of a product or service (Heide 1994).

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margins to vary not only across but also within categories.

Second, previous PL research assumed that “store brands usually are not quite up to the quality standards of the top NBs and always are priced at a discount” (Dhar and Hoch 1997, p. 209). Yet, currently, some PLs offer equal or even better quality than leading NBs, and PL prices can exceed NB prices (Kumar and Steenkamp 2007). Similarly, Chen et al. (2010) stated that “one rarely finds quality tiers in PL products” (p. 2). However, more and more retailers have now moved from a single standard PL line to a differentiated three-tiered PL portfolio (Geyskens, Gielens, and Gijsbrechts 2010; Martos-Partal and Gonzáles-Benito 2011). These three-tiered PL programs follow a ‘good, better, best’ approach, and include an economy and premium PL line in addition to the standard PL. Since not all PLs have remained undifferentiated commodity goods, retailer PL margins are no longer expected to be the same across all PL SKUs in a given category.

Furthermore, retailers have started to develop a wide range of PL SKUs to appeal more to heterogeneous consumer preferences (Dobson and Chakraborty 2009). PLs started as generics that, within each category, were usually offered in only one size (typically copycatting the most common size on the shelves), thereby accounting for relatively few SKUs for the retailer (Kumar and Steenkamp 2007). Nowadays, retailers implement a sophisticated mix of segmentation strategies to construct their PL portfolio, leading to an extensive PL SKU proliferation even within the same quality tier (Olbrich, Grewe, and Orenstrat 2009). Different PL package sizes offered within a category may correspond to different PL percentage margins for the retailer.

Finally, previous studies typically assumed that PL manufacturers were dedicated PL suppliers with little market power (see e.g. Ailawadi and Harlam 2004; Narasimham and Wilcox 1998). Due to increased PL competition, NB manufacturers increasingly pursue a dual strategy, and engage in PL production next to their NB activities. In the U.S. alone, it has been estimated that over half of the NB manufacturers already pursue such a dual strategy (Kumar and Steenkamp 2007). As such, both dedicated PL suppliers and NB manufacturers operate in the PL market. Because of this, PL suppliers may vary in terms of their negotiation power, and retailer PL margins may depend on who physically produces the PL, i.e. a dedicated PL supplier or a dual brander.

Table 3.1, which we will use as a guiding tool for developing our hypotheses, exemplifies this changing retail landscape, and its expected influence on within-category PL margin

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variations for a given retailer. In a nutshell, we expect retailer PL margins (i) to depend on the nature of the PL supplier-retailer relationship, (ii) to differ across PL tiers and PL sizes, and (iii) to be affected by a supplier’s extent of NB focus next to its PL production for the retailer. Figure 3.1 visualizes our theorizing on these determinants of a retailer’s PL margins. In developing our hypotheses, we take into account the two components of retailer PL margins as reflected in Equation (3.1), and we argue how each of the determinants influences retailer PL margins through, respectively, the retail price and/or the wholesale price.

**TABLE 3.1
HISTORICAL VS. CURRENT PRIVATE-LABEL SITUATION**

| | Historical Situation | Recent Developments |
|--|---|--|
| PL Supplier-Retailer Relationship | Arm’s length only – Many (interchangeable) PL suppliers | Increasing use of partnerships – More limited number of “preferred” PL suppliers |
| PL Differentiation | Uniformly low(er) quality – One PL tier | Quality variation – Multiple PL tiers |
| | Few variants/sizes – One PL SKU | Multiple variants/sizes – Multiple PL SKUs |
| PL Supplier | Dedicated PL suppliers only | Increasing use of dual branders |
| Margin Implications | Little within-category variation | Considerable within-category variation |

Heterogeneity in PL Supplier-Retailer Relationships

Relationship intensity. Following Bolton, Lemon, and Verhoef (2004), we conceptualize the intensity of a supplier-retailer relationship in terms of three dimensions: relationship length (how long does a supplier produce PLs for the retailer), relationship depth (what percentage of

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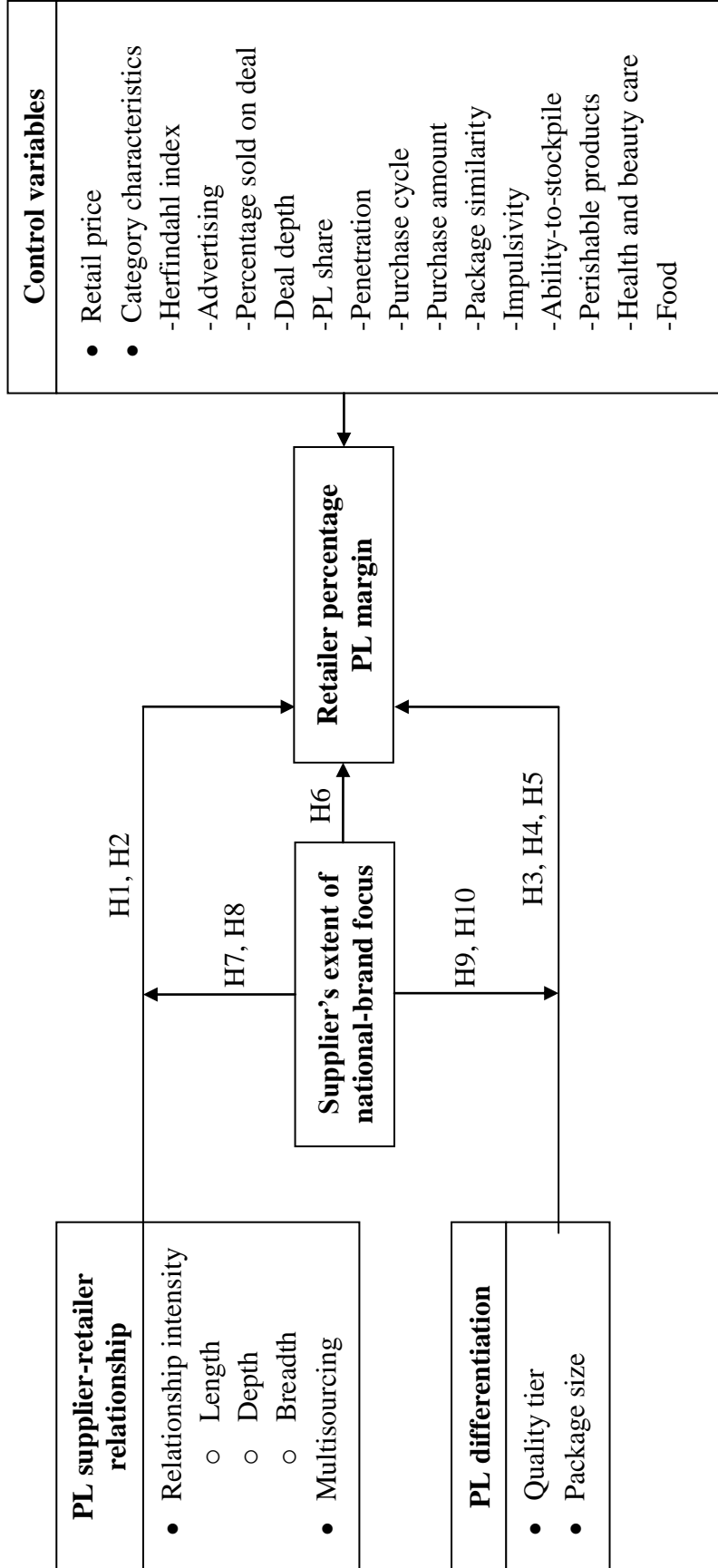
total retailer category sales does the supplier represent), and relationship breadth (in how many categories does the supplier produce PLs for the retailer). Numerous studies have documented the benefits of intense supplier-buyer relationships. Embedded ties, i.e. intense relationships, facilitate the transfer of knowledge between partners (Reagans and McEvily 2003). For example, network theory shows that interconnectedness between partners positively affects communication efficiency (Rowley 1997). Intense supplier-retailer relationships benefit from better mutual planning and problem-solving efforts (Maloni and Benton 1997). As such, PL suppliers in intense relationships have the opportunity to better match a retailer's needs and create added value, on top of the product, for the retailer (de Jong 2011), thereby establishing switching barriers (Dubé, Hitsch, and Rossi 2009). As a result, we expect that the retailer will be more likely to accept higher wholesale prices from PL suppliers with whom he shares a more intense relationship than from those where this is not the case. As there is no theoretical rationale to expect a systematic relationship between supplier-retailer relational characteristics and the PL's retail price, a higher PL wholesale price will lead to a lower PL margin for the retailer.²³

H1: Relationship intensity, as reflected in a (a) longer, (b) deeper, and (c) broader PL supplier-retailer relationship, decreases a retailer's PL margins.

Multisourcing. Multisourcing, i.e. simultaneously allocating PL production to multiple competing suppliers within the same category, is employed by retailers to reduce the risks that arise from relying on a single supplier (Swaminathan and Shanthikumar 1999). The fewer suppliers are used within a category, the more difficult it is to replace one (Geyskens, Gielens, and Dekimpe 2002). Hence, single sourcing makes the retailer more dependent on a particular supplier than multisourcing. In contrast, if the retailer uses multiple suppliers at the same time, all of which capable of supplying the PLs in the category, the retailer has more negotiation power (Minner 2003). Working with several suppliers who can all take over the production of the other PL SKUs in the category relatively easily, makes the threat of substitution believable. Hence, increased use of multisourcing by the retailer will push wholesale prices down (Cannon and Homburg 2001), and corresponding retailer PL margins will be higher. In a counterfactual

²³ As detailed in our empirical results section, the observed variation in retailer PL percentage margins across SKUs and categories indicates the absence of fixed mark-up price-selling mechanisms on the retailer's part. Still, in our empirical testing, we will control for the potential impact of PL retail price.

FIGURE 3.1
CONCEPTUAL FRAMEWORK



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policy experiment in the milk market, Chen et al. (2010) finds that retailers indeed benefit from lower PL wholesale prices when an additional PL supplier enters the PL market. As with relationship intensity, no systematic link is expected between multisourcing and retail prices. As such, the lower PL wholesale price that can be obtained through multisourcing should translate into higher retailer PL margins. Hence:

H2: Multisourcing increases a retailer's PL margins.

Multiple PL Quality Tiers

We also expect retailer PL margins to differ within categories because PLs now cover multiple quality tiers, and may include an economy and a premium tier next to the standard PL tier. Both components of the retailer's PL margin, i.e. the PL retail price and the corresponding PL wholesale price, are expected to differ per tier, as explained below.

Economy PL. Economy PLs are no-frills, bottom-of-the-market PLs that offer basic, acceptable quality at the best price. They are often introduced to compete with hard discounters (Bergès-Sennou, Bontems, and Réquillart 2004), and therefore have a strong focus on offering a low retail price. As to the wholesale price, economy PLs are commodity products with few, if any, possibilities for differentiation (Kumar and Steenkamp 2007). Since there are little intrinsic differences between the economy PLs offered by suppliers, retailers can push the wholesale price of the economy PLs down compared to the standard PLs. Depending on the relative strength of both downward pressures (i.e. on the retail price vs. on the wholesale price), the retailer's percentage margins for economy PLs could be either lower or higher than those for standard PLs.

H3a: Economy PLs offer lower retailer PL margins than standard PLs.

H3b: Economy PLs offer higher retailer PL margins than standard PLs.

Premium PL. Premium PLs are positioned at the top end of the market, and deliver premium quality. They are introduced in categories that offer opportunities to provide real additional value to the consumer. These unique features of the premium PL enable the retailer to charge a higher retail price for premium than for standard PLs. On the other hand, given their more unique features, premium PLs also offer more possibilities for differentiation (Bazoche,

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Giraud-Héraud, and Soler 2005). As more intrinsic differences in premium PL quality can be offered by suppliers, wholesale prices are expected to be higher for premium compared to standard PLs. Again, depending on the relative strength of both factors, the retailer percentage margin for premium PLs could be either lower or higher than that for standard PLs.

H4a: Premium PLs offer lower retailer PL margins than standard PLs.

H4b: Premium PLs offer higher retailer PL margins than standard PLs.

Multiple Package Sizes

PLs no longer solely copy the most common size on the shelves, but rather cover multiple package sizes. Good arguments are available to support quantity discounts on the different PL package sizes offered in a category. Quantity discounts may be due to either the manufacturer's wholesale price or the retailer's pricing strategy (Khan and Jain 2005).

According to Nason and Della Bitta (1983), consumers expect to pay lower per-unit prices for larger package sizes. Common explanations for quantity discounts are, for example, the lower convenience (Clements 2006) and higher inventory-carrying costs (Dolan 1987) for consumers buying larger package sizes, or the fact that larger package sizes appear smaller than they really are because of the inelasticity of size estimations (Chandon and Ordabayeva 2009). There may also be competitive pressures, particularly from mass discounters that offer larger sizes at discounted prices (Deleersnyder et al. 2007). Hence, retailers may use quantity discounts so that *per-unit* PL retail prices decrease with package size.

Crowther (1964) has indicated that manufacturers might save costs by selling fewer, but larger, packages as fewer orders have to be processed. Although these lower costs may lead to a lower per-unit wholesale price for the PL, recent empirical research finds that manufacturers do not consider quantity-discount effects when setting wholesale prices (Gu and Yang 2010). Hence, in line with the findings of Khan and Jain (2005), we expect that while the *absolute* margin is highest for the larger PL package sizes and lowest for the smaller sizes, the *percentage* margin is lower for the larger PL package sizes.

H5: Larger package sizes offer lower retailer PL margins.

3. Why Retailer Private-Label Margins Differ Within Categories

Supplier's Extent of NB Focus

Retailers can either outsource their PL production to dedicated PL suppliers, or they can opt to work with dual branders. While dedicated PL suppliers focus exclusively on the production of PLs, dual branders engage in PL production for the retailer next to their NB activities. A retailer's PL margins may differ within categories, depending on the extent to which a supplier also produces NBs for that retailer.

Dedicated PL suppliers are high-volume producers which follow a price-led strategy (Kumar and Steenkamp 2007). They mainly concentrate on ways to reduce costs. R&D support and quality control are far less important than for manufacturers supplying both PLs and NBs (Davies 1990).

Dual branders are thought to offer more quality assurance (Sethuraman 2009) and innovative capacity (Kumar and Steenkamp 2007).²⁴ Moreover, manufacturers that produce both NBs and PLs for a retailer have double the contact with that retailer compared to manufacturers that focus solely on supplying PLs, making the former more integral to the category decision making processes of the retailer (IGD 2006). In addition, because of their repeated interactions with the retailer, suppliers with a higher extent of NB focus next to their PL production become more credible (Sudhir and Rao 2006). PL suppliers that also sell NBs to the retailer in addition to the PLs they produce therefore become more valuable to a retailer, and more so as their NB focus increases, if only because retailers continue to need NBs to draw customers to their stores (Dhar and Hoch 1997). These factors should enable more NB-focused suppliers to leverage higher PL wholesale prices. By doing so, they not only increase their own profits, but also prevent the retailer from increasing his own profitability and power (Messinger and Narasimhan 1995). As such, we expect a retailer to obtain lower PL margins from manufacturers that supply more NBs next to PLs for the retailer:

H6: The higher a PL supplier's extent of NB focus, the lower a retailer's PL margins.

The Moderating Effect of a Supplier's Extent of NB Focus

A supplier's extent of NB focus may interact with the nature of that supplier's relationship with

²⁴ Even though one could argue that NB manufacturers could use PL production to dispose of their lower-quality products, retailers have become so powerful that they can pressure manufacturers to share their latest technologies (Kumar and Steenkamp 2007, p. 141).

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the retailer and/or with the PL tier it produces.²⁵

NB focus × relationship intensity. As argued before, PL suppliers in intense relationships have the *opportunity* to create added value, on top of the product, for the retailer because they better understand the retailer's needs. However, the extent to which a supplier also has the *ability* to create added value may depend on that supplier's NB focus. Dedicated PL suppliers are believed to lack flexibility and ideas compared to dual branders (Kumar and Steenkamp 2007). As a result, dedicated PL suppliers in intense relationships may not be able to provide as much added value as more NB-oriented suppliers in intense relationships. While both dedicated and more NB-focused suppliers have the opportunity to create added value in an intense relationship, more NB-focused suppliers are expected to also have a higher ability to do this. Hence:

H7: The negative effect of (a) relationship length, (b) relationship depth, and (c) relationship breadth on a retailer's PL margins will be amplified when the SKU is produced by a supplier with a higher extent of NB focus.

NB focus × multisourcing. When the retailer uses several suppliers at the same time who are all capable of supplying the PLs in the category, the retailer has more negotiation power vis-à-vis each individual supplier (Minner 2003), and a higher retailer PL margin is expected (as postulated in H2). We do not have an a priori expectation whether this effect will be stronger or weaker for more NB-focused suppliers. On the one hand, when dealing with a supplier with a higher extent of NB focus, the retailer may be more reluctant (careful) to fully exert his negotiation power than when dealing with a more dedicated PL supplier, given that more NB-oriented suppliers are also valuable to a retailer because of their NBs. On the other hand, the gains to be realized from dual branders if one effectively plays out suppliers against one another are higher, given that these tend to demand higher PL wholesale prices than dedicated suppliers. We therefore offer alternative hypotheses:

H8a: The positive effect of multisourcing on a retailer's PL margins will be attenuated when the SKU is produced by a supplier with a higher extent of NB focus.

²⁵ No interaction effect of supplier NB focus and PL package size was hypothesized. An additional model was estimated including this interaction effect. Consistent with our expectations, no significant interaction effect was found ($p > .10$). Moreover, all other results remained stable.

3. Why Retailer Private-Label Margins Differ Within Categories

H8b: The positive effect of multisourcing on a retailer's PL margins will be amplified when the SKU is produced by a supplier with a higher extent of NB focus.

NB focus \times *PL tier*. A supplier's extent of NB focus may also interact with the PL tier that the supplier produces. As mentioned before, economy PLs are undifferentiated commodity goods, with a focus on low-cost procurement. Dedicated PL suppliers may be particularly well suited to deliver such products. As they can more easily be squeezed than suppliers with a higher extent of NB focus, it should be easier to push them to supply at marginal production cost, which increases the retailer's margin on the economy PL.

More NB-oriented manufacturers offer more quality assurance and should be better able to differentiate the PLs they supply (Sethuraman 2009). The latter feature is especially critical (valuable) for premium PLs (Kumar and Steenkamp 2007). As such, dual branders with a higher NB focus should be more likely to derive negotiation power from their production flexibility in a premium PL setting, which will lower the retailer's PL margin. This flexibility is less of an asset, however, when dealing with intrinsically undifferentiated economy PLs. Formally:

H9: The retailer PL margin for the economy PL is higher when the SKU is produced by a supplier with a lower extent of NB focus.

H10: The retailer PL margin for the premium PL is lower when the SKU is produced by a supplier with a higher extent of NB focus.

3.3 Research Setting and Measures

Setting

To test our hypotheses, we need three pieces of information that typically are highly confidential: (i) the identity of the PL producers,²⁶ (ii) the nature of the retailer's relationship with those suppliers, and (iii) the retailer margins realized on their PL SKUs. We were fortunate to obtain a unique data set with PL supplier information for the complete PL assortment of a large Dutch retailer. In addition, we had access to information on the length of the relationship of these PL suppliers with the retailer, along with the retailer PL margins for the retailer's complete PL

²⁶ Indeed, many dual branders fear the reaction of their customer base (who often pays a price premium for the NB) if it becomes known that they also deliver the products for a retailer's PL offering (Gomez-Arias and Bello-Acebron 2008).

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assortment.

The retailer is positioned as a high-price, high-service chain and, as such, scores relatively low on perceived price image, but high on product quality (GfK 2009). The retailer belonged to the top 5 Dutch retailers in terms of value share. Its aggregate PL share amounts to 30%. Over the past ten years, its sales have steadily increased, which can be attributed in part to the hundreds of new products that were added to its PL range.

PLs play an important role in the Dutch grocery market, and account for 25% of the FMCG retail sales in 2008 (PlanetRetail 2011). Most retailers in the Netherlands, including our focal retailer, have started to offer several PL tiers across a diverse set of product categories. The Netherlands has been argued to be representative for many other Western economies in terms of inflation rate, PL share, the price gap between NBs and PLs, and grocery store density (Steenkamp et al. 2005). Therefore, it has been used as the setting of several recent PL studies (see, for example, Ailawadi, Pauwels, and Steenkamp 2008 and Szymanowski and Gijsbrechts 2012).

Data

The dataset covers the complete PL assortment of the retailer at a fixed point in time (June 2008), and includes 1,545 PL SKUs across 211 product categories.²⁷ The 1,545 PL SKUs in our sample are produced by 189 PL suppliers. These suppliers usually produce PLs for the retailer in more than one category (as reflected in their relationship breadth, see below). On average, a supplier produces 8 PL SKUs for the retailer. We combine the proprietary retailer data on PL margins and PL suppliers with conventional scanner panel data from GfK. The latter cover the purchases in 2008 of 5,000+ Dutch households.

Retailer PL margin. In line with Ailawadi and Harlam (2004), our dependent variable is a retailer's gross PL margin (PLMARGIN), expressed in percentages. It is measured as the difference between the regular retail price in June 2008 (excluding promotions) and the contractually defined wholesale price, relative to the retail price. The retailer's PL percentage margins were provided by the retailer. The average PL margin in our sample, as illustrated in Table 3.2, equals 36.7%, which is in line with the average margin of 34% reported in Sethuraman (2006).

²⁷ In line with Ailawadi and Harlam (2004), product categories in the fresh meat, deli, seafood, and bakery departments, in which most products are unbranded and not categorized into PLs and NBs, were excluded. Also short-lived promotional PL SKUs were not included in our dataset.

3. Why Retailer Private-Label Margins Differ Within Categories

TABLE 3.2
RETAILER PL MARGINS (%)

| | Grand-Mean | Cluster-Mean Economy PL | Cluster-Mean Premium PL |
|---------------------------|-------------------|------------------------------------|------------------------------------|
| Overall PL margin | 36.67 | | |
| Economy PL margin | 17.93 | 17.93 | ---- |
| Standard PL margin | 37.49 | 38.58 | 33.53 |
| Premium PL margin | 38.43 | ---- | 38.83 |

Relationship intensity. We operationalize relationship length (LENGTH) as the number of consecutive years each producer has been supplying PLs for the retailer within the category. While some suppliers already produce PLs for the retailer for several years, others have started only recently. Second, we measure relationship depth (DEPTH) as the percentage of the retailer’s category volume sales (both PLs and NBs) the supplier accounts for (through PLs and/or NBs). Finally, relationship breadth (BREADTH) reflects the number of categories in which the supplier produces PLs for the retailer. It appears that at least some of the suppliers in our sample are in a partnership with the retailer, given that long, deep, and broad relationships exist. For example, we observe a PL supplier in the soup category who already produces PLs for the retailer for more than 9 years, that currently represents over 40% of the retailer’s total category sales, and that produces PLs in 11 different categories.

Extent of multisourcing. We operationalize the extent of multisourcing (MULTISOURC) as the number of PL suppliers a retailer simultaneously employs within a category. Within one category, the retailer sources from 1 to 16 PL suppliers.

PL tier. Although the majority of the PL assortment still consists of standard PLs (number of SKUs $n = 1,445$), several “non-standard” SKUs were present as well ($n = 100$). The economy tier (D_ECON) is present in 42 categories ($n = 66$), among which detergent, coffee, and cereals. The premium tier (D_PREM) is offered in 10 categories ($n = 34$), among which rice and coffee. Overall, the economy, standard, and premium PLs offer the retailer an average margin of 17.9%, 37.5%, and 38.4%, respectively (see Table 3.2). Comparable summary statistics are obtained when focusing only on those categories where, respectively, an economy or premium PL was offered (reported as cluster means in Table 3.2). We denote the PL tier that an SKU belongs to through an economy and a premium dummy, with the standard PL tier as the baseline.

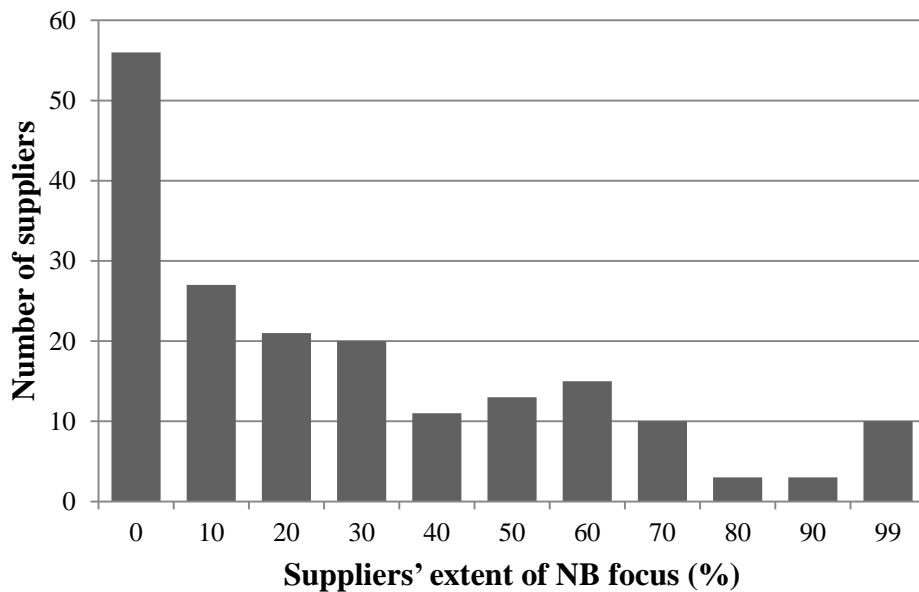
Package size. Following Khan and Jain (2005), we measure package size using two

3. Why Retailer Private-Label Margins Differ Within Categories

dummy variables, capturing small package sizes (D_SMALL) and large package sizes (D_LARGE), respectively, with the modal package size serving as benchmark. The modal size is identified as the most common size on the shelves in the category with the retailer.²⁸

Supplier's extent of NB focus. We measure a supplier's extent of NB focus (NBFOCUS) as the ratio of a supplier's NB volume sales to its total (NB and PL) volume sales within a category at the retailer. A value of 0 indicates that the PL supplier is a dedicated PL supplier to the retailer, whereas values larger than 0 indicate that the PL supplier is a dual brander.²⁹ In total, 133 of the 189 suppliers in our sample are dual branders. Figure 3.2 shows that the extent of suppliers' NB focus varies from very low levels to over 90%. Dual branders produced 983 of the 1,545 PL SKUs in our sample. The remaining 562 SKUs are produced by dedicated PL suppliers.

FIGURE 3.2
DISTRIBUTION OF SUPPLIERS' EXTENT OF NB FOCUS



Given that we include interactions between a supplier's extent of NB focus, the various dimensions of a supplier's relationship intensity, and the extent of multisourcing, we mean center

²⁸ We identified small and large sizes as any downward or upward deviation of more than 20% from the modal size, respectively. Specifying small and large packages sizes as a more than 10% or more than 30% deviation from the modal size does not alter our results.

²⁹ To test whether our findings are sensitive to our measure of NB focus, we re-estimated our model using a dummy variable (dual brander = 0; fully dedicated supplier = 1) as opposed to a continuous measure. All findings (on both main and interaction effects) remain substantively the same.

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these variables to facilitate interpretation (Cohen et al. 2003).

Control Variables

We control for the effect of the PL's retail price and of several category characteristics on retailer PL margins. These covariates are not the focus of our study, but controlling for them provides a stronger test of our hypotheses (Greene 2000).

Retail price. In our theorizing on the effects of (a) the intensity of a PL supplier's relationship with the retailer, (b) the extent of multisourcing, and (c) a PL supplier's extent of NB focus on retailer PL margins, we focused on the impact of these factors on the PLs' wholesale prices. In contrast, in our theorizing on the effects of (d) the PL tier and (e) package size, we considered the impact of these factors on both PL wholesale prices and PL retail prices. To allow for the potential effect of retail price differences to be picked up by the PL tier and package size variables ((d) and (e) above), but to control for retail price differences in (a), (b), and (c) above, we mean-centered PL retail price within PL tier and package size (in addition to within-category mean-centering), and add the resulting price as a control variable (see Cohen et al. 2003, p. 565 on centering within context without building back group means).

Category characteristics. We control for most of the category characteristics that Ailawadi and Harlam (2004) included as determinants of retailer PL margins in their cross-category study: the Herfindahl index, percentage sold on deal and deal depth, PL value share, penetration, purchase cycle (in days), and average purchase amount in the category at the retailer were all obtained from the GfK panel data.³⁰ Ailawadi and Harlam (2004) also included advertising expenditures per product category. However, the actual spending figures were not available to us. We include perceived advertising intensity in a category as a proxy (for details, see Steenkamp, van Heerde, and Geyskens 2010).

In addition to including Ailawadi and Harlam's category characteristics, we also control for consumers' perceived package similarity between NBs and PLs in a category, which may also drive cross-category differences in PL margins. This measure was obtained from a recent study on consumer perceptions of PLs across categories (Steenkamp, van Heerde, and Geyskens

³⁰ For both 'percentage sold on deal' and 'deal depth' (percentage discount) in the category, a price promotion is identified when the price of a product was at least 5% below its yearly average price level (see Raju 1992 for a similar practice). 'Penetration' is measured as the percentage of all households that shop at the retailer, that make at least one purchase in the category during the year, while 'purchase cycle' is defined as the average interpurchase time for households that make at least two purchases in the category during the year.

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2010). Furthermore, similar to Narasimhan, Neslin, and Sen (1996), we control for the degree of perceived impulse buying and for the ability to stockpile the category.

Finally, and again as per Ailawadi and Harlam (2004), we control for other unobserved differences across categories by including a dummy variable for perishable products (i.e. frozen, refrigerated, or dairy foods). Moreover, we also include two control variables to indicate, respectively, health and beauty care (HBC) and food categories.

Table 3.3 provides descriptive statistics. None of the VIF statistics exceeded 5 in our analyses, suggesting that multicollinearity is not an issue.

3.4 Model

The cross-sectional model, with a retailer's PL margin obtained for SKU i from supplier s in category j as the dependent variable, is specified as follows:

$$\begin{aligned}
 (3.2) \quad \text{PLMARGIN}_{isj} = & \gamma_0 + \gamma_1 * \text{LENGTH}_{sj} + \gamma_2 * \text{DEPTH}_{sj} + \gamma_3 * \text{BREADTH}_s \\
 & + \gamma_4 * \text{MULTISOURC}_j + \gamma_5 * \text{D_ECON}_{isj} + \gamma_6 * \text{D_PREM}_{isj} + \gamma_7 * \text{D_SMALL}_{isj} \\
 & + \gamma_8 * \text{D_LARGE}_{isj} + \text{NBFOCUS}_{sj} [\gamma_9 + \gamma_{10} * \text{LENGTH}_{sj} + \gamma_{11} * \text{DEPTH}_{sj} \\
 & + \gamma_{12} * \text{BREADTH}_s + \gamma_{13} * \text{MULTISOURC}_j + \gamma_{14} * \text{D_ECON}_{isj} \\
 & + \gamma_{15} * \text{D_PREM}_{isj}] + \Delta X + \varepsilon_{isj}
 \end{aligned}$$

where the X matrix includes the control variables, i.e. the PL retail price and the category characteristics, and Δ is the corresponding vector of coefficients.

Estimation of our model is complicated by two factors. First, SKU margins across categories coming from the same supplier are likely to be correlated, which may also be the case for SKU margins from different suppliers within the same category. To account for potential intercorrelation among multiple observations per category and/or supplier, we use robust clustered error-term estimation (cf. Mizik and Jacobson 2009). Specifically, we adopt the extension to two-way clustering of Cameron, Gelbach, and Miller (2011).

Second, the retailer may already have selected PL tiers, sizes, or suppliers to optimize his PL margins, such that only maximizing choices are observed. As a result, the supplier-retailer relationship characteristics, the PL tiers, the PL package sizes, and the supplier's extent of NB focus may not be exogenous. Following Hoetker and Mellewigt (2009) and Mooi and Ghosh (2010), we tested one-by-one for the endogeneity of the respective main effects using the Durbin-Wu-Hausman test (Wooldridge 2002). In a first-stage regression, where we also allow

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TABLE 3.3
DESCRIPTIVE STATISTICS

| Variable | M | SD | Minimum | Maximum |
|---------------------------------|----------|-----------|-------------------|----------------|
| Retailer PL % margin | .37 | .14 | -.58 ^a | .78 |
| Relationship intensity: length | 5.45 | 2.96 | .58 | 9.17 |
| Relationship intensity: depth | .33 | .27 | .01 | 1.00 |
| Relationship intensity: breadth | 4.26 | 3.45 | 1 | 14 |
| Multisourcing | 4.19 | 3.74 | 1 | 16 |
| Quality tier: economy | 4% | -- | 0 | 1 |
| Quality tier: premium | 2% | -- | 0 | 1 |
| Package size: small | 16% | -- | 0 | 1 |
| Package size: large | 29% | -- | 0 | 1 |
| Supplier NB focus | .16 | .22 | .00 | .99 |
| Retail price | 1.67 | 1.12 | .15 | 8.99 |
| Herfindahl index | .42 | .20 | .10 | 1 |
| Advertising | 3.35 | .30 | 2.10 | 4.21 |
| Percentage sold on deal | .21 | .09 | .00 | .74 |
| Deal depth | .17 | .04 | .00 | .46 |
| PL share | .46 | .26 | .02 | .99 |
| Penetration | .21 | .11 | .00 | .47 |
| Purchase cycle | 61.67 | 11.78 | 11.67 | 115.24 |
| Purchase amount | 1.96 | 1.05 | .48 | 9.69 |
| Package similarity | 2.65 | .11 | 2.30 | 2.92 |
| Impulsivity | 2.31 | .24 | 1.79 | 2.88 |
| Ability-to-stockpile | 2.90 | .40 | 2.13 | 3.87 |
| Perishable products | 33% | -- | 0 | 1 |
| Health and beauty care | 4% | -- | 0 | 1 |
| Food | 75% | -- | 0 | 1 |

Note: Descriptive statistics are reported before mean-centering. For the dummy variables, we report the percentage of the observations taking the value 1.

^aAlthough negative margins occur infrequently (1% of the SKUs), they are not uncommon, neither in Europe nor in the U.S. (Drèze 1999). Our results remain substantially the same when excluding these loss-leaders (n = 21) from our sample.

for correlated errors within categories and suppliers, we regress the potentially endogenous variables on the same (within- and across-category) variables that appear in the margin equation. From this first-stage regression, we compute the residual $\hat{\eta}$, and use this residual as an additional regressor in the PL margin equation, after incorporating all the independent variables, minus three category control variables (impulsivity, ability-to-stockpile, and the perishable products dummy) for identification purposes. The latter three variables are therefore used as exclusion

instruments. The parameter estimates for the residuals did not reveal any violation of the assumed exogeneity of the decision variables (all p -values were $> .20$).³¹ Consequently, endogeneity was found to not be an issue.

3.5 Results

To assess the importance of studying within-category drivers of PL margins, we first assess how much of the explainable variance in retailer PL margins is due to differences between versus within categories. To this extent, we performed a one-way ANOVA with random effects (Raudenbush and Bryk 2002, p. 23). We find that 46% of the explainable variance is due to between-category differences. Thus, a considerable part of the explainable variance (54%) is due to within-category differences. Our empirical analyses focus on explaining this 54% of variance. Table 3.4 reports the parameter estimates for the model.

Main Effects

We first discuss the results of the main effects. These are evaluated at the mean value of a supplier's NB focus. We find that the longer a PL supplier already engages in PL production for the retailer in the category, the lower the PL margins a retailer obtains ($\gamma_1 = -.39$; $p < .10$). Moreover, if the number of categories a PL supplier produces for the retailer increases, a lower PL margin is obtained by the retailer as well ($\gamma_3 = -.76$; $p < .01$). Overall, we confirm that relationship intensity, in terms of a longer and broader supplier-retailer relationship, tends to decrease retailer PL margins. As such, H1a and H1c are supported. No significant effect of relationship depth was found ($\gamma_2 = 3.83$; $p = .12$). Hence, H1b cannot be confirmed.

The level of multisourcing in a category increases retailer PL margins. The higher the number of suppliers simultaneously producing PLs for the retailer within the same category, the higher the retailer's PL margins ($\gamma_4 = .68$; $p < .01$). Hence, H2 is supported.

We find that the retailer obtains lower PL margins ($\gamma_5 = -20.56$; $p < .01$) on the economy PL than on the standard PL. Hence, H3a is supported. Moreover, we find that the retailer obtains

³¹ The variance explained in the first-stage regression, to obtain the residuals, improves significantly (F-values were evaluated at the 1% significance level) when adding the exclusion instruments, demonstrating the validity of the instruments (Cohen et al. 2003). One could also test for the endogeneity of the interaction terms. However, given that we have six interactions, this would require six additional valid instruments. Given that the main-effect tests for endogeneity were highly insignificant, we are confident that, even with the interaction terms added, the impact of endogeneity will remain limited (see Hoetker and Mellewigt 2009 for a similar reasoning).

3. Why Retailer Private-Label Margins Differ Within Categories

TABLE 3.4
DETERMINANTS OF PL MARGINS (N = 1,545)

| Variable | Coefficient | | t-value |
|--|--------------------|-----|----------------|
| Intercept | 1.36 | | .06 |
| <i>Relationship intensity</i> | | | |
| Relationship length | -.39 | * | -1.62 |
| Relationship depth | 3.83 | | 1.16 |
| Relationship breadth | -.76 | *** | -3.48 |
| <i>Multisourcing</i> | .68 | *** | 2.38 |
| <i>PL quality tier</i> | | | |
| Economy tier (economy = 1, standard = 0) | -20.56 | ††† | -6.64 |
| Premium tier (premium = 1, standard = 0) | 3.58 | † | 1.81 |
| <i>Package size</i> | | | |
| Small size (small = 1, modal = 0) | 1.93 | | 1.25 |
| Large size (large = 1, modal = 0) | -3.44 | *** | -2.34 |
| <i>Supplier NB focus</i> | -4.88 | ** | -1.85 |
| <i>Interaction effects</i> | | | |
| Supplier NB focus * Relationship length | -1.32 | * | -1.48 |
| Supplier NB focus * Relationship depth | 5.04 | | .48 |
| Supplier NB focus * Relationship breadth | -1.01 | * | -1.34 |
| Supplier NB focus * Multisourcing | 1.47 | † | 1.87 |
| Supplier NB focus * Economy tier | -.61 | | -.04 |
| Supplier NB focus * Premium tier | 2.51 | | .35 |
| Control variables | | | |
| <i>Retail price</i> | 1.97 | † | 1.90 |
| <i>Category characteristics</i> | | | |
| Herfindahl index | -2.71 | | -.71 |
| Advertising | 6.93 | †† | 2.48 |
| Percentage sold on deal | -2.14 | | -.31 |
| Deal depth | 15.12 | | .76 |
| PL share | -3.78 | | -.81 |
| Penetration | -21.06 | †† | -2.15 |
| Purchase cycle | .08 | | 1.12 |
| Purchase amount | -2.01 | †† | -2.38 |
| Package similarity | 7.48 | | 1.05 |
| Impulsivity | -2.00 | | -.63 |
| Ability-to-stockpile | -.15 | | -.09 |
| Perishable products | 1.28 | | .55 |
| Health and beauty care | 5.58 | † | 1.77 |
| Food | 3.10 | | 1.17 |
| R-square | | | 21.7 |
| Adjusted R-square | | | 20.2 |

Significant effects are indicated in bold.

*** $p < .01$, ** $p < .05$, * $p < .10$ (one-sided), for directional hypotheses.

††† $p < .01$, †† $p < .05$, † $p < .10$ (two-sided), for non-directional hypotheses.

3. Why Retailer Private-Label Margins Differ Within Categories

higher margins on the premium PL ($\gamma_6 = 3.58; p < .10$) as compared to the standard PL. As such, H4b is supported. This confirms the (previously untested) intuition of Geyskens, Gielens, and Gijsbrechts (2010, p. 805) and Pauwels and Srinivasan (2009, p. 263) that premium PLs yield the highest margin of the three tiers.

In addition, we find that the retailer obtains a lower percentage margin on larger than modal package sizes ($\gamma_8 = -3.44; p < .01$). This is consistent with the finding of Khan and Jain (2005) that, on average, percentage product margins decrease with quantity, and confirms H5.

Consistent with our expectations, the effect of a supplier's NB focus on a retailer's PL margins is negative ($\gamma_9 = -4.88; p < .05$). As such, H6 is supported.

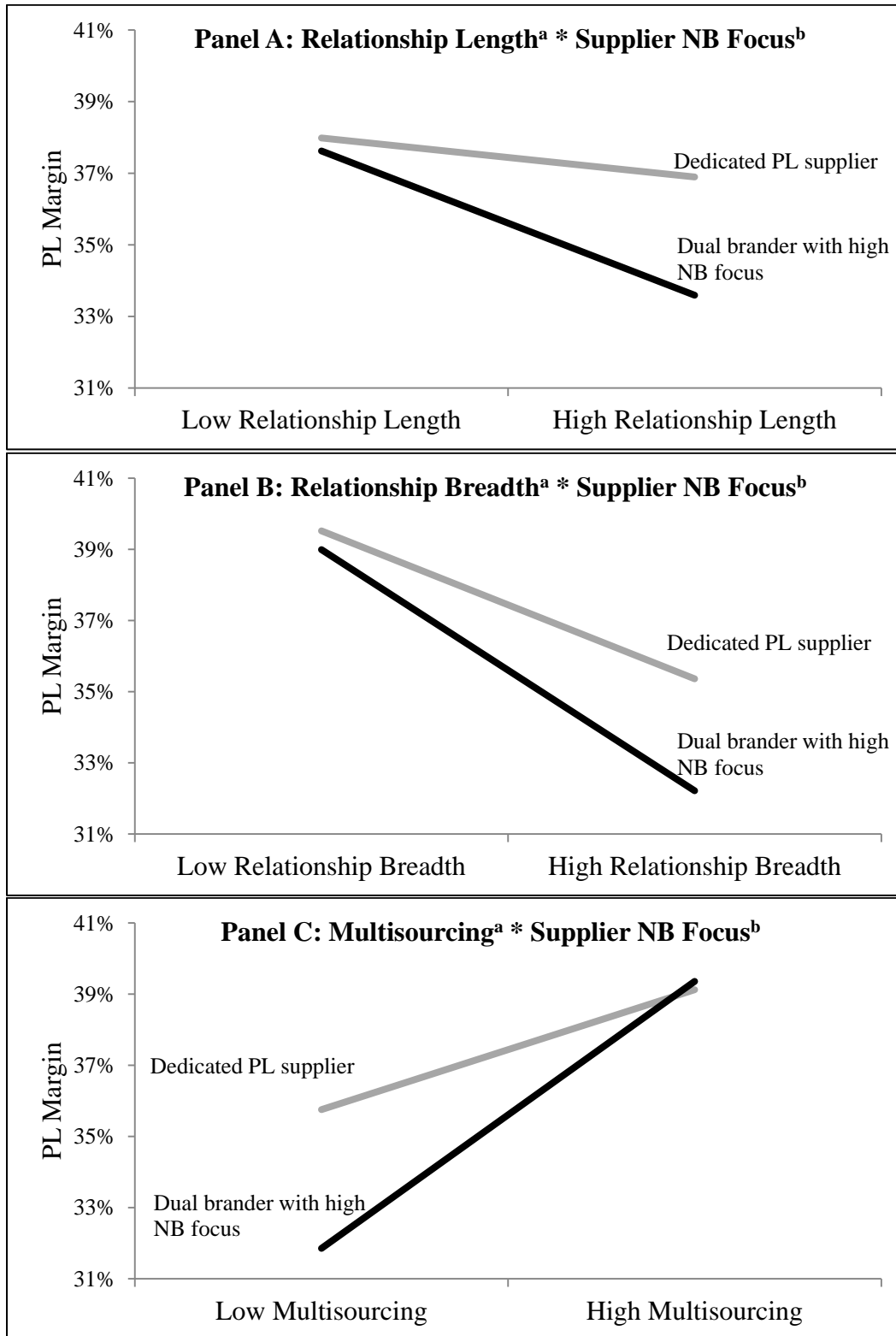
The Moderating Effect of a Supplier's Extent of NB Focus

We created interaction terms by multiplying the grand-mean-centered supplier-retailer relationship characteristics and the PL tier dummies with a supplier's grand-mean-centered extent of NB focus. The negative effect of relationship intensity, in terms of length ($\gamma_{10} = -1.32; p < .10$) and breadth ($\gamma_{12} = -1.01; p < .10$), on retailer PL margins is stronger when the SKU is produced by a supplier with a higher extent of NB focus. As such, we find support for H7a and H7c. Specifically, we find that the negative *net* effect of relationship length ($\gamma_1 + \gamma_{10} * \text{NBFOCUS}_{sj}$) only becomes significant ($p < .10$)³² when a supplier's focus is at least for 11% on NBs, and is insignificant when a supplier is mainly PL focused, i.e. when his NB focus is lower than 11%. This is consistent with the argument that retailers perceive that only dual branders are really able to provide added value, on top of the product, at high levels of relationship length. Looking at the observed values for NB focus (cf. Figure 3.2) in our sample, length had a significant negative net effect on a retailer's PL margin for 40% of the observations. As to relationship breadth, the net effect ($\gamma_3 + \gamma_{12} * \text{NBFOCUS}_{sj}$) is significantly negative regardless of a supplier's extent of NB focus, yet becomes more pronounced at higher levels of NB focus. This is consistent with the argument that retailers perceive especially dual branders as better able to provide added value at high levels of relationship breadth. The moderating effect for relationship depth, i.e. H7b, was not supported ($\gamma_{11} = 5.04; p = .32$). Furthermore, we find that the level of PL multisourcing within a category increases a retailer's PL margin, especially for more NB-focused PL suppliers ($\gamma_{13} = 1.47; p < .10$). The net effect of multisourcing ($\gamma_4 + \gamma_{13} * \text{NBFOCUS}_{sj}$) on a

³² We derived standard errors for the net effect using the delta rule (see e.g. Fornell, Rust, and Dekimpe 2010).

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FIGURE 3.3 INTERACTION EFFECTS



^a Low/high levels equal the mean value minus/plus one standard deviation.

^b High supplier NB focus equals the mean value plus one standard deviation. A dedicated PL supplier represents the minimum value of NB focus, i.e. 0.

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retailer's PL margin is significantly positive at all levels of NB focus, yet becomes more pronounced at higher levels of NB focus. Finally, we do not find evidence that a supplier's extent of NB focus interacts with the economy PL ($\gamma_{14} = -.61$; $p = .49$) or the premium PL ($\gamma_{15} = 2.51$; $p = .36$). Hence, we cannot support H9 and H10.

To further understand the nature of the significant interactions between relationship length, breadth, multisourcing, and a supplier's extent of NB focus, we graphically display the interaction effects in Figure 3.3. We use values of one standard deviation below and above the mean to represent low and high levels, respectively. We deviate from this practice for the NB focus variable, where we use the minimum value (0%) as low value (and again one standard deviation above the mean as high value). This facilitates the interpretation, especially since our sample contains multiple fully-dedicated PL producers. All control variables and other covariates are held constant at their mean value when deriving Figure 3.3.

Control Variables

PL retail price has a positive effect on a retailer's relative PL margin ($\delta = 1.97$; $p < .10$). Controlling for this variable provides stronger support for our theorizing that it is the PL wholesale price that is driving the effects of the supplier characteristics on a retailer's PL margin.³³

Our findings for the category characteristics are largely in line with the results of Ailawadi and Harlam (2004). First, we also find a significant positive effect of advertising, and a significant negative effect of a category's average purchase amount on retailer PL margins. Second, whereas Ailawadi and Harlam hypothesized a negative effect of category penetration, they could not confirm this hypothesis. We do find a significant negative effect of category penetration on retailer PL margins. The effects of a category's concentration level (Herfindahl index), percentage sold on deal, and purchase cycle were in the same direction, but did not reach significance. We further replicate Ailawadi and Harlam's findings that there are no significant margin differences between PLs in perishable versus non-perishable categories, and find support that PLs in the health and beauty care sector offer the retailer higher PL margins. However, no significant effect was found for PL share and deal depth.

³³ Similar results were obtained when not controlling for PL retail price.

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Explained Variance

In all, our model explains 21.7% of the variation in a retailer's PL margins, as reflected in its R-square. Only including the control variables in the model results in an adjusted R-square of 7.1%. When adding the focal variables, the adjusted R-square of the model rises to 20.2%. Thus, an additional 13% of the variation in a retailer's PL margin is explained by the specific relationship of the PL supplier with the retailer, the tier the SKU belongs to, the SKU's package size, and the PL supplier's extent of NB focus.

3.6 Discussion

Ailawadi and Harlam (2004) demonstrated that while retailer PL percentage margins are high on average, they vary considerably *across* categories. In this article, we showed that a retailer's PL percentage margins also differ substantially across PL SKUs in the same category. We tested our hypotheses on a sample of 1,545 PL SKUs in 211 product categories of a major European retailer, using unique supplier and margin information.

Insights for Retailers

An interesting observation stemming from our endogeneity analyses is that when building a relationship with a PL supplier, introducing a specific PL tier, package size, or selecting a certain PL supplier, the retailer did not yet take the expected PL margin into account. Hence, it appears that this retailer did not yet behave optimally in terms of the PL margins that could be procured. A possible explanation stems from the fact that we focused on fairly recent changes in the retail environment, while it takes time to develop optimal practices (Nelson and Winter 1982). Retailers have little or no own prior experiences to rely on, and are therefore still uncertain about the benefits and drawbacks of some of their decisions. Moreover, given the secrecy surrounding both PL production (Gomez-Arias and Bello-Acebron 2008) and retailer PL margins (Ailawadi and Harlam 2004), it is hard to derive (observe) best-industry practices that can subsequently be imitated (Gielens and Dekimpe 2007). Hence, our study provides several valuable first insights for retailers.

In previous research, retailer PL percentage margins were assumed to be invariably high, because PL suppliers were only able to obtain arm's length contracts. However, according to a recent report by the Private Label Manufacturers Association (PLBuyer 2010), stronger PL

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supplier-retailer partnerships are becoming more and more essential for retailers to maintain and grow their PL market share. Tom Gerrity, senior PL product director at 7-Eleven confirms that “it’s critical that we establish a close business relationship with our supplier partners” (Hofbauer 2010, p. 1). However, PL suppliers with whom the retailer establishes such an intense (long and/or broad) relationship have a better negotiation position, which results in lower PL margins for the retailer. While the retailer may be able to reap other benefits of these intense supplier relationships, e.g. in terms of more efficient communication, one should realize that there is no such thing as a free lunch, as this comes at the expense of lower retailer PL margins. One way to counter this negative effect is to diversify PL supply across several suppliers within the category. For example, when a retailer would extend the relationship with his existing suppliers from 2 to 3 years (keeping all other covariates, including the number of suppliers (4), at their mean level), his PL margin is expected to drop .6% (i.e., from 38.7% to 38.1%). When he would end these relationships, and select instead 4 new suppliers, this margin would rise to 39.9%. Had he been working with 6 (rather than 4) competing suppliers, he would have been able to obtain this same higher margin level without supplier turnover (and therefore keep the other aforementioned advantages). Although retailers lately tend to work with fewer suppliers, in line with their increased focus on forming select partnerships (de Jong 2011), multisourcing pushes PL wholesale prices down, and positively affects the retailer’s PL margins.

Second, retailers increasingly use multiple tiers to increase their overall PL penetration. We show that retailer PL margins differ considerably across different tiers. Lower-quality economy PLs offer a lower percentage margin to the retailer compared to the standard PL. Given the lower price level of the economy PL, this translates into an even lower absolute margin. To make matters worse, economy PLs have been found to cannibalize the higher-margin standard PLs (Geyskens, Gielens, and Gijsbrechts 2010). Even though the introduction of an economy PL tier may seem appealing to keep (hard) discounters at bay (Dekimpe et al. 2011), retailers should be aware of the triple jeopardy that such an introduction entails. However, we also find evidence that high-quality premium PLs offer higher margins for the retailer. While the premium PL introduction also affects the sales of the incumbent (standard) PLs negatively (Geyskens, Gielens, and Gijsbrechts 2010), and even disproportionately more so than an economy PL introduction, this is less of a problem as consumers switch from lower- to higher-margin products. Moreover, given the higher price level of the premium PL, the higher percentage

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margin translates into an even higher absolute margin. Ailawadi, Pauwels, and Steenkamp (2008) recommended the introduction of premium PLs because of their loyalty-creating benefit. Combined with our findings, retailers seem justified in their current practice of devoting more shelf space to this high-margin tier (IGD 2006). Interestingly, our focal retailer introduced the economy tier in more categories than the premium tier. This again suggests room for improvement.

Finally, while the literature has mostly assumed that PLs are produced by dedicated PL suppliers with little market power, we also provide insights into the performance implications of dual branding, where PLs are produced by a NB manufacturer. We find that retailer PL margins differ depending on who produces the PL. Dedicated PL suppliers live up to their image of being mainly cost focused, and provide higher PL margins to the retailer. In contrast, working with suppliers with a higher extent of NB focus, which may be beneficial in terms of more quality assurance and flexibility, leads to lower PL margins for the retailer. Building intense relationships results in an even larger drop in retailer PL margins when working with dual branders, as compared to dedicated suppliers. However, multisourcing (i.e. working with several suppliers simultaneously) as a strategy to avoid margin drops works particularly well when dealing with more NB-oriented suppliers.

Insights for PL Suppliers

Faced with soaring PL shares and volumes, quite a few *NB manufacturers* are struggling with the issue whether or not to engage in PL production. One of the reasons why NB manufacturers may be reluctant to do so is their perception that the retailer will solely focus on obtaining the lowest cost possible (Dunne and Narasimham 1999). However, our results show that retailers appreciate the benefits provided by suppliers with whom they share an intense relationship, and are willing to reward such added value. Our results are therefore in line with Gomez-Arias and Bello-Acebron (2008), who suggested that by producing PLs, NB manufacturers can influence PL wholesale prices. We show that this is even more so as the relationship intensifies in terms of length and/or breadth.

One could argue that such higher margins may not persist. Prior research has noted that there may be a “dark side” to long-term relationships. Suppliers in very long relationships may have a decreased motivation to keep finding optimal solutions for the retailer (Baiman and Rajan

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2002), even though the latter's expectations may rise (Grayson and Ambler 1999). This may lead retailers to again go for lower PL wholesale prices in these very long relationships (thereby increasing their own margins). We did not find evidence for the U-shaped relationship that would result if this would be the case (p -value for the quadratic term = .49).³⁴

Dedicated PL manufacturers, on the other hand, are struggling with how to raise their wholesale prices above marginal costs. Dedicated PL suppliers face an intrinsic disadvantage compared to dual branders. For example, retailers obtain an average margin of 38.0% from dedicated suppliers (all else evaluated at their mean value). When replacing them with dual branders with a 20% (50%) NB focus, the retailer's margin drops to 36.3% (33.7%), leaving more of the dyad's profit to the supplying party. Our results show that dedicated PL manufacturers have little to win by building long-term relationships with retailers. However, they can make themselves more valuable to retailers by producing PLs in multiple categories, as retailers also value (and reward) that aspect of a relationship. For example, the aforementioned margin difference of 1.7% (between 38 and 36.3%) could be compensated by producing in 2 more categories.

Limitations and Further Research

Our research has several limitations that offer interesting avenues for future research. First, even though PL margins are very important to a retailer's profitability, limited empirical research is available on the topic. This may be attributed to the highly confidential nature of the required data. Similar to the few other studies that were fortunate to have access to this kind of private information (see e.g. Ailawadi et al. 2007; Rao and McLaughlin 1989; Sudhir and Rao 2006), we were restricted to a single retailer. We therefore exploited mainly the variation that was observed on the suppliers' side. Still, it would be interesting to replicate our findings with other retailers. Also, our data offer a historical snapshot, and describe the situation in the middle of 2008. The addition of a longitudinal dimension would undoubtedly offer additional insights.

Second, we focused on margin (profit) differences at the SKU level. Future research could study a more aggregate level, and consider the profit implications for the retailer at the category level. This would require to also evaluate the implications of, say, dual branding on the

³⁴ A similar conclusion was obtained when including the interaction between (LENGTH)² and (NBFOCUS), with a p -value of .40.

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retailer's NB margins, along with an explicit modelling of all possible substitution (cannibalization) effects that may arise when adding a premium and/or economy tier.

Finally, especially when dealing with dual branding, cross-category and even cross-retailer effects may come into play. While most channel negotiations take place at the category level (Subramanian et al. 2010), it is possible that producing PLs in one category may have positive spill-over effects to other categories, as already suggested by the significance of our relationship-breadth variable. We also made abstraction from the potentially harmful effects that PL production for one retailer could have on the channel relationships (and subsequent margins) with other retailers. A more extensive model could incorporate such effects.

Also in the operationalization of our NB focus-variable, we only considered the activities with a specific retailer. While this is consistent with our theorizing (which focuses on the margin implications for that retailer), it might be that a PL supplier who sells almost exclusively NBs to one retailer engages more extensively in PL production for other retailers. We assumed that, when dealing with a supplier, a retailer focuses on his own perception of (experience with) that supplier, and does not take a supplier's activities for other retailers into consideration. Given the secrecy surrounding PL production (Gomez-Arias and Bello-Acebron 2008), this may be a reasonable assumption to make. Still, an empirical validation would be useful.

Clearly, we have only begun to scratch the surface of many research possibilities in an area that warrants more attention, given the richness of the phenomenon and the high level of managerial interest (Sethuraman 2009, p. 771). We hope that this article will provide a stimulus for more research on the changing PL environment.

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4. Why Premium Private Label Presence Varies by Category

4.1 Introduction

Standard PLs are present in almost every consumer-packaged-goods category (de Jong 2011). Still, many retailers wish to expand their PL offerings even further. As a result, PLs now cover multiple quality tiers, including standard, economy, and premium PLs (Martos-Partal and González-Benito 2011; Szymanowski and Gijsbrechts 2012). Economy PLs were primarily introduced to fight hard discounters, and are no-frills, bottom-of-the-market PLs. More recently, premium PLs have emerged, which are positioned at the top end of the market (Kumar and Steenkamp 2007). Their unique features in terms of taste, origin, and/or ingredients (Bazoche, Giraud-Héraud, and Soler 2005) enable retailers to compete with the highest-quality NBs (Geyskens, Gielens, and Gijsbrechts 2010). Notable examples include Loblaw's President's Choice in the U.S., and Carrefour's Selection or Tesco's Finest in Europe. Of all PL tiers, the market shares of premium PLs have been growing the fastest (Dobson and Chakraborty 2009).

Even though premium PLs are considered "one of the hottest trends in retailing" (Kumar and Steenkamp 2007, p. 41), retailers apparently do not feel the need to extend their standard PL with a premium PL in every category (IGD 2006; Martos-Partal and González-Benito 2011). Assuming a constant total store surface, expanding the PL portfolio with a premium PL typically comes at the expense of NB listings in a category (PlanetRetail 2010a). Since NBs play an important role in signposting a category (IGD 2006), leaving less space for NBs may reduce a category's appeal to some consumer segments. Further, as premium PLs directly compete with the highest quality NBs in the category, a retailer's relationship with leading NB manufacturers may be affected. Given these potential pitfalls, *retailers are selective in picking their battles* with

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top-quality NBs (Kumar and Steenkamp 2007), especially since retailers are primarily interested in the performance of the category as a whole (Sayman and Raju 2004a).

Prior empirical research on premium PLs is limited. Geyskens, Gielens, and Gijsbrechts (2010) investigate how the introduction of premium PLs affects the choice of both NBs and the retailer's existing PL offering, using U.K. data for retailers Asda and Sainsbury in the corn-flakes and canned-soup categories. Gielens (2011) studies the impact of NB new product introductions on incumbent economy, standard and premium PL choice in 35 categories at Asda, Sainsbury and Tesco in the U.K. New NB products tend to harm rival NBs and economy PLs, but standard and premium PL share remains mostly unaffected.

While several studies have investigated the drivers of standard PL offerings (e.g. Raju, Sethuraman, and Dhar 1995a; Sayman and Raju 2004a), conditions conducive to premium PLs have not been explored yet (Sethuraman 2009).³⁵ The focus of this study is to provide insight into why retailers offer premium PLs in some categories, but not in others. Our study is managerially relevant since more and more retailers are getting ready to climb onto the premium PL bandwagon (Dekimpe et al. 2011). For example, Coop in Sweden and U.K.-based Wilkinson recently announced that they will soon launch a premium PL range (PlanetRetail 2011a, 2011b). Outside Europe, similar announcements have been made by U.S. retailer Walgreens (PlanetRetail 2010b), and by South African retailer Pick n Pay (PlanetRetail 2011c), among others. Faced with considerable uncertainty given the recency of the premium PL phenomenon, retailers may learn from the prevailing practices of other industry participants. Insight into the common decision rules used by other retailers should reduce the perceived uncertainty, as they reflect the collective wisdom of the industry (Gielens and Dekimpe 2007). As such, our study may help retailers to identify appropriate categories for premium PL introductions, and reduce the risk of having to withdraw them at a later stage (Raju, Sethuraman, and Dhar 1995a). Likewise, managers of NBs must understand in which categories they are most likely to face this new competitor.

The paper is organized as follows. We begin with a discussion of our conceptual framework, and discuss the category characteristics that are expected to influence a retailer's proneness to carry a premium PL in the category. Next, we discuss the research methodology

³⁵ While Sayman and Raju (2004a) consider under what conditions retailers would be inclined to introduce multiple standard PLs, they do not consider the introduction of premium PLs (which they leave as an important area for future research, p. 285), as premium PLs operate in a different price/quality market.

and the data. Based on an analysis of four European retailers that already carry a premium PL line for several years, we provide insights into which categories are more or less conducive to premium PL listings. By considering multiple retailers, the insights become more generalizable, and less sensitive to the idiosyncratic features of a single organization's decision processes. The final section discusses implications for researchers and managers, and provides suggestions for further research.

4.2 Conceptual Framework

This study investigates which characteristics make a retailer more prone to carry a premium PL next to his standard PL in a category. Five broad classes of variables are considered, viz. (i) the category's market structure, (ii) the incumbents' marketing conduct in the category, (iii) the pioneer's premium PL presence/absence in the category, (iv) the category's growth potential, and (v) the category's role for the retailer. For each variable, we first discuss the collective wisdom from the standard PL context. Then, we will argue whether and how this line of reasoning can be extended to the premium PL context. Figure 4.1 summarizes our conceptual framework.

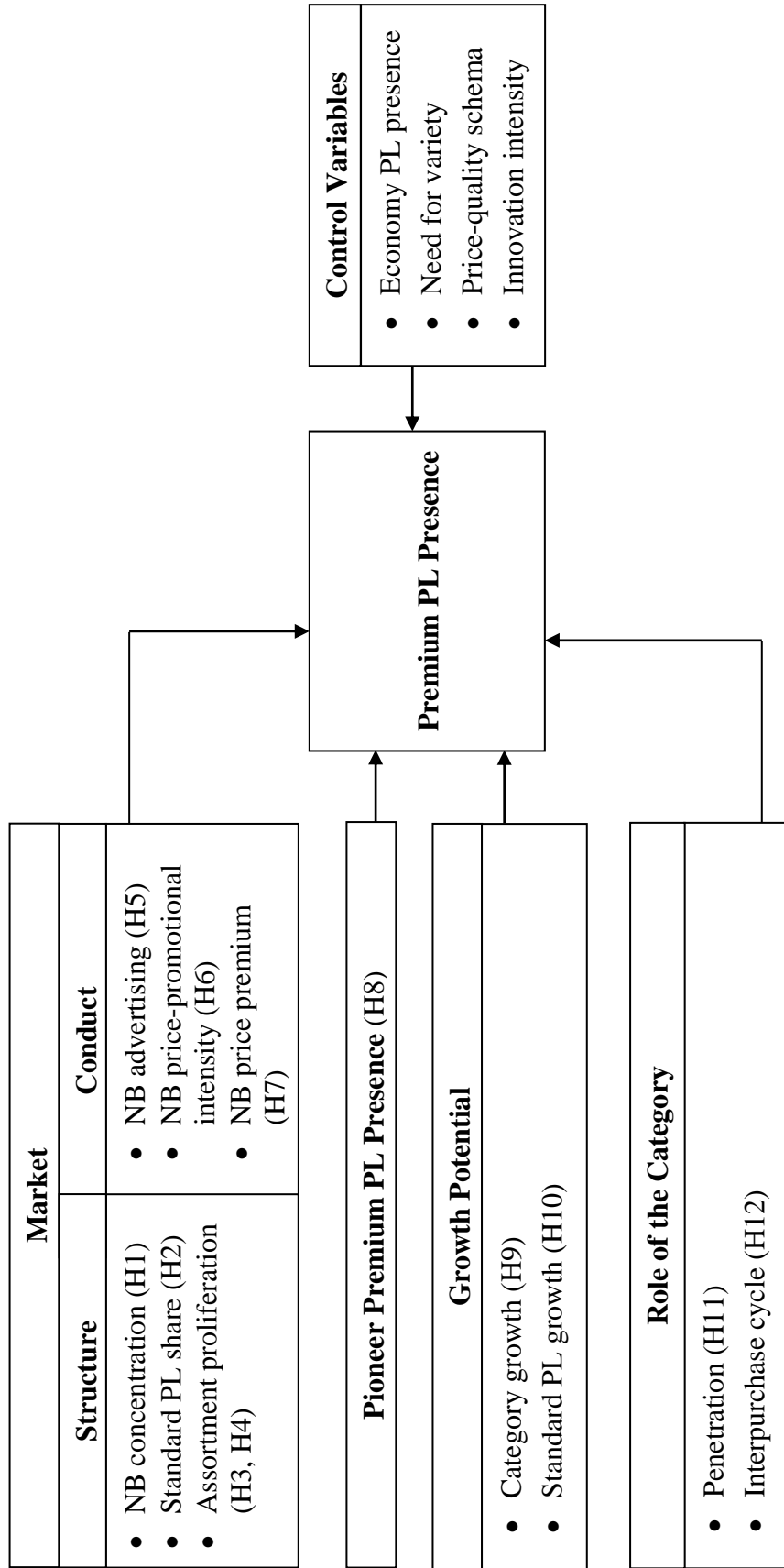
Market Structure

Retailers' inclination to carry premium PLs is likely to depend on the strength of the incumbents in the category, including both NBs and standard PLs. To that extent, we study a category's competitive market structure in terms of NB concentration, standard PL share, and assortment proliferation.

NB concentration. According to the industrial organization (IO) literature, the degree of market concentration is inversely related to the degree of competition (Tirole 1988). Markets with low NB concentration are fragmented and highly competitive. In these markets, while it is easy to enter, new entrants are deterred given that the gains to be realized are small (Schmalensee 1978). In markets with high NB concentration, the product space may not be completely covered yet, and the gains to be realized are expected to be higher (Tirole 1988).

Overall, standard-PL findings are in line with these insights from the IO literature. While more fragmented markets are easier to enter by standard PLs (see, for example, Raju, Sethuraman, and Dhar 1995a and Sayman and Raju 2004a), the gains to be realized, in terms of standard PL share, are lower (see, for example, Dhar and Hoch 1997, Hoch and Banerji 1993,

**FIGURE 4.1
CONCEPTUAL FRAMEWORK**



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and Raju, Sethuraman, and Dhar 1995a).^{36,37} In markets with higher NB concentration, standard PLs can more effectively differentiate themselves from NBs by offering an attractive alternative at a lower price point.

Similarly, high NB concentration is expected to create differentiation opportunities for more innovative products, such as the premium PL that distinguishes itself from extant NB products by offering unique features in terms of taste, origin, or ingredients (Bazoche, Giraud-Héraud, and Soler 2005). Indeed, Scott-Morton and Zettelmeyer (2000) have shown that high NB concentration may increase a category's appeal for PLs that target a *leading* NB, as is the case with premium PLs. We therefore expect that a retailer's propensity to carry a premium PL is higher in categories with higher NB concentration.

H1: Higher NB concentration in a category increases retailers' propensity to offer a premium PL in that category.

Standard PL share. A high standard PL share in a category enhances a retailer's reputation, and makes it easier to make other successful standard PL introductions (Herbert 2009). A strong brand name, as reflected in the brand's market share, facilitates brand extensions (Keller 1998). Moreover, the stronger a brand's reputation, the more substantial the impact of its new products (Gielens 2011). As standard PL share also signals the intrinsic appeal of PL products to consumers (Kumar and Steenkamp 2007), a retailer may be more inclined to carry a premium PL in categories where the standard PL is already strong.

However, in categories in which retailers already have a high standard PL share, retailers' PL expertise traditionally lies in the offering of functional, price-based products (Kumar and Steenkamp 2007). Hence, while it may be easier to introduce extensions within the same tier, consumers are likely to be skeptical of extensions that deviate considerably from this practice (Aaker and Keller 1990), such as quality-focused premium PL extensions. Moreover, when standard PL share in a category is high, the likelihood of cannibalizing the incumbent PLs (as

³⁶ Dhar and Hoch (1997) measure PL share including both standard and premium PLs. Due to data limitations, they were not able to distinguish between the two and to analyze premium PLs separately. Hence, they control for premium PL presence (obtained from secondary data) and point this out as a fruitful future research area (p. 226).

³⁷ Hoch and Banerji (1993) measure PL share including both standard and economy PLs. Since (i) economy PL sales only represent a small fraction of total PL sales, and since (ii) their results remain the same when excluding economy PLs (p. 61), we refer to standard PLs when discussing their results.

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opposed to NBs) increases (Geyskens, Gielens, and Gijbrecchts 2010). Since the introduction of an innovative new product makes existing products in the category appear more similar (van Heerde, Mela, and Manchanda 2004), the introduction of a premium PL makes products from the same product line (i.e., the standard PL) less distinctive, and more susceptible to competition from incumbent NBs in the category. This will lower retailer profits for the standard PL, which is more detrimental to a retailer when standard PL share is higher. Finally, Nowlis and Simonson (1996) have shown that when a strong brand adds a new benefit, the introduction may go unnoticed. In contrast, if a new benefit is added by a weaker brand, the competitive pull may be stronger. Following this line of reasoning, when the standard PL has a lower share, the premium PL may be more successful.

In sum, while it may be easier to introduce additional standard PL extensions in categories in which the standard PL is stronger, it is unclear whether this would hold for the premium PL. Combined with the higher expected negative consequences for the standard PLs, we postulate that premium PLs are less likely to be offered in categories with higher standard PL shares.

H2: Higher standard PL share in a category decreases retailers' propensity to offer a premium PL in that category.

Assortment proliferation. Shoppers only appreciate new products if they add meaningful variety to the assortment (Broniarczyk and Hoyer 2006). As such, the range of products already offered by a retailer may influence his premium PL strategy (de Jong 2011). We distinguish between (i) the extent of NB SKU proliferation, and (ii) the extent of standard PL SKU proliferation in the category.

Narrow assortments, with low NB SKU proliferation, were found to favor the standard PL (Dhar and Hoch 1997). Standard PLs obtain a higher share in categories with a lower extent of NB SKU proliferation. However, in these categories, retailers are less likely to carry specialty items (Dhar and Hoch 1997). As such, when the extent of NB SKU proliferation is low, retailers may, de facto, see less value in taking account of the diverse tastes and needs of consumers, for example by offering a premium PL, as compared to when the extent of NB SKU proliferation is high.

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On the other hand, a so-called “crowding effect” (Srinivasan et al. 2004, p. 626) may occur at very high levels of proliferation: the higher the number of SKUs in the category, the less any individual SKU can stand out. A cluttered marketplace with a lot of NB SKUs makes it increasingly difficult to create awareness for new products. Moreover, highly proliferated assortments act as a barrier to entry because market share in the category is already carved up into many pieces (Hoch and Banerji 1993; Sethuraman 1992).

In sum, while standard PLs tend to perform better (worse) in categories with a lower (higher) extent of NB proliferation, premium PLs are expected to fit best at moderate degrees of NB SKU proliferation. If NB proliferation is low, retailers lack the interest to take into account the diverse tastes and needs of the consumers. As NB proliferation increases, retailers’ interest in offering a more diverse assortment increases, which would suit the premium PL. However, if NB proliferation becomes very high, the market is too cluttered and the premium PL will not stand out anymore. The aforementioned conflicting points of view can be reconciled by positing an inverted U-shaped effect for the extent of NB SKU proliferation on the likelihood of premium PL presence in a category.

H3: The effect of NB SKU proliferation in a category on retailers’ propensity to offer a premium PL in that category follows an inverted U-shape.

Ailawadi, Pauwels, and Steenkamp (2008) suggest that the average number of PL SKUs per category could explain variation in standard PL share and consumers’ share-of-wallet spent at the retailer. Indeed, Dhar and Hoch (1997) find that the number of standard PL SKUs in a category positively affects standard PL share. Next to the fact that standard PL SKU proliferation enhances standard PL performance, it is also expected to justify further investments in premium PLs, as it signals retailer commitment to the PL program (Dhar and Hoch 1997).

However, nowadays, as retailers keep on extending their PL portfolio (de Jong 2011), there may also be a countervailing force operating, which becomes especially strong at very high levels of PL SKU proliferation. In general, for all PL tiers, over-extension with too many PL variants may cause PL fatigue, as consumers grow weary of seeing further extensions of the PL brand (Dobson and Chakraborty 2009), especially at the expense of NBs. In addition, when standard PL SKU proliferation is high, a retailer’s resources may already be stretched, reducing

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the availability of the required investments for premium PLs. Moreover, and as mentioned before, a very cluttered marketplace makes it increasingly difficult to create awareness for new products in general.

In sum, premium PLs are expected to fit best at moderate degrees of standard PL proliferation. If standard PL proliferation is low, retailers lack a basic commitment to PLs. As standard PL proliferation increases, retailers' PL commitment increases, which would increase their propensity to offer a premium PL. However, if PL proliferation reaches too high levels, retailers may lack resources, risk PL fatigue, and face a cluttered market. As such, we predict an inverted U-shaped effect for the extent of standard PL SKU proliferation on the likelihood that a retailer carries a premium PL in the category.

H4: The effect of standard PL SKU proliferation in a category on retailers' propensity to offer a premium PL in that category follows an inverted U-shape.

Marketing Conduct

Following Dhar, Hoch, and Kumar (2001), we also take into account the marketing conduct in the category in terms of NB advertising, NB price-promotions, and price premium of NBs over PLs. Since the incumbents' marketing mix has been found to influence a retailer's ability to successfully develop its standard PL program in a category (Dhar and Hoch 1997), we also expect it to influence a retailer's likelihood of offering a premium PL line.

Advertising. Advertising support for NBs significantly contributes to their brand equity (Sriram, Balachander, and Kalwani 2007).³⁸ Advertising can positively affect brand equity through the creation of favorable associations and experiences, causing an improvement in perceived quality (Keller 1998). Heavy NB advertising keeps standard PLs at bay by creating non-price reasons for buying (Steenkamp et al. 2004). NB advertising is therefore often considered a significant barrier to standard PL success (Dhar and Hoch 1997; Sethuraman 1992), and is perceived by retailers as a signal of future NB demand (Desai 2000).

Although premium PLs offer similar quality as the leading NBs, we expect that NB advertising also keeps premium PLs at bay by emphasizing brand image and associations, over

³⁸ We focus on the advertising conduct of NBs, as the advertising activities for PLs are still minor given retailers' lack of financial resources to advertise individual products and/or categories (Lamey et al. 2011).

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and above objective quality advantages. As a result, we expect that higher NB advertising decreases the likelihood that retailers carry premium PLs in the category.

H5: Higher NB advertising in a category decreases retailers' propensity to offer a premium PL in that category.

Price-promotional intensity. Standard PLs have been shown to be more successful in categories with more frequent and deeper NB promotions (Kumar and Steenkamp 2007). In such an environment, consumer acceptance of regular NB prices reduces, and NB manufacturers convert their loyal buyers into price (promotion) oriented buyers (Mela, Gupta, and Lehmann 1997), who may eventually switch to the cheaper standard PL.

However, others have found standard PLs to perform worse in categories with more frequent and deeper NB promotions, since standard PLs lose their comparative price advantage in these categories (Dhar and Hoch 1997; Sethuraman 1992). When NBs compete intensely on price, little room is left for the PL to be profitable. In such a setting, the retailer may be better off exploiting the competition among the NBs without offering a standard PL (Raju, Sethuraman, and Dhar 1995a).

The literature on the effect of deal frequency and deal depth on standard PL success is therefore indecisive. For premium PLs, however, we believe that both aforementioned, opposing, arguments for standard PLs will work in the same direction. When NBs offer frequent and deep promotions, consumer acceptance of regular NB prices reduces. On the other hand, in these categories, standard PLs lose their competitive price advantage. In both cases, consumers increasingly focus on price instead of quality (Mela, Gupta, and Lehmann 1997). While this may or may not benefit the standard PL, more price-promotional activity in a category leads to lower retail prices that can be charged (Cotterill, Putsis, and Dhar 2000). Given that premium PLs are premium priced, we expect that retailers are less likely to introduce them in categories with high NB price-promotional intensity.

H6: Higher NB price-promotional intensity in a category, in terms of deal frequency and deal depth, decreases retailers' propensity to offer a premium PL in that category.

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NB price premium. The ability of a NB to charge a higher price than the standard PL varies substantially across categories (Steenkamp, van Heerde, and Geyskens 2010). The larger the NB price premium within a category, the stronger the incentive (monetary gain) for consumers to trade down to a standard PL (Kumar and Steenkamp 2007). Hence, when NBs charge a higher price premium compared to standard PLs, standard PLs are likely to be more successful within the category (Dhar and Hoch 1997; Raju, Sethuraman, and Dhar 1995b; Steenkamp and Geyskens 2011).

However, this line of reasoning no longer holds for premium-priced PLs. When NBs are able to charge a higher price premium over PLs, their equity is higher (Ailawadi, Lehmann, and Neslin 2003). Brand equity results, among other factors, from quality differences between NBs and the standard PL. While standard PLs still have a clear monetary incentive for consumers to buy the standard PL, premium PLs have to deal with an intrinsically stronger NB competitor. Even if premium PLs are able to match the NB's objective quality, a higher price premium for NBs over standard PLs suggests that consumers also derive utility from NBs beyond what is dictated by quality, for example because of their familiarity, imagery, or other positive associations with NBs (Sethuraman 2000), which may be more difficult for the premium PL to match. Hence, we expect that a retailer's propensity to carry a premium PL in a category is negatively affected by the NB price premium in the category.

H7: A higher NB price premium in a category decreases retailers' propensity to offer a premium PL in that category.

Pioneer Premium PL Presence

Faced with considerable uncertainty given the recency of the premium PL phenomenon, retailers may look at the prevailing practices of other players in the industry to guide their own decisions. However, retailers have been shown to attach more weight to the actions of some competitors than of others (Gielens and Dekimpe 2007). Specifically, they may believe that the premium PL pioneer has superior information, which allows him to identify interesting market opportunities better or more quickly (Carow, Heron, and Saxton 2004; Lieberman and Montgomery 1988). Actions of a pioneer (especially if this is also the market leader, as in our empirical application) are seen as a clear signal of market potential, and offer crucial information about the potential

success of a premium PL. Therefore, if the pioneer has introduced a premium PL in the category, a positive effect is expected on the inclination of other retailers to also do so.

H8: The pioneer's premium PL presence in a category increases other retailers' propensity to also offer a premium PL in that category.

Growth Potential

Some categories signal more premium PL market potential than others. We discuss a category's (i) overall growth, and (ii) standard PL growth.³⁹

Category growth. Some categories are more attractive than others for new products in general (Robinson 1988). Category growth signals future market potential, and has been shown to positively affect both new-product performance (Henard and Szymanski 2001) and retail acceptance of new products (Rao and McLaughlin 1989). Firms that target high-growth markets tend to achieve higher sales and better financial performance (Srinivasan et al. 2009). Moreover, although a faster-growing category elicits a greater likelihood of competitive response to a new product introduction (Aboulnasr et al. 2008), competitive response is likely to be less aggressive (Bowman and Gatignon 1995). To satisfy the various consumer segments in high-growth categories, firms have a greater incentive to expand their product lines than in low-growth categories (Putsis and Bayus 2001). As such, we expect that retailers are more likely to carry premium PLs (and new products in general) in faster-growing categories.

H9: Higher category growth increases retailers' propensity to offer a premium PL in that category.

Standard PL growth. Standard PLs can show significant growth irrespective of category growth (Hoch, Montgomery, and Park 2004). From the traditional branding literature, we know that a strong brand name, as partly reflected by sales growth, facilitates brand-extensions (Keller 1998). In addition, standard PL growth is often realized at the expense of NBs (Kumar and

³⁹ We acknowledge that it may be relevant to also look at the effect of category size, as it has been repeatedly shown to affect a retailer's standard PL offering (Hoch and Banerji 1993; Raju, Sethuraman, and Dhar 1995a; Sayman and Raju 2004a). However, category size was highly correlated (.70) with category penetration (a variable we discuss subsequently), and we could therefore not separate these effects.

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Steenkamp 2007), and therefore signals customers' openness towards the notion of retailer-owned brands. When introducing a new product extension, the risk of cannibalizing one's own sales is especially high when sales are constrained. Growing sales, because of some untapped demand or need, provide both existing and new products with sales opportunities, making cannibalization less likely because firms do not need to engage in a zero-sum game (Bayus and Putsis 1999). Hence, with growing standard PL sales, cannibalization of the standard PL when adding a premium PL is less of an issue. Following this line of reasoning, we expect a higher likelihood of extending a standard PL offering with a premium PL in categories with higher standard PL growth.

H10: Higher standard PL growth in a category increases retailers' propensity to offer a premium PL in that category.

The Role of the Category for the Retailer

A popular classification scheme promoted by the Food Marketing Institute (FMI), and commonly used among retailers, defines category roles in terms of penetration (percentage of households that buy the category) and interpurchase cycle (number of days between purchases) (Dhar, Hoch, and Kumar 2001; Hoch and Pomerantz 2002). Given that the retailer's level of interest is different depending on whether most households buy the category frequently (e.g. milk), or if only a few consumers make infrequent purchases in the category (e.g. vinegar) (Dhar, Hoch, and Kumar 2001), penetration and interpurchase cycle may affect retailers' likelihood to offer a premium PL in a category.

Penetration. According to Sethuraman (1992), there are two main reasons why retailers are more inclined to carry standard PLs in categories that are purchased by a large number of households. First, these categories provide greater opportunity to offset the investments needed to develop the PL. Second, these categories provide better chances of enhancing retailers' image among a larger fraction of consumers. In support of this line of reasoning, Fader and Lodish (1990) and Sethuraman (1992) have shown that standard PL share tends to be lower in low-penetration categories. In a similar vein, Dhar, Hoch, and Kumar (2001) find that a strong standard PL program contributes significantly more to a retailer's category performance in categories that have achieved high penetration.

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The limited importance to the retailer of low-penetration categories may not justify the time and effort necessary to develop a sophisticated PL operation in those categories (Steenkamp and Geyskens 2011), i.e. to invest heavily in a premium PL. Since it is more difficult for retailers to build expertise in categories that are bought by few households only (Dhar and Hoch 1997), and since premium PLs are likely to require even more expertise than standard PLs (IGD 2006), we expect that retailers are also more likely to carry a premium PL in categories with higher penetration.

H11: A higher penetration rate of a category increases retailers' propensity to offer a premium PL in that category.

Interpurchase cycle. Sethuraman (1992) conjectures that consumers are more likely to look for good value and low price, and hence are more receptive to standard PLs, in categories with a shorter interpurchase cycle (i.e., in categories that are more frequently purchased). Consistent with this line of reasoning, Fader and Lodish (1990) have shown that standard PL share tends to be higher in categories with lower interpurchase times. Also, Dhar, Hoch, and Kumar (2001) find that standard PLs contribute significantly more to a retailer's category performance in categories that are more frequently purchased.

When consumers mainly look for good value and a low price in categories with a shorter interpurchase time (Sethuraman 1992), premium PLs are not likely to be very successful. If the average time between purchases is low, consumers have more opportunities to compare and learn about prices (Ailawadi and Harlam 2004), which increases their price sensitivity (Ailawadi, Lehmann, and Neslin 2003). Since premium PLs are higher-priced, retailers may avoid carrying them in categories with shorter inter-purchase times. Thus, we expect that retailers are less likely to carry premium PLs in categories with a shorter interpurchase cycle for consumers.

H12: A shorter interpurchase cycle of a category decreases retailers' propensity to offer a premium PL in that category.

Table 4.1 summarizes our propositions and their alignment with earlier research on standard PLs.

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TABLE 4.1
STANDARD VS. PREMIUM PL

| Variable | Standard PL | | Premium PL | | Prediction supported? ^a |
|------------------------------------|-------------------------|--|------------------------|-------------------|------------------------------------|
| | Documented relationship | Empirical support | Predicted relationship | Empirical finding | |
| Market structure | | | | | |
| NB concentration | + | Dhar and Hoch (1997) | + | + | √ |
| Standard PL share | n.ap. | n.ap. | - | - | √ |
| Extent of NB proliferation | - | Hoch and Banerji (1993) Sethuraman (1992) | ∩ | n.s. | X |
| Extent of PL proliferation | + | Dhar and Hoch (1997) | ∩ | ∩ | √ |
| Market conduct | | | | | |
| Advertising intensity | - | Hoch and Banerji (1993) Sethuraman (1992) | - | - | √ |
| Price-promotional intensity | + | Kumar and Steenkamp (2007) | - | + | X |
| NB price premium | - | Dhar and Hoch (1997) Sethuraman (1992) | - | - | √ |
| Pioneer premium PL presence | + | Dhar and Hoch (1997) | - | - | √ |
| Growth potential | n.a. | n.a. | + | + | √ |
| Category growth | n.a. | n.a. | + | n.s. | X |
| Standard PL growth | n.ap. | n.ap. | + | n.s. | X |
| Role of the category | | | | | |
| Penetration | + | Fader and Lodish (1990) Sethuraman (1992) | + | + | √ |
| Interpurchase cycle | - | Fader and Lodish (1990) | + | + | √ |

n.a. = not available; n.ap. = not applicable

∩, √ means that we found support for the predicted relationship, 'X' means that we did not find such support.

4.3 Research Setting and Measures

Setting

Western Europe is by far the most developed PL region in the world (PlanetRetail 2008a). According to the Chief Marketing Officer of ACNielsen Europe, “premium priced PLs are now common [in Europe]” (ACNielsen 2006, p. 2). Since Europe is the cradle of premium PLs – in contrast to the U.S., where retailers have only recently begun to explore the opportunities of premium PLs (IRI 2009) – we study the premium PL decision of several European retailers that already carry a premium PL line for several years. Specifically, we study a retailer’s proneness to carry a premium PL next to its standard PL in the category at four of the largest retailers in the Netherlands, which is within Europe one of the front-runners in premium PLs (de Jong 2007; IRI 2009)⁴⁰: Albert Heijn (the flagship of Royal Ahold, one of the world’s largest grocery retailers), Jumbo, Plus, and Super de Boer. By studying the practices of four retailers, we look for generalizable patterns in their decision making.

Data

We use scanner panel data from GfK on the 2007-2009 purchases of 5,000+ households in the Netherlands. For each retailer, we included all categories that the retailer carried in 2009, and which contained a standard PL.⁴¹ Our sample consists of 1,035 observations, i.e. four retailers times the number of categories with a standard PL that these retailers carry.⁴² Our dependent variable, premium PL presence in the category, is measured in 2009. Our independent variables – the category drivers of premium PL presence – are measured one year prior to the premium PL presence measure, i.e. in 2008.

Premium PL presence. We measure “premium PL presence” (PREMIUM) as a binary variable that is coded 1 if the retailer carried a premium PL in the category in 2009, and 0 otherwise. In that year, Albert Heijn, Jumbo, Plus, and Super de Boer offered a premium PL in 29%, 21%, 16%, and 14% of their categories, respectively.

NB concentration. NB concentration (NBCONCENTR) is measured as the sum of squared market shares (in volume) of the top three NBs in the category at the retailer (cf.

⁴⁰ In December 2010, one in four households already bought premium PLs in the Netherlands (GfK 2010).

⁴¹ In line with Ailawadi and Harlam (2004), product categories in which products are unbranded and not categorized into PLs and NBs were excluded.

⁴² As a result, a slightly different number of categories is included per retailer. However, when examining the common set of categories across the four retailers (n = 164), our results remain substantively the same.

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Srinivasan et al. 2009).⁴³ NB concentration gives an indication of NB competition, as higher values indicate more NB market power, and lower values indicate a more fragmented and more competitive market.

Standard PL share. Standard PL share (PLSHARE) is operationalized as the ratio of total volume sales of a retailer's standard PLs compared to total category volume sales at the retailer (cf. Hoch and Banerji 1993). Average standard PL share across all categories ranges between 29% and 50% for the four retailers in our sample.

NB and PL SKU proliferation. SKU proliferation is captured by the number of unique SKUs offered by the retailer in the category during the year (cf. Gielens 2011). We distinguish between NB and PL SKU proliferation, which are measured by the number of NB SKUs (NBSKUS) and the number of standard PL SKUs (PLSKUS) offered in a category at a retailer, respectively. On average, 40 NB SKUs (range: 1 – 402) and 10 standard PL SKUs (range: 1 – 165) are carried per category. Given that we include squared terms of NB and PL SKU proliferation, both are mean-centered to facilitate interpretation (Cohen et al. 2003).⁴⁴

NB advertising intensity. As the actual spending figures were not available to us, we include NB advertising intensity (ADV) in a category as a proxy. This was measured on a 5-point Likert scale, as perceived by Dutch consumers (for similar practice see Steenkamp, van Heerde, and Geyskens 2010).

Price-promotional intensity. A category's deal frequency (DEALFREQ) is measured as the percentage of all NB volume sales in a category made on a price promotion. A category's deal depth (DEALDEPTH) is operationalized as the average percentage discount when a NB purchase in the category is made on a price promotion (Ailawadi and Harlam 2004). A price promotion is identified when the price of the NB is at least 5% below its grand-average price level (see e.g. Raju 1992 and Rao, Arjunji, and Murthi 1995 for similar practice). Across categories and retailers, 18.3% of all NB sales are bought on a price promotion. The average price discount across all promotional purchases is 17.4%.

NB price premium. The NB price premium (NBPREMIUM) reflects the ratio of the (SKU-weighted) average non-promotional NB price of the leading NB to the (SKU-weighted) average non-promotional standard PL price (in equivalent units) (cf. Deleersnyder et al. 2007).

⁴³ We also operationalized NB concentration based on (i) all NBs, and (ii) on the top five NBs in the category. Similar results are obtained.

⁴⁴ Using a log-transformation for both variables does not alter our results.

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Across categories and retailers, the average NB price premium is 1.58, which is in line with the common belief that NBs are usually priced considerably higher than PLs (Kumar and Steenkamp 2007).

Pioneer premium PL presence. Albert Heijn was the first retailer to introduce a premium PL in the Dutch market (DistriFood 2007). Hence, for retailers Jumbo, Plus, and Super de Boer, we include a dummy variable for the premium PL presence of the pioneer (PIONEER) in the year prior to our measure of premium PL presence, Albert Heijn, in a given category.

Category growth. Following Aboulnasr et al. (2008), we operationalize category growth (CATGROWTH) as the yearly rate of change in category volume sales at the retailer, i.e. the ratio of volume sales in the year before we measure premium PL presence relative to the previous year.⁴⁵ While some categories are shrinking (growth < 1), most have seen a positive growth (mean = 1.06).

Standard PL growth. Similar to category growth, we operationalize standard PL growth (PLGROWTH) as the yearly rate of change in standard PL category volume sales at the retailer. On average, standard PL sales are still growing (with an average standard PL growth for Albert Heijn, Jumbo, Plus, and Super de Boer of 1.68, 1.45, 1.62, and 1.13, respectively). At Jumbo, for example, standard PL sales in the ice-cream category almost tripled (growth rate = 2.87), while the total category growth rate was only 1.62. Similarly, at Plus, standard PL sales in the salty biscuits category quadrupled (growth rate = 4.28), while category growth was only 1.20.

Category penetration and interpurchase cycle. Following Fader and Lodish (1990), we operationalize category penetration (PENETR) as the percentage of all households that make at least one purchase in the product category during the year, and interpurchase cycle (PURCYCLE) as the average interpurchase time (in days) for households that make at least two purchase occasions in the category during the year. Retailers use penetration as an indication of the number of PL purchasers they can potentially reach (Sethuraman 1992), and interpurchase cycle as a signal of consumers' learning about prices (Ailawadi and Harlam 2004). As retailers only observe these category characteristics at the retailer level and use these observations to attach more importance to some categories than to others, we measure these variables at the retailer as opposed to the national level.

⁴⁵ Total category sales are based on all NB and standard (as well as economy) PL sales, but do not include premium PL sales.

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Control variables. Many European retailers have introduced an economy PL tier as part of their multi-tier PL portfolio to address the needs of more price conscious consumers (Dekimpe et al. 2011). We control for the presence of an economy PL in the category (ECONOMY) by including a dummy that is coded 1 if the retailer carries an economy PL in the category, and 0 otherwise. Both Albert Heijn and Super de Boer carry an economy PL line, in 142 and 71 categories, respectively.

We further control for consumers' need for variety (VARIETY), i.e. their desire for a broad assortment to choose from in a given category, as measured by a survey among Dutch consumers (following Steenkamp et al. 2004). From this same survey, we also obtain information on consumers' price-quality schema (PRICQUAL), indicating whether consumers perceive higher prices to signal higher quality, and consumers' perceived innovation intensity (INNOV) in the category. Both factors were found to affect consumers' willingness to pay a premium for NBs over PLs (Steenkamp, van Heerde, and Geyskens 2010) and hence could also influence consumers' interest in premium (priced) PLs. These covariates are not the focus of our study, but controlling for them provides a stronger test of our hypotheses (Greene 2000).

Table 4.2 provides summary information on premium PL presence and the category characteristics for each of the four retailers in our sample. Albert Heijn has the most extensive PL assortment. It carries premium PLs in 29% of the categories and has, on average, a 50% standard PL share. On average, Albert Heijn carries 14 standard PL SKUs in a category. Jumbo, in contrast, carries "only" 8 standard PL SKUs in a category, but carries a more extensive NB assortment. As is apparent from the promotional intensity numbers, Albert Heijn is a clear Hi-Lo oriented retailer (average promotion frequency = 20%, average deal depth = 21%), whereas Jumbo is more of an EDLP retailer. On average, and compared to Albert Heijn, Jumbo sells fewer products on deal (average price promotion frequency = 14%), and NB discounts are less deep (average deal depth = 16%). Plus and Super de Boer are positioned in between Albert Heijn and Jumbo (average promotion frequency = 19%; average deal depth = 16%).

4.4 Model

We use a binary logistic functional form to model the event of "premium PL presence" ($\text{PREMIUM}_c = 1$). Specifically, we formulate the probability of premium PL presence in category c as a function of the category's market structure, marketing conduct, the pioneer's

TABLE 4.2
DESCRIPTIVES OF THE FOUR RETAILERS

| | Albert Heijn | Jumbo | Plus | Super de Boer |
|---|---------------------|--------------|-------------|----------------------|
| Number of categories | 323 | 213 | 249 | 250 |
| Categories with a premium PL | 94 | 44 | 39 | 35 |
| Mean value of | | | | |
| NB concentration | .54 | .42 | .46 | .43 |
| Standard PL share | .50 | .29 | .43 | .40 |
| Extent of NB proliferation (# of SKUs/10) | 3.80 | 4.55 | 3.80 | 3.86 |
| Extent of PL proliferation (# of SKUs/10) | 1.42 | .81 | .89 | .88 |
| Advertising intensity | 3.35 | 3.29 | 3.33 | 3.34 |
| NB deal frequency | .20 | .14 | .19 | .19 |
| NB deal depth | .21 | .16 | .16 | .16 |
| NB price premium | 2.01 | 1.19 | 1.58 | 1.37 |
| Pioneer premium PL presence | n.a. | .38 | .35 | .35 |
| Category growth | 1.13 | 1.16 | 1.03 | .93 |
| Standard PL growth | 1.68 | 1.45 | 1.62 | 1.13 |
| Penetration | .18 | .16 | .13 | .13 |
| Interpurchase cycle (in days) | 64.15 | 62.09 | 63.42 | 65.30 |

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premium PL presence, the category's growth potential, its role for the retailer, and four control variables. Hence, the likelihood of the retailer carrying a premium PL in category c , is expressed as:

$$(4.1) \quad \ln\left(\frac{\eta}{1-\eta}\right) = \beta_0 + \beta_1\text{NBCONCENTR}_c + \beta_2\text{PLSHARE}_c \\ + \beta_3\text{NBSKUS}_c + \beta_4(\text{NBSKUS}_c^2) + \beta_5\text{PLSKUS}_c + \beta_6(\text{PLSKUS}_c^2) \\ + \beta_7\text{ADV}_c + \beta_8\text{DEALFREQ}_c + \beta_9\text{DEALDEPTH}_c + \beta_{10}\text{NBPREMIUM}_c \\ + \beta_{11}\text{PIONEER}_c + \beta_{12}\text{CATGROWTH}_c + \beta_{13}\text{PLGROWTH}_c \\ + \beta_{14}\text{PENETR}_c + \beta_{15}\text{PURCYCLE}_c + \beta_{16}\text{ECONOMY}_c \\ + \beta_{17}\text{VARIETY}_c + \beta_{18}\text{PRICQUAL}_c + \beta_{19}\text{INNOV} + \varepsilon_c$$

where η equals premium PL presence and ε is the error term.

We estimate this model separately for each of the four retailers. Given our interest in the overall effect of the category characteristics on a retailer's proneness to carry a premium PL in a category, and this across the four retailers, we focus on the combined significance of the corresponding parameter estimates using Rosenthal's (1991) meta-analytical test of adding weighted Z 's.⁴⁶ As this test combines evidence across the four retailers in our sample, it allows us to arrive at more generalizable insights. However, meta-analysis does not pool the retailers into a single sample. As such, we do not impose any restrictions on the sign and/or magnitude of the coefficients, and therefore allow for potential differences among the retailers. Maximum VIF-scores for Albert Heijn, Jumbo, Plus and Super de Boer are 7.2, 8.0, 7.0, and 8.2, respectively, suggesting that multicollinearity is not an issue, as all are below the recommended cut-off-value of 10 (Cohen et al. 2003).

4.5 Results

Selective Premium PL Presence

We first report whether the overlap in premium PL presence in the common categories between two retailers is greater than the overlap by chance, based on these two retailers' respective premium PL presence (α_1 and α_2) in the common categories (see Table 4.3).⁴⁷ By comparing the percentages of categories in which both retailers carry a premium PL to the overlap by chance,

⁴⁶ See, for example, Lamey et al. (2007) or Deleersnyder et al. (2004) for previous marketing applications.

⁴⁷ α_1 (α_2) represents the proportion of categories, carried by both retailer 1 and 2, in which retailer 1 (retailer 2) offers a premium PL.

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i.e. $\alpha_1 * \alpha_2$, we can judge whether there is some systematicity in the decision of retailers to carry premium PLs in some, but not in other, categories. The observed percentage of common categories with a premium PL is always at least twice the number expected by chance. We aim to explain this systematic behaviour in our subsequent analyses.

TABLE 4.3
COMMON CATEGORIES ACROSS RETAILERS
(% WITH PREMIUMS / % OVERLAP BY CHANCE)

| | Albert Heijn | Jumbo | Plus | Super de Boer |
|----------------------|---------------------|-----------------|----------------|----------------------|
| Albert Heijn | 323 (29) | | | |
| Jumbo | 202 (17 / 8) | 213 (21) | | |
| Plus | 233 (16 / 6) | 180 (10 / 4) | 249 (16) | |
| Super de Boer | 242 (12 / 5) | 182 (10 / 3) | 215 (8 / 3) | 250 (14) |

Consider for example the cell of “Jumbo-Albert Heijn” where 202 categories are carried by both retailers. In 17% (35/202) of these categories, both retailers carry a premium PL. By chance, one would have found both retailers to carry a premium PL in only 8% (i.e. $(43*77) / 202^2$) of the categories.

Market Structure

Table 4.4 reports parameter estimates and model fit statistics. For all four retailers, the coefficient for NB concentration shows the expected positive sign, even though for only two retailers (Jumbo and Super de Boer) the test is significant. This may be due to the limited power of the test, caused by the more modest number of observations per retailer. Employing the meta-analytic method of adding weighted Z 's provides evidence for the positive effect of NB concentration on premium PL presence ($Z = 1.81$; $p < .05$), supporting H1. As argued before, this positive effect can be attributed to the fact that highly concentrated NB markets offer higher potential gains, are less competitive, and more differentiated. Hence, these categories create opportunities for additional entrants like the premium PL.

Second, the higher a retailer's standard PL share in the category, the lower the probability that a premium PL is listed in the category ($Z = -1.34$; $p < .10$). The effects for three retailers go into the same direction, but fail to reach statistical significance individually. The collective evidence, however, as reflected in the meta-analysis, shows a significant negative effect. Hence, H2 is supported. While a retailer could have been able to reap the benefits of its favorable

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standard PL reputation in these high-share categories, retailers are apparently reluctant to offer a premium PL, given the high risk of cannibalization and the increased price competition for the standard PL.

Third, we find no support for our hypothesized inverted U-shaped effect of NB SKU proliferation on premium PL presence (linear effect: $Z = .57$; $p = .28$; squared effect: $Z = -.89$; $p = .19$). Hence, H3 cannot be confirmed. However, consistent with expectations, we do find that the effect of PL SKU proliferation follows an inverted U-shape (linear effect: $Z = 3.82$; $p < .01$; squared effect: $Z = -2.04$; $p < .05$). As such, H4 is supported. At first, the probability of a premium PL listing increases with the extent of standard PL SKU proliferation, as it signals a retailer's commitment to its PLs in that category. In these categories, a retailer already addresses consumers' diverse tastes and needs, and a premium PL would further enhance this. At very high levels of standard PL SKU proliferation, however, retailers become aware of the "crowding effect," and avoid overextending their PL assortment with too many PL variants.

Market Conduct

For two of the four retailers, we find significant support for the expected negative effect of advertising. For the other two cases, the effects are of the same sign, but fail to reach statistical significance. Combining this evidence across all four retailers, we find that higher NB advertising lowers the probability that retailers carry a premium PL in the category ($Z = -3.17$; $p < .01$), which is consistent with expectations, and which confirms H5. Heavy NB advertising therefore keeps premium PLs at bay, probably because the NBs offer non-price reasons for buying over and above objective quality advantages, and NB advertising brings these non-price reasons to the fore.

For price-promotional intensity, we study deal frequency and depth. None of the retailers' premium PL presence is affected by NB deal frequency. Also the Rosenthal test does not reveal a significant effect ($Z = .37$; $p = .36$). Somewhat surprisingly, we find a significant positive effect of NB deal depth for one of the four retailers (two-sided $p = .01$). Moreover, the effect of NB deal depth for the other three retailers goes into the same direction. Hence, the collective evidence, as reflected in the meta-analysis, shows a highly significant positive effect of NB deal depth ($Z = 2.86$; $p < .01$) on retailers' proneness to carry a premium PL in the category. In these categories, consumers generally are more price sensitive (Mela, Gupta, and Lehmann 1997).

TABLE 4.4 EMPIRICAL RESULTS

| Variable | Expected Sign | Albert Heijn | | Jumbo | | Plus | | Super de Boer | | Meta-Analytic Z ^a |
|--|---------------|---------------|-----|---------------|-----|---------------|-----|---------------|-----|------------------------------|
| | | β | †† | β | †† | β | † | β | * | |
| Intercept | | -5.94 | †† | -13.51 | †† | 3.67 | | -1.46 | | |
| Market Structure | | | | | | | | | | |
| NB concentration | + | .16 | | 2.00 | ** | .38 | | 1.98 | * | 1.81 ** |
| Standard PL share | - | .04 | | -1.69 | | -1.43 | | -1.29 | | -1.34 * |
| Extent of NB SKU proliferation (Extent of NB SKU proliferation) ² | ∩ | .06 | | .06 | | .07 | | -.10 | | .57 |
| Extent of PL SKU proliferation | | -.01 | | -.00 | | -.00 | | .00 | | -.89 |
| Extent of PL SKU proliferation (Extent of PL SKU proliferation) ² | ∩ | .61 | *** | .27 | | 1.22 | *** | .61 | | 3.82 *** |
| Market Conduct | | -.03 | * | -.10 | | -.09 | * | -.04 | | -2.04 ** |
| Advertising | - | -1.72 | *** | -2.35 | * | -1.09 | | -.49 | | -3.17 *** |
| NB deal frequency | - | -.55 | | .03 | | .48 | | 2.62 | | .37 |
| NB deal depth | - | 2.88 | | 8.85 | ††† | 5.23 | | 1.92 | | 2.86 *** |
| NB price premium | - | -.01 | | -.55 | | .01 | | -1.30 | ** | -1.56 * |
| Pioneer Premium PL Presence | | n.a. | | 2.27 | *** | 3.61 | *** | 3.17 | *** | - |
| Growth Potential | | | | | | | | | | |
| Category growth | + | .81 | | .81 | | -1.43 | | -2.42 | | .18 |
| Standard PL growth | + | .04 | | -.24 | | -1.25 | † | .30 | | .01 |
| The Role of the Category | | | | | | | | | | |
| Penetration | + | 2.90 | ** | 3.20 | ** | -5.70 | * | 5.20 | | 1.42 * |
| Interpurchase cycle | + | .01 | | .04 | ** | -.00 | | .01 | | 1.77 ** |
| Control variables | | | | | | | | | | |
| Economy PL presence | | .83 | †† | n.a. | | n.a. | | -.49 | | - |
| Need for variety | | .81 | † | .41 | | 1.10 | | -.18 | | 1.98 ** |
| Price-quality schema | | 1.25 | † | 1.33 | | -2.70 | † | 1.97 | | 1.32 * |
| Innovation intensity | | .41 | | 2.61 | †† | .92 | | -1.71 | | .90 * |
| N (sample size) | | 323 | | 213 | | 249 | | 250 | | 1035 |
| -2 Log Likelihood | | 280.50 | | 141.22 | | 115.98 | | 112.02 | | |
| R-Square | | .29 | | .30 | | .33 | | .30 | | |

^a We only report the meta-analytic test statistic in case the parameter was estimated for all four retailers. Significant effects are indicated in bold. *** $p < .01$, ** $p < .05$, * $p < .10$ (one-sided). ††† $p < .01$, †† $p < .05$, † $p < .10$ (two-sided). One-sided tests are used for directional hypotheses, two-sided tests otherwise.

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Hence, we expected that it would challenge potential premium PL success. However, in these heavily promoted categories, consumers also tend to become less brand loyal (Kumar and Steenkamp 2007), which may indeed signal market potential for premium PLs.

For NB price premium, we find a negative effect for three out of the four retailers. While the individual effect reaches significance for only one retailer, the meta-analytic Z shows support for H7. A higher NB price premium decreases retailers' propensity to offer a premium PL ($Z = -1.56; p < .10$).

Pioneer Premium PL Presence

For all three retailers, we find a highly significant effect of the pioneer's premium PL presence in the category (Jumbo: $\beta_{11} = 2.27; p < .01$; Plus: $\beta_{11} = 3.61; p < .01$; Super de Boer: $\beta_{11} = 3.17; p < .01$), which confirms H8. Actions of the premium PL pioneer are seen as a signal of market potential, which reduces the perceived risk of also carrying a premium PL in that category.

Growth Potential

Turning to the effects of category growth and standard PL growth, we find no significant effect for either proposition using the meta-analytic method of adding weighted Z's (Rosenthal 1991). Hence, we cannot support H9 and H10. No evidence is found for the effect of category growth ($Z = .18; p = .43$). While for standard PL growth, we find a significant negative effect for Plus ($\beta_{13} = -1.25; p < .10$), we do not find collective evidence that retailers are less likely to carry premium PLs in a category where standard PLs are still growing ($Z = .01; p = .50$).

The Role of the Category for the Retailer

Consistent with our expectations, we find that a premium PL is more likely to be carried in categories with higher penetration levels ($Z = 1.42; p < .10$), i.e. H11 is supported. Even though we find a significant negative effect of penetration for one retailer, for the other three retailers the effect of penetration has the expected positive sign. High-penetration categories, in general, appear to provide greater opportunity to offset the investments needed to develop the premium PL.

For interpurchase cycle, we find a similar pattern for three out of the four retailers. The higher the inter-purchase time in the category, the higher the probability that retailers list a

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premium PL ($Z = 1.77$; $p < .05$). As such, we also find support for H12. In line with the idea that categories with a shorter inter-purchase cycle are characterized by higher price sensitivity, retailers avoid carrying premium PLs in these categories.

Whereas standard PLs are particularly well represented in high-penetration, low interpurchase-cycle categories, we find that premium PLs are typically offered in categories defined as “variety enhancers” (i.e. high penetration and interpurchase time) by Fader and Lodish (1990) and Dhar, Hoch, and Kumar (2001). These “variety enhancing” categories correspond with the premium PLs’ image of being exclusive products for special occasions (de Jong 2007).

Control Variables

The effect of the presence of an economy PL in the category on the probability of premium PL presence is significant and positive for Albert Heijn ($\beta_{16} = .83$; $p < .05$), but insignificant for Super de Boer ($\beta_{16} = -.49$; $p = .31$). Moreover, we find that premium PLs are more likely to be offered in categories in which consumers appreciate more variety ($Z = 1.98$; $p < .05$), where price is perceived as a signal of quality ($Z = 1.32$; $p < .10$), and where innovation intensity is higher ($Z = .90$; $p < .10$).

Model Fit

Our model fits the data well. Classification accuracy for Albert Heijn, Jumbo, Plus, and Super de Boer equals 76.5%, 81.2%, 84.3%, and 84.8% respectively. It is higher than the proportional chance criterion of a random model, which yields a hit rate of $\alpha^2 + (1 - \alpha)^2$, where α is the prior probability of premium PL presence (Morrison 1969). Using the observed premium PL presence rate as an estimate of α , we find that the classification accuracy for the random model would equal 58.7%, 67.2%, 73.6%, and 75.9% for Albert Heijn, Jumbo, Plus, and Super de Boer, respectively. However, given that the event of no premium PL presence in a category is much more likely, we also look at the ability of our model to correctly predict the (less likely) event of premium PL presence in a category. The maximum chance criterion (Morrison 1969) is 29.1%, 20.7%, 15.7%, and 14.0%, whereas our model correctly classifies 45.7%, 40.9%, 43.6%, and 28.6% of the categories with a premium PL for Albert Heijn, Jumbo, Plus, and Super de Boer, respectively. Our model clearly outperforms the random benchmark model on both dimensions.

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4.6 Discussion

Although standard PLs have been investigated extensively, research on premium PLs is still scarce. Against this backdrop, we theorize and test how a large battery of category characteristics affects retailers' proneness to offer a premium PL line next to their standard PL. Our expectations are, to a large extent, supported by our empirical findings.

As the empirical regularities are consistent with our theory-based expectations (with empirical support for 8 of our 12 hypotheses), this provides a first indication that there is indeed a certain amount of rationality in these retailers' decision making (Gielens and Dekimpe 2007; Steenkamp et al. 2005). Moreover, given that we use data across four retailers, the insights are more generalizable, and less sensitive to the idiosyncratic nature of a single retailer's decision process.

Specifically, we observe that premium PLs are mostly offered in categories in which NB concentration is higher, standard PL share is lower, and standard PL proliferation is moderate. Moreover, retailers are more likely to offer premium PLs in categories with low NB advertising, deep price-promotional discounts, a low NB price premium, high penetration and longer interpurchase times. Similar to Gielens and Dekimpe (2007), who report that retailers take into account the actions of competitors when considering to enter a foreign market, we find that retailers also consider the actions of the pioneer when deciding to enter the premium PL market.

Given that in many countries and for many retailers, premium PLs are still a fairly recent phenomenon, our findings provide an indication of the already available "collective wisdom" of the industry. Retailers who are expected to launch a premium PL soon, like Sam's Club in the U.S. (Howard 2011), can benefit from this. Next to the implications for retailers that consider to offer a premium PL line next to their standard PL, our findings also have important implications for NB manufacturers. Categories in which NBs are not able to manage the price- and quality gap, and/or create emotional bonds (Kumar and Steenkamp 2007), are more prone to a premium PL introduction. As premium PLs proliferate in categories with little differentiation between NBs and PLs, NB manufacturers should *collectively* combat and prepare for them effectively. In their fight with standard PLs, NB manufacturers should resist the temptation to offer deep price-promotions and/or to reduce the price gap, as this will help the premium PL to manifest itself. Fighting one competitor (the standard PL) in this way would open the door to another one (the premium PL). As "the rise of the premium PL will further fasten the commoditization of NBs"

(FSIN 2009), they should try instead to communicate to consumers that NBs are superior by sustaining a high level of advertising and by maintaining the price gap. This will make retailers reluctant to enter the category with a premium PL. In case retailers have already entered, this strategy may enable some *individual* high-quality NBs to actually benefit from premium PLs by emphasizing their own brand superiority. Indeed, when a NB is the most similar superior option to a premium PL, the presence of a premium PL has been shown to increase the choice share of these NBs (Geyskens, Gielens, and Gijsbrechts 2010).

Limitations and Further Research

Our research has several limitations that offer interesting avenues for future research. First, we were restricted to a cross-sectional snapshot of premium PL presence. Studying longitudinal data on premium PL introductions (as Pauwels and Srinivasan (2004) did for standard PL introductions) could provide additional insights on the exact short- and long-term effects of premium PL entry. Second, we studied premium PLs at four leading retailers in the Dutch market. These four retailers involved three Hi-Lo oriented retailers and one more EDLP-oriented retailer. Still, it would be interesting to explore whether our findings also generalize to other formats as, for example, the (hard) discounters. Germany's leading discounter Aldi recently introduced a premium PL (PlanetRetail 2008b). Future research could investigate whether they were guided by the same principles in their selection of categories.

While we took into account premium PL presence of the pioneer in the category, we were unable to distinguish between whether retailers pay attention to Albert Heijn because it is the pioneer, and/or because it is the market leader. Moreover, while we focused on the within-category effects of market structure and conduct, their effects may well extend across categories. For example, a higher number of PLs in some categories was found to positively affect PL share in others (Sayman and Raju 2004b). Future research could try to capture whether such cross-category effects also come into play when deciding in which categories to introduce premium PLs.

Moreover, in relation to chapter 2 and 3, given the general belief that dual branders have more innovative capacity (Kumar and Steenkamp 2007) and the expertise that is needed to develop premium PLs (IGD 2006), future research could incorporate whether premium PLs are more likely to be carried by a retailer when NB manufacturers are more prone to engage in PL

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production.

Our descriptive study has been mainly concerned with describing retailers' choices to offer a premium PL, and has focused less on the (normative) performance consequences of these decisions. This study investigated which characteristics make a retailer more prone to carry a premium PL next to his standard PL in a category. Hence, it focused on the *antecedents* of premium PL introductions. An interesting question would be to also look at the potential *consequences* of premium PLs for retailers. The consequences of a retailer's premium PL offering in terms of performance implications can be multiple-fold. First, premium PLs may help a retailer to differentiate himself from other retailers (Corstjens and Lal 2000), and thereby may increase store traffic (consumers who used to buy at a different retailer may switch stores because of a retailer's premium PL offering). On the other hand, adding a premium PL may come at the expense of NBs in the category (PlanetRetail 2010a). As a result, the category's appeal might be reduced which may negatively affect the store traffic drawing power of a retailer's assortment. Secondly, as new innovative products may increase market penetration (Mahajan, Muller, and Bass 1990), a premium PL may increase a retailer's category penetration rate (consumers who did not buy the category may be convinced to purchase the category because of a retailer's attractive premium PL offering). A third benefit may arise because of the higher margins that premium PLs generate (as evidenced in chapter 3). Finally, a potential drawback to offering a premium PL may be the risk of NB or standard PL cannibalization (Geyskens, Gielens, and Gijsbrechts 2010) (current customers may switch from the NBs or the standard PL to the premium PL). The former is preferable to the retailer as NBs offer lower retailer margins than PLs (Ailawadi and Harlam 2004). For retailers that are considering to expand their PL offering it would be interesting to know the exact implications of premium PLs on each of these performance metrics. To estimate the potential success of a premium PL and their impact on a retailer's profitability, retailers need to gauge not only how much new demand it generates but also to what extent this demand comes at the expense of (cannibalizes) their other products (Carpenter and Hanssens 1994). To this end, future research could include these factors. Moreover, one might want to consider integrating both antecedents and consequences into one modeling framework and thereby assess to what extent retailers take the expected performance metrics (along one of the aforementioned consequences) into account when deciding to carry a premium PL in a category or not. To be able to estimate how a retailer's

premium PL offering affects performance, while taking into account the factors that increase a retailer's likelihood of carrying a premium PL in a certain category, and correcting for endogeneity, a simultaneous two-step estimation approach (similar to the one we adopted in chapter 2) is required (Heckman 1979). Research along those lines is called for.

Out of all PL tiers, premium PL shares are growing the fastest (Dobson and Chakraborty 2009). Given their increasing significance in the retail market, we hope the findings of this paper will encourage other researchers to continue empirical and theoretical research into this important retail trend.

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5. Conclusions and Future Research

In a handful of markets, like the U.K. and Germany, PL shares are stagnating but these are clearly exceptions to the rule (PlanetRetail 2010a). Although PL penetration already exceeded 40% in 2010 in countries like Switzerland and the U.K., further PL growth is expected for virtually all markets around the world, with especially strong growth rates in developing markets. While discounters are the “true PL champions” (PlanetRetail 2010a, p. 7), PL shares are poised for further growth across all other retail formats. The enormous success of PLs has led many NB manufacturers to start producing PLs. Moreover, as PLs have been around for a longer time, retailers have developed more intense relationships with (some of) their PL suppliers. Retailers do not want to rely only on their standard PL for growth, but they are expanding their PL portfolios, for example with a premium PL line. The research presented in this dissertation is among the first to empirically investigate the phenomenon of PL production, and to shed light on the recent trend of premium PLs. The conclusions from each chapter in this dissertation are summarized in §5.1, after which §5.2 provides managerial implications. In §5.3, the limitations of this work are discussed. Because PLs are considered “the brands of the future” (PlanetRetail 2010a, p. 1), the final section (§5.4) offers numerous implications for future marketing research.

5.1 Summary and Conclusions

This dissertation contains three main chapters. Chapter 2 investigated the drivers of PL production by NB manufacturers, and whether PL production creates goodwill in terms of shelf presence in a discount setting. Chapter 3 studied the consequences of dual branding and characteristics of the relationship between the PL supplier and the retailer on a retailer’s PL

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percentage margins in a traditional supermarket setting. Finally, chapter 4 investigated the recent premium PL trend, which was already tangentially touched upon in chapter 3. In the following subsections, the conclusions per chapter are discussed.

Chapter 2: Sleeping With the Enemy: Does Private-Label Production by National-Brand Manufacturers Create Discounter Goodwill?

Discounters have a PL dominated assortment where NBs have only limited shelf access. These limited spots are in high demand with NB manufacturers. We conducted a cross-category analysis at two leading discounters, and showed that PL production is indeed rewarded: NB manufacturers involved in such practice have a higher likelihood of obtaining NB shelf presence. Moreover, while powerful manufacturers are intrinsically more likely to obtain shelf presence with soft discounters, manufacturers with lower power can compensate this by producing PLs. No such dependence on power exists for hard discounters.

However, not all NB manufacturers are equally likely to produce PLs for discounters. Taking into account both the discounter's and the NB manufacturers' considerations, we found that NB manufacturers are more likely to be involved in PL production for the discounter when it is easier to produce high-quality products in the category. Conversely, more advertising for their NBs, a higher price differential relative to the discounter's PLs, and more innovations make this less likely.

Chapter 3: Why Retailer Private-Label Margins Differ Within Categories

PL percentage margins are known to vary across categories. Given recent developments in the retailscape, including (i) closer relationships between some PL suppliers and retailers, (ii) PL differentiation across quality tiers and sizes, and (iii) the emergence of dual branders, we showed that retailer PL margins also differ substantially within categories. We find that retailer PL margins are lower for SKUs from PL suppliers with whom the retailer shares a more intense relationship (as reflected in relationship length and breadth), but this negative effect can be countered through multisourcing. Further, the economy (premium) PL tier yields lower (higher) retailer margins compared to the standard tier, and also larger package sizes offer the retailer lower margins. In addition, lower retailer PL margins are obtained from more NB-oriented suppliers compared to dedicated PL suppliers. In contrast to more NB-oriented suppliers,

dedicated PL suppliers have little to win by building long-term retailer relationships, but can make themselves more valuable by providing PLs in multiple categories.

Chapter 4: Why Premium Private Label Presence Varies by Category

Premium PLs are considered one of the hottest trends in retailing. Still, although premium PLs provide higher margins (as evidenced in chapter 3), retailers do not feel the need to carry premium PLs in every category in the store. Using data on four retailers that already carry premium PLs for several years, we studied whether such presence depends on (i) the category's market structure, (ii) the marketing conduct in the category, (iii) the pioneer's premium PL presence/absence in the category, (iv) the category's growth potential, and (v) the category's role for the retailer.

We found that retailers are more likely to offer premium PLs in categories where the market structure is characterized by a lower standard PL share but higher NB concentration, and with a more proliferated assortment in terms of standard PLs. However, retailers are also aware of the crowding effect at very high levels of PL proliferation. Further, premium PLs are more likely to be offered in categories in which NBs' marketing conduct consists of less advertising, deeper price promotions, and a lower price premium towards standard PLs. In addition, when deciding in which categories to carry a premium PL, retailers consider the prevailing practice of the premium PL pioneer. Finally, while the category's growth potential did not have an effect, premium PLs are more likely in categories with a variety-enhancing role for the retailer (i.e., with a higher penetration level and a longer interpurchase time).

5.2 Implications for Practice

The findings of this dissertation have implications for all parties involved, i.e. retailers, NB manufacturers, and PL suppliers

Implications for Retailers

Antecedents of PL supplier type. As highlighted in both chapters 2 and 3, retailers have to choose between NB manufacturers and dedicated PL manufacturers to produce their PLs and, in case of the former, they may prefer certain NB manufacturers over others. However, not all NB manufacturers are equally willing to produce PLs. For retailers, it is therefore important to

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understand the relevant considerations for PL production from the manufacturer's point of view. Our analyses in chapter 2 help retailers (discounters) understand which NB manufacturers are more versus less prone to engage in PL production. NB manufacturers are less likely to produce PLs when it is more difficult to produce high-quality products in the category. For such categories, NB manufacturers do not want to give away their quality advantage. Relatedly, we found that NB manufacturers that support their products by heavy advertising, a higher price premium, and more innovations are less likely to produce PLs. When consumers, or other retailers, would find out that these manufacturers produce PLs as well, this could tarnish their brands' image. Moreover, this may put them in a position where the discounter can exert pressure to share the latest technologies. Retailers may take this information into account when negotiating with NB manufacturers on contractual agreements. A retailer may emphasize its righteous policy in terms of confidentiality, so as not to harm a NB manufacturer's image. Moreover, highlighting the chain's selling proposition, e.g. a price focus versus a more innovative focus, may decrease the significance of some manufacturer concerns. For example, for a premium-priced NB manufacturer, the risk of brand devaluation when producing PLs in a soft discount setting may not be as high as in a hard discount setting, as price is a less prominent chain attribute in the former setting.

Consequences of PL supplier type. The main result of chapter 2 was that PL production by NB manufacturers creates retailer goodwill. Retailers may attract NB manufacturers by explicitly pointing this out beforehand. In a discounter context, goodwill manifests itself through an increased likelihood of obtaining shelf presence with the discounter. In more traditional settings, retailers may be able to show goodwill towards the dual brander in other ways. As evidenced in chapter 3, manufacturers with a higher extent of NB focus are also able to leverage higher PL wholesale prices. Hence, another substantial concern for NB manufacturers to engage in PL production, i.e. that the retailer will squeeze them, can be taken away by the retailer. Working with suppliers with a higher extent of NB focus leads to lower PL margins for the retailer, but may be beneficial to the retailer in terms of more quality assurance and flexibility.

Consequences of PL supplier-retailer relationship. In chapter 3, we further showed that retailers nowadays seek to develop more intense relationships with certain PL suppliers (this holds for both dedicated and NB manufacturers). However, again, PL suppliers with whom the retailer establishes such an intense (long and/or broad) relationship have a better negotiation

position, resulting in lower PL margins for the retailer. Retailers can consider diversifying PL supply across several suppliers within the category. Although retailers lately tend to work with fewer suppliers, in line with their increased focus on forming select partnerships (de Jong 2011), multisourcing pushes PL wholesale prices down, and positively affects the retailer's PL margins. While prior research agrees on the fact that PLs generate high percentage margins for retailers and that these margins differ across categories (Ailawadi and Harlam 2004), we found that margin differences across PL SKUs within categories result from a supplier's extent of NB focus, and the intensity of the relationship between the supplier and the retailer.

Antecedents and consequences of PL differentiation. For years, retailers relied only on their standard PL. With the standard PL, retailers tried to copy NBs in the category on quality, but offered them at a lower price. Today, many grocery retailers use a three-tier strategy for their PL offerings. The economy tier offers products at the lowest price in the category to appeal to low-income consumers who are extremely price sensitive. Of late, more and more retailers are adding a third tier. These are premium, unique, specialty items that compete more on quality and innovation than they do on price. These items can truly expand a retailer's category sales, and not just induce switching from NBs, if done right (Shea 2008). Both chapters 3 and 4 lead to a number of implications for retailers on this issue.

First, as shown in chapter 3, retailer PL margins differ considerably across different tiers. Lower-quality economy PLs offer a lower percentage margin to the retailer compared to the standard PL. Given that economy PLs have already been found to cannibalize the higher-margin standard PLs (Geyskens, Gielens, and Gijsbrechts 2010), retailers should be cautious when shifting their focus toward this tier. We also found evidence that high-quality premium PLs can be a good opportunity for retailers, as they offer higher margins for the retailer than the standard PL.

In line with our findings of chapter 3, PlanetRetail (2010a, p. 25) considers premium PLs a "key PL trend," and predicts that retailers are mainly set to focus on quality in 2011. Given that more and more retailers are likely to shift their focus to more profitable premium PLs (PlanetRetail 2010a), chapter 4 specifically focused on premium PLs. Retailers are obviously aware of potential pitfalls as they were found not to extend their standard PL with a premium PL in every category. Following prevailing industry practices, retailers primarily select categories in which NB concentration is higher, standard PL share is lower, and standard PL proliferation is

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moderate. Moreover, retailers are more likely to offer premium PLs in categories with lower NB advertising, deeper price-promotional discounts, a lower NB price premium, higher penetration and longer interpurchase times. We also found that retailers usually consider the actions of the pioneer when deciding to expand their PL portfolio in a given category with a premium addition.

Implications for NB Manufacturers

Shankar et al. (2011, p. 36) suggested that it is important to “close the manufacturer-retailer collaboration gap.” Brand manufacturers must learn to co-exist with PLs by adopting new brand-building strategies, while also working collaboratively with retailers, for example by producing their PLs.

PL production. One way to fight the PL threat is by partnering effectively with retailers, for example by producing their PLs, or by supplying NBs to discounters, who need NBs in their assortments (Kumar and Steenkamp 2007). However, NB manufacturers are struggling with the decision whether or not to engage in PL production. Following prevailing practices by other NB manufacturers, they should consider producing PLs when they do not have a significant competitive advantage in the category, i.e. when it is easy to produce high-quality products, when they do not engage in a lot of advertising, when they charge only a small price premium, and when they introduce few innovations. Moreover, the uncertainty of NB manufacturers can be attributed to the existence of several benefits and drawbacks to PL production for the NB manufacturer. This dissertation provided insights concerning two of their presumed concerns. One of the benefits, and an important reason why NB manufacturers are willing to produce PLs, is that they assume it will improve their relationship with the retailer, and that they will benefit subsequently from the goodwill that they created. In a discounter setting, we found evidence that PL production increases the likelihood of obtaining shelf presence with the discounter, supporting the validity of the goodwill argument. Hence, as suggested by Dunne and Narasimhan (1999), producing PLs may indeed represent a neglected opportunity for those who seek closer ties with retailers. Moreover, NB manufacturers that refuse to engage in PL production should be aware of the fact that their refusal to produce PLs may jeopardize their chances of gaining access to one of the fastest-growing retail formats.

A second concern for NB manufacturers when facing the decision whether or not to engage in PL production is their perception that the retailer will solely focus on obtaining the

lowest cost possible (Dunne and Narasimham 1999), making the production of PLs less likely to be profitable. Our results, in contrast, showed that retailers appreciate the benefits, e.g. more quality assurance, provided by suppliers with a higher extent of NB focus, and accept higher wholesale prices from them compared to more dedicated PL suppliers. Moreover, NB manufactures may consider trying to intensify the relationship by entering long-term contracts or by producing PLs in multiple categories. This will further increase the NB manufacturer's negotiation power, and lead retailers to accept higher PL wholesale prices.

Premium PLs. Chapter 4 helped NB manufacturers to predict in which categories they are likely to face premium PL competition. While many NB manufacturers are still figuring out a way to combat standard PLs, the premium PL threat is already looming. NBs nowadays face a PL threat on both the price (with the standard PL) and the quality (with the premium PL) front, which puts them in a difficult position. NB manufacturers have to select the right strategy to battle the standard PL, the premium PL, but preferably to battle both at the same time. While prior research already found that advertising negatively affects standard PL success (Hoch and Banerji 1993), we found that more NB advertising also keeps premium PLs at bay. Other marketing tools, however, do not seem to work in the same direction. In their fight with standard PLs, NB manufacturers are tempted to offer deep price-promotions to reduce the price gap. A lower price gap between NBs and standard PLs in a category indeed decreases standard PL success (Dhar and Hoch 1997). However, at the same time, this lower price gap between the NB and the standard PL will increase a retailer's interest in offering a premium PL in a category. Similar to retailers that are selective in picking their battles with NBs, NB manufacturers should also be cautious in picking the right strategy to battle both standard and premium PLs.

Implications for Private-Label Suppliers

Dedicated PL manufacturers have a low-cost mindset. However, as shown in chapter 3, they are struggling with how to raise their wholesale prices above marginal costs. Our results show that dedicated PL manufacturers have little to win by building long-term relationships with retailers. However, they can make themselves more valuable to retailers by producing PLs in multiple categories, as retailers also value (and reward) that aspect of a relationship. Nevertheless, dedicated PL manufacturers face increased competition from dual branders who are believed to provide more quality assurance and innovative capacity. Retailers are actively looking for PL

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suppliers that are flexible, provide marketing support and quality control, and invest in product development. Dedicated PL suppliers are usually believed to lack these aspects (Kumar and Steenkamp 2007). To become more profitable, they should address these issues or they risk losing their business to dual branders.

5.3 Limitations

The implications of this research must be tempered by an understanding of its limitations. At the end of every chapter, we already pointed out a number of limitations, as well as some areas for further research. We refer to these sections for a more detailed discussion on the specific limitations that apply to each of the chapters. In the remainder of this section, we will further discuss the limitations that are common to all three main chapters.

First, the three chapters were restricted to a specific retail setting, i.e. discounters (chapter 2) or traditional retailers (chapters 3 and 4). Hence, the generalizability of the findings may be constrained by the nature of these settings. For example, discounters operate with a limited assortment that is mainly focused on PLs, making shelf access given to NBs a prevalent dimension of retailer goodwill. For traditional retailers, goodwill may manifest itself in multiple other ways, such as in the slotting allowances a NB manufacturer has to provide to increase NB acceptance (Sudhir and Rao 2006). In addition, while more traditional retailers may prefer dual branders, as they have more innovative capacity and offer more quality assurance, these factors may be less important for a discounter. Hence, whether the extent of NB focus of a supplier still enables him to leverage higher wholesale prices in a discount setting is questionable, and should be studied. Finally, while we studied premium PLs at four leading traditional retailers, it would still be interesting to explore whether our findings also hold in a discount setting, as discounters have begun to introduce premium PLs as well (PlanetRetail 2010b). Given that discounters focus less on NBs, the effects of NBs' marketing conduct may not affect their decision to carry a premium PL in a category. This requires further study. Additional investigations are not only recommended across retail formats, but also to see to what extent our findings can be generalized to other countries and industries. Key PL trends in Europe, such as the rise of premium PLs, are already becoming evident in developing PL regions such as North America (PlanetRetail 2010c). Moreover, while our focus was on the FMCG branch, PLs are not restricted to this sector. PLs have already succeeded in many industries, like apparel, books, electronics, and financial

services (Kumar and Steenkamp 2007).

All three chapters made abstraction from potential spill-over effects *across categories*. Especially when dealing with dual branding, cross-category effects may come into play. A manufacturer's PL production in one category may affect the retailer's goodwill in others. Similarly, a supplier's intense relationship with the retailer in one category may positively affect a supplier's leveraging ability in other categories. Also potential spill-over effects of PL production *across retailers* are left for future research. More extensive models could take into account the potentially harmful impact that PL production for one retailer could have on the channel relationships (and subsequent goodwill and/or margins) with other retailers.

Although retailers can produce PLs themselves, up to date this rarely occurs. Hence, this dissertation only addressed PL production by either NB manufacturers or by dedicated PL suppliers. However, there is some recent evidence that retailers are increasingly relying on their own production facilities. For example, Lidl recently announced that it will build two plants for waters and soft drinks (PlanetRetail 2011). Hence, following the example from the clothing industry, backward vertical integration into PL production also seems to become more popular in the grocery retail industry, and should be taken into account in future research.

Finally, all three chapters had a cross-sectional focus, due to data limitations. Longitudinal data could provide additional insights on the development and endurance of retailer goodwill, the PL supplier-retailer relationship and resulting PL margins, and the short- and long-term effects of premium PL introductions.

5.4 Future Research Directions

In many industries, PLs represent considerable competition to NBs. While a lot of PL research has been published over the past years, to which this dissertation has tried to add, several areas are left unexplored.

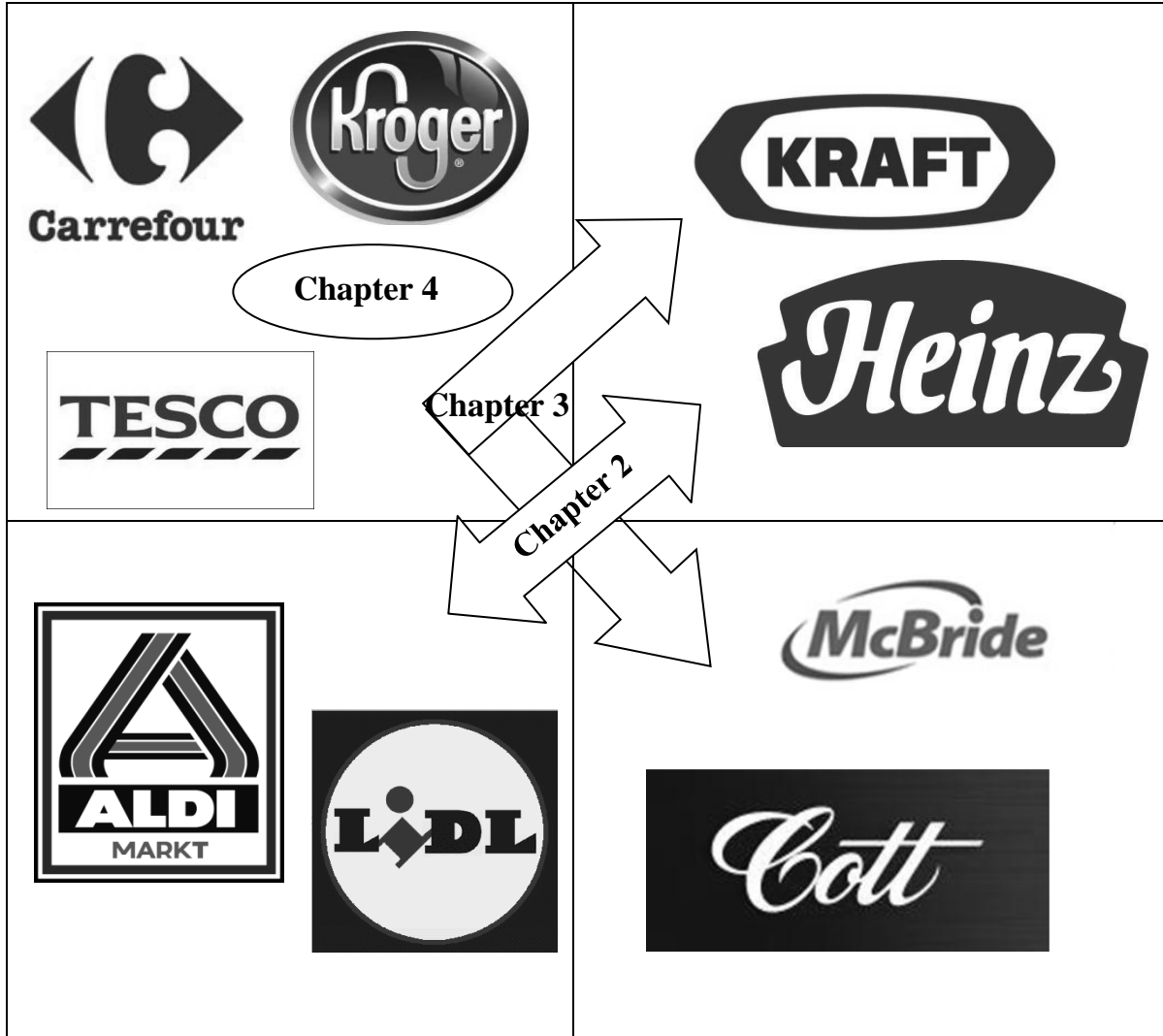
First, as is evident from Table 1.1, what drives close PL supplier-retailer relationships is still left unexplored. The importance of retailer-manufacturer partnerships in the equation of PL success is increasing. According to the director of PLs at Walgreens, retailers and suppliers will continue to work closer together to find unique opportunities to differentiate retailers' offerings (Hofbauer 2010). Future research could explore whether, when, and where retailers tend to build these intense relationships.

5. Conclusions and Future Research

Second, in chapter 4 we found evidence for a so-called “crowding effect” concerning PL SKU proliferation, which deters retailers to extend their standard PL with a premium PL. In addition, Ailawadi, Pauwels, and Steenkamp (2008) found evidence for an inverted U-shaped relationship between PL share and share-of-wallet. They argued that, while retailers are making a concerted effort to grow their PL, “it can be overdone” (Ailawadi, Pauwels, and Steenkamp 2008, p. 27). Most papers study the enormous success of PLs, but abstract away from any limitations or boundaries to PLs. Could retailers cause harm by continuously expanding their PL offering and hence, for example, risk PL fatigue (Dobson and Chakraborty 2009), with negative consequences that may extend beyond just decreased PL sales? More research on these negative consequences of continued PL expansion and differentiation is needed.

Lately, a lot of research has focused on the manufacturer-retailer interface, for example on the pass-through of trade promotions (Ailawadi and Harlam 2009; Dubé and Gupta 2008; Nijss et al. 2010), and on retailers’ strategic assortment decisions (Coughlan and Shaffer 2009; Dukes, Geylani, and Srinivasan 2009). This dissertation also touched upon several manufacturer-retailer interactions, as summarized in Figure 5.1. Whereas chapter 2 focused on the interaction between discounters (e.g. Aldi) and NB manufacturers (e.g. Kraft), chapter 3 focused on the interaction between traditional retailers (e.g. Carrefour) and several types of PL suppliers, i.e. NB manufacturers that produce PLs, as well as dedicated PL suppliers (e.g. McBride). Figure 5.1. can also function as a framework for research extensions. For example, future research could explore the relation between discounters and dedicated PL suppliers, or the interaction between discounters and traditional retailers. Discounters are acclaimed to be the most dynamic channel (Planetretail 2010d). According to Mike Duke, CEO of Walmart “the slow economic recovery will continue to affect our customers, and we expect they will remain cautious about spending.” Hence, discounters are presumed to keep growing, and more traditional retailers may be affected by this. A first reaction of retailers to this growing popularity of discounters was the introduction of economy PLs. Recently, retailers have even started to introduce discount PLs that are of slightly better quality than their economy PLs, to match the discounter’s PLs on both price and quality (PlanetRetail 2010a). What the most effective strategies are to combat discounters, and how effective current strategies are, needs to be studied.

FIGURE 5.1
MANUFACTURER-RETAILER INTERACTIONS



The increasing success of discounters has also prompted retailers to rationalise their assortment, freeing up room for their PL. As a result, NB manufacturers need to think of strategies to survive. “We have to view private brands as branded competitors,” says Kirsten Lynch, CMO of Quaker Oats (PlanetRetail 2010a, p. 49). NB manufacturers need to continue investing in quality, advertising, and innovation. However, there will be an increasing “blurring between private labels and brands” (PlanetRetail 2010e, p. 1). Future research could investigate close manufacturer-retailer cooperation in the form of licensing or co-branding (in addition to PL production as studied in this dissertation). Also, NB manufacturers may imitate retailers and mimic PL aspects. Some first signals of this are the launch of economy versions of NBs

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(PlanetRetail 2010f), and the exclusive distribution of NBs through only one retailer (Gielens, Gijsbrechts, and Dekimpe 2011). Again, these are interesting topics to pursue in future research.

For an increasing number of retailers, the role of PLs is transitioning from a generic alternative to a true FMCG brand. PLs are becoming brands in their own right. This has led to three important areas for future research. First, the effectiveness of marketing tools needs to be studied in the PL context. While advertising is yet not widely used by PLs, some retailers are already engaging in PL advertising (Lamey et al. 2011). However, PL advertising, if present, is almost always generic rather than category-specific, and hence poses several challenges. Effects might not only be observed on category sales, as PL loyalty and store loyalty may be affected as well. Compared to PL advertising, PL price promotions are more regularly used by retailers. Bronnenberg and Wathieu (1996) already showed that the effects of NB and PL promotions on sales are asymmetric. However, the effectiveness of PL price promotions leaves room for future research, especially given retailers' increasing PL portfolio. Second, a growing number of retailers are licensing their PL lines to other retailers (PlanetRetail 2011). For example, U.K. retailer Waitrose sells Boots' drugstore PLs, and vice versa. This enables retailers to reach a larger set of potential consumers, and increases brand awareness for their PL. However, when retailers engage in this practice, retailers no longer have full control on, for example, the retail price and shelf position of their PLs in other stores. The benefits and drawbacks of this strategy need to be studied. Third, as PLs become more like brands, the use of a strong brand name becomes more important. Dhar and Hoch (1997) found that putting the retailer's own name on the PL is positively related to PL share. Still, discounters carry unique PL brand names across categories. Moreover, Tesco recently launched several venture brands with no reference to the retailer on the package at all (PlanetRetail 2011). Little research has examined in detail the effectiveness of a retailer's specific PL branding strategy (Ailawadi and Keller 2004). Using one strong brand name could help to strengthen the PL brand and create synergies across marketing campaigns (Dekimpe et al. 2011). On the other hand, a large number of brand extensions, as retailers keep expanding their PL portfolio, could negatively affect consumers' attitude towards the PL brand, especially when congruence between the extensions is low.

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