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Stefanie Weiß

# Determinants of Private Label Attitude

## Predicting Consumers' Brand Preferences Using Psychographics

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## Predicting Consumers' Brand Preferences Using Psychographics

With a Preface by Prof. Mag. Silvia S. Kucera

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# Preface

Kundenbindung, also loyale Konsumenten, stehen im Fokus sämtlicher betriebswirtschaftlicher Aktivitäten. Werbe- und Marktforschung untersuchen seit Jahrzehnten Faktoren und Parameter, welche die Aufmerksamkeit und Einstellung der Kunden transparenter und damit auch manipulierbarer machen sollen. Aber in den letzten Jahren zeigt sich, dass Kunden immer kritischer werden, Produkte und deren Erzeugung sowie Inhaltsstoffe hinterfragen.

Doch es kommt noch schlimmer: laut einer Studie, die am 16.10.2014 im Rahmen einer Veranstaltung der Handelszeitung Wien vorgestellt wurde und in der bis dato 6.000 Personen zum Thema Essen befragt wurden, ging klar hervor, dass jeder zweite Österreicher unseren Lebensmitteln und damit auch unseren Marken nicht mehr vertraut.

Herkömmliche Marketingmodelle zur Erklärung von „Markenbewusstsein“, des „Evoked –Sets“, der „Intention to Buy“ um nur einige zu nennen, sind nur mehr bedingt anwendbar.

Seit Ende der 70er Jahre haben Private Label Brands (Handelsmarken) Umsatzanteile gewonnen – weil sie vor allem die Preissensibilität spezieller Kundensegmente angesprochen haben. Mittlerweile werden diese Produkte in allen Preis- und Qualitätsklassen angeboten und sind eine starke Konkurrenz für Markenprodukte geworden. Damit ist aber auch die Preissensibilität als entscheidender Faktor für die gezielte Kundenansprache obsolet. Die vorliegende Arbeit untersucht die psychographischen Parameter der Konsumenten in Bezug auf deren Wahrnehmung und Einstellung zu Private Label Brands. Die Ergebnisse sind nicht nur im Sinne der Anwendbarkeit beziehungsweise Überprüfung theoretischer Konzepte interessant, sondern liefern - basierend auf den Ergebnissen der Befragung - auch für Erzeuger, Marketingexperten und Retailer relevante Daten für Kundenansprache und Marktsegmentierung.

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**IMC Fachhochschule Krems - Institutsprofil**

Die IMC Fachhochschule Krems gilt als eine der internationalsten Fachhochschulen Österreichs. Derzeit werden sowohl Vollzeit- als auch berufsbegleitend 27 innovative Studiengänge in den Bereichen Wirtschaftswissenschaften, Gesundheitswissenschaften und Life Sciences angeboten. Die hohe Qualität der IMC FH Krems wurde durch das Qualitätssiegel der Foundation for International Business Administration Accreditation (FIBAA), einer renommierten internationalen Qualitätssicherungsagentur mit Sitz in Bonn, Deutschland, bestätigt. Auch seitens der FIBAA wurde der IMC FH Krems eine – insbesondere für eine österreichische Fachhochschule - „bemerkenswerte internationale Ausrichtung“ attestiert.

Neben einer extrem praxisorientierten Ausbildung auf akademischem Niveau zeichnet sich die Ausbildung an der IMC FH Krems durch die Vermittlung von Führungsqualitäten und Soft Skills, ein umfassendes Fremdsprachenangebot sowie ein projektbezogenes Arbeiten in überschaubaren Gruppen, meist in direktem Kontakt mit den Lehrenden aus. Die IMC FH Krems versteht sich nicht als „Bildungsfabrik“ sondern bietet Wissensvermittlung aus erster Hand.

Ein engagiertes internationales ProfessorInnen Team mit einem hohen Qualitäts- und Bildungsanspruch motiviert Studierende zu Bestleistungen und bereitet sie für eine internationale Karriere vor. Durch interaktives Lernen, direkten und persönlichen Erfahrungsaustausch zwischen Studierenden und Lehrenden, internationale Partnerprogramme mit Universitäten, Forschungseinrichtungen und Unternehmen, sowie ein umfassendes Freizeitangebot in einer der idyllischsten Gegenden Osterreichs wird an der IMC FH Krems Studieren zum Erlebnis.

## Abstract

Private label brands play an important role in today's grocery retail, particularly in the developed economies of Western Europe. Understanding what influences the attitudes that consumers hold towards these brands is therefore of huge interest to marketing professionals, but academic research has so far been only moderately successful at determining the antecedents that cause consumers to evaluate private labels more positively than manufacturer brands. This thesis therefore aims to establish causal relationships between consumers' private label attitude and various psychographic traits, which are believed to most directly influence brand attitude. These hypothesized relationships are tested on a sample of German and Austrian consumers who have been asked to evaluate themselves on these psychographic traits using an online questionnaire. Their response data are then analyzed using the multiple regression technique.

The results suggest support for only three psychographic characteristics having an influence on consumers' private label attitudes: his or her price consciousness, value consciousness, and the extent to which he or she perceives private labels to offer equally high quality levels as manufacturer brands. The implications that these findings have for manufacturers and retailers as well as this thesis' major limitations are discussed and possible directions for future research are suggested.

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# 1 Introduction

The aim of this chapter is to provide an introductory overview of the background situation concerning private label brands and to describe the problem statement with which this thesis is concerned, based on which the research questions are then developed. After outlining the primary objectives of the research to be conducted, its practical relevance and applicability to real management situations are illustrated. A limitation of the thematic scope and an outline of the remainder of the thesis finally close this chapter.

## 1.1 Background situation

Private label brands (or PLB) are brands produced, owned, and sold exclusively by retailers in an attempt to differentiate their stores' offerings from those of competitors. PLB in the grocery sector are frequently introduced in the form of umbrella brands that serve several product categories (e.g. Clever by Billa in Austria, or ja! by REWE in Germany). The products sold under a private label brand are typically lower-priced and less heavily advertised than national brands (Hoch, & Banerji, 1993, p. 65), as proven by the fact that, on average, the price differential between PLB and national brands (or NB) is as much as 30% (Ailawadi, Neslin & Gedenk, 2001, p. 71).

Since their appearance in the late 1970s, first in the form of un-branded generic products, private label brands have established themselves firmly in the modern retail landscape of developed economies and particularly Europe. In the European average, private labels command value market shares of 35.6% and unit shares of 45.1% (Symphony IRI Group, 2012, p. 6). Private label consumption has traditionally been highest in the UK, reaching 50.5% value share in 2011 as opposed to only 16.8% in Italy (ibid, p. 5). Particularly in price sensitive markets like Germany, private label brands cause significant competitive pressure, commanding large percentages of unit and value share that were previously held by manufacturer brands alone. This makes a thorough understanding of PLB even more important nowadays, since national brand manufacturers are no longer able to ignore the threat that PLB pose.

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A few decades ago, private label brands were still considered cheap, low-quality imitations of popular national brands, copying major elements of their branding strategies such as their packaging design, colours, and ingredients. Private label colas for example often use the red and white colour schema of the category leader Coca-Cola. These imitation strategies were one of the reasons why PLB could be offered at significantly lower prices, since they rarely invested in product innovations of their own (Hoch, & Banerji, 1993, p. 66), allowing them to save the enormous R&D expenses that innovations usually require. In the meantime, private label brands are available in all quality tiers, ranging from rock bottom-priced generics over low priced "standard" private labels to premium PLB that compete head-on with national brands in terms of both quality and price. This vast array of competitive segments adds to the already existing complexity from the consumer perspective and grocery shoppers may have very different pictures in mind when thinking of private labels. Depending on which type of PLB they have been most exposed to or aware of – low-quality generics or high-quality premium PLBs – their attitudes towards them may vary considerably.

Retailers have recognized the importance of private label brands as a source of competitive advantage, particularly during times of economic downturn when PLB shares tend to rise (Lamey, Deleersnyder, Dekimpe, & Steenkamp, 2007, p. 11). Due to the restrained economic conditions that private households feel during economic recessions and their resulting need to save money on daily necessities, many try out private label brands as more affordable alternatives to manufacturer brands. As a logical consequence, Lamey et al. (2007, p. 11) argue, many people stick to PLB even when economic conditions improve, mainly because they have become familiar with the brands and gained sufficient trust in their quality to not switch back to the brands they used to purchase before. Store brands can now be found in nearly all retail product categories due to their ability to shift power from manufacturers to the retailers producing PLBs, ultimately affecting chain profitability and increasing bargaining power (Narasimhan, & Wilcox, 1998, p. 574; Pandya, & Joshi, 2011, pp. 20-21). Most importantly, private label brands have a gross profit margin that is up 44% higher than that of manufacturer brands (Davies, & Brito, 2004, as cited in Beneke, 2010, p. 208). Keller (1993, as cited in Manikandan, 2012, p. 66) speaks of a gross margin range between 25-50%. For re-

tailers, such margins are impossible to achieve solely by selling national brands for a fraction of the profit margin that PLB promise.

The fact that retailers nowadays reserve a significant portion of their shelf space to their own store brands makes it even more difficult for NB manufacturers to bring their products to consumers' attention, and above all this improves the negotiating position of retailers considerably. For these and many other reason, understanding PLB and their workings is not only of interest to the retailers that sell them, but also to the manufacturers that have to compete with them on a daily basis.

## 1.2 Problem statement

In the eyes of consumers, store brands are seen as affordable alternatives to national brands. However, current research reveals that price considerations alone are insufficient in explaining consumers' buying intentions (Walsh, & Mitchell, 2010, p. 4) and that other factors such as previous experience with PLB or value consciousness need to be taken into consideration to explain what motives drive consumers to choose PLB over national brands (Kara, Rojas-Méndez, Kucukemiroglu, & Harcar, 2009, p. 128). Consumers' decision-making processes are way more complicated than any single construct – e.g. price consciousness or risk averseness - could possibly explain. Instead it would appear logical that the more constructs are used to explain the phenomenon, the greater the predictability of PLB attitude will be.

In an attempt to aggregate available PLB research findings into a managerially relevant overview of the topic, Gooner and Nadler (2012, p. 87) assert that, despite several thousand published articles, there is a generally acknowledged lack of consensus concerning exercisable generalizations as to how PLB branding strategies need to be designed in order to be successful. The authors call for more integrative research contributions that are targeted at developing useful middle range theory as opposed to even more investigative, qualitative research techniques.1 To the great discouragement of the endeavours of this thesis, the authors also note that "the range and scope of private label issues and research and the frequent incommensurability of approaches and

[1] Middle range theory is here defined as an "approach to theory development aimed at integrating theory and empirical research" (Gooner, & Nadler, 2012, p. 87).

measures makes a classic, quantitative meta-analysis covering multiple private label branding topics illusive" (Gooner, & Nadler, 2012, p. 87). Admittedly, it is highly unlikely that this thesis will manage to perfectly depict the reality or identify all existing antecedents of consumers' attitudes towards a brand. It is still save to assert that (1) the assumptions on which this thesis is based are well backed-up by the findings of previous research and are therefore no unsupported or simply estimated guesses, and (2) any latent shortcoming, mal-assumption or unexpected outcome of the results will aid future researchers in improving the approach used and learning from the mistakes made today. Therefore, Gooner and Nadler's statement about the illusiveness of this research paper's endeavours shall not hinder another solid attempt.

When looking at the existing literature on the topic, not only do different authors often come to different results concerning one and the same antecedent they investigate, but also do their categorizations and classifications of antecedents vary widely. In an attempt to identify clearly distinguishable consumer segments for private label brands and national brands, some authors look at demographic and psychographic consumer variables to determine attitude (Ailawadi et al., 2001; Batra, & Sinha, 2000; Coe, 1971; Dunn, Murphy, & Skelly, 1986), some of them assessing both groups of variables in combination with each other, others separately. Again others try to explain shopping behaviour with the behaviour itself (Omar, 1996), which seems illogical and only little relevant to identifying the antecedents that cause the behaviour. Also, some studies have approached the topic from a cultural perspective (Erdem, Swait, & Valenzuela, 2006; Shannon, & Mandhachitara, 2005).

The two dominant categories of antecedents in previous literature have been the demographic and the psychographic approach. In later parts this thesis will defend the view that these two categories do not contain mutually exclusive antecedents of PLB attitude, but instead that consumers' demographic traits are funnelled through and hence included in the psychographic characteristics (Ailawadi et al., 2001, p. 73). It is therefore not a question of abandoning one category in favour of the other. Rather, the antecedents of both categories shall be looked at from the psychographic perspective exclusively.

Despite a wide array of research that has already been conducted on private label attitudes, findings on its antecedents are, as mentioned above, often inconclusive and sometimes even contradictory. A possible reason for this shortcoming is that many authors investigate only three or less antecedents at a time (Batra, & Sinha, 2000; Kara et al., 2009), whereas others attempt to develop model frameworks that integrate as many relevant antecedents as possible (Burton, Lichtenstein, Netemeyer, & Garretson, 1998; Walsh, & Mitchell, 2010). The latter category is however comparatively rare. Studying various antecedents in isolation might be easier to carry out, but it neglects the fact that consumers' attitude formation process does not take place in a vacuum, but instead involves a number of interrelated and maybe even interdependent antecedents. This study will hence direct its efforts at developing a conceptual framework with broad validity and generalizability, so that future researchers will be able to draw on its findings and develop PLB theory further.

## 1.3 Research questions

Based on the problem statement outlined above, the primary research question can be stated as follows:

***RQ:*** *Which psychographic characteristics are major antecedents of consumers' attitudes towards private label brands?*

Drawing on the findings from current academic discussion, the research question can be refined into a number of sub-questions that each take account of a different type of psychographic antecedents, which by various researchers have been deemed potentially valid and relevant to the research question. A large number of authors have investigated the role of price on consumer decision making. More precisely, large importance has been attributed to consumers' price and value perceptions on their attitude formation process, purporting that consumers who only value low prices and ignore the (presumably) lower quality levels of PLB have more favourable attitude towards this type of brand (Ailawadi et al., 2001, p. 71; Burton et al., 1998, p. 294; Lichtenstein et al., 1993, p. 235). Hence, sub-question 1 will be stated as:

***RQ1:*** *Do consumers' perceptions of price and value affect their evaluations of private label brands?*

Cue reliance[2] as a determinant of PLB attitude has been examined for example by Burnkrant (1978), Dawar, and Parker (1994) and Richardson, Dick, and Jain (1994) who attempted to determine the role of intrinsic (e.g. taste, texture) and extrinsic (e.g. packaging, advertising coverage) product cues on consumers' quality perceptions and therefore ultimately on their attitudes towards a brand. Given that PLB are rarely supported by extensive packaging and media promotion expenses, it appears likely that consumers who rely more on intrinsic as opposed to extrinsic product cues hold more favourable attitudes towards private label brands. Research question 2 is therefore stated as:

***RQ2:*** *Do shoppers of PLB rather rely on extrinsic or intrinsic product cues when making their purchase decisions?*

Ailawadi et al. (2001, p. 75) as well as Burton et al. (1998, p. 296) suggest that consumers PLB proneness in part also depends on how they view themselves, as private individuals and as consumers. They argue that those consumers who take pride from making smart purchase decisions are more likely to hold positive attitudes towards PLB, given their lower prices and often equivalent quality level. Hence, research question three will be:

***RQ3:*** *How does consumers' self-perception influence their private label attitude?*

Lastly, how consumers perceive risk is assumed to have an impact on their consumption choices (Batra, & Sinha, 2000, p. 179). Whether and to what extent private labels are perceived to pose a serious financial, social, or performance risk (Dunn et al., 1986, p. 214) will influence how favourable or unfavourable they view those brands in comparison to national brands. Therefore, the final sub-question will be:

***RQ4:*** *What impact do consumers' perceptions of risk have on their attitudes towards PLB?*

The methodology used to answer the research questions will be based on an Ex Post Facto research design which – using Multiple Regression – will attempt to determine

[2] Even though cue reliance as a construct has mostly been investigated separately from other psychographic determinants and has therefore never been explicitly labelled as "psychographic", in accordance with common definitions, just as price and value consciousness, cue reliance deals with consumers' activities, interests and opinions (Business Dictionary, 2014, para. 1) in that it gives an answer on the nature of the product cues a person is more or less receptive to.

the individual and combined predictive validity of the constructs outlined above. For more details on the applied methodology, please refer to chapter 3.

## 1.4 Research objectives

This thesis aims at validating different psychographic antecedents of consumers' attitudes towards private label brands as suggested by academic literature. The goal is to harmonize the multitude of academic contributions to the topic by assessing a combination of factors that each stem from different perspectives, but all try to explain the same phenomenon. In doing so, the insights gained from the research will contribute to either consolidating or rejecting the findings made by other researchers in the field, thereby supporting the creation of valid middle range theory.

It can hardly be doubted that identifying all possible antecedents of PLB attitude would be illusive. Most certainly, a set of 30 or more factors will still not be able to describe the phenomenon fully. However, it can be deemed realistic to identify those antecedents with the greatest impact on PLB attitude, thereby setting the direction for any future research efforts. More precisely, the thesis at hand will attempt to determine whether the psychographic antecedents identified from the literature are able to sufficiently explain variance in consumers' attitudes towards private label brands. These factors – consumers' orientation towards price and value, their tendency to judge products on either extrinsic or intrinsic product cues, their self-image as consumers, as well as their perceptions of risk – have been carefully selected from the literature and shall be tested in terms of their predictive value of PLB attitude. In the ideal scenario, their combined predictability is sufficiently large in order to be relevant and of theoretical and practical use in the academic world and in the grocery retail industry alike.

In more general terms, the aim of this thesis shall therefore be to contribute to the development of empirical generalizations and hence consolidate the knowledge gained from a multitude of approaches into a single, comprehensive framework. Possibly, future researchers will add to this work by testing the inferences in empirical research of their own.

## 1.5 Practical relevance and application

Apart from their contribution to academic theory, the expected insights might result in valuable and relevant practical and managerial implications for marketing professionals of manufacturers and retailers alike. It is expected that the findings will enable marketers of private label brands to not only make more informed market segmentation decisions on the basis of consumers' psychographics, but also to derive important implications for the design of their marketing communication, brand positioning, product development, pricing and product packaging strategies. For manufacturers of national brands the insights gained will be helpful in further developing their points of difference to the private label brands they compete with, shifting focus to those brand elements that PLB cannot easily copy.

Being able to understand what drives certain consumers to prefer private labels over national brands is not only of great importance to retailers, but also to manufacturers. Apart from obtaining a more precise picture of the market segment in question and thereby deriving conclusions on the market segments national brands can serve themselves, the competitive interaction with retailers is different from the "standard predatory tactics" often used with other manufacturers (Dhar, & Hoch, 1997, as cited in Horvat, 2011, p. 191). This means that from the perspective of the manufacturer, the retailer has become both a customer as well as a competitor at the same time, which puts the retailer in a privileged position for negotiations and requires a more cooperative rather than competitive interaction style. This insight makes it even more important for manufacturers to understand the rules of the game and adjust their own branding strategies accordingly.

It may be argued that – by working with and building on existing knowledge generated by other researchers – this thesis might lack a certain ground-breaking innovation potential. This argument is valid insofar as there are no previously unheard-of or thoroughly surprising results to be expected, however the primary goal of any research should be to yield insights that are of practical relevance and applicability to managers and other researchers alike. The literature on PLB does not lack innovative approaches to developing possible new theories. What the literature does lack is clarity and an

overview of which findings are still merely unapproved hypotheses, and which can be considered generally valid and proven.

## 1.6 Scope and limitations

As mentioned above, there are three major categories of factors that have an influence on PLB attitude formation: consumers' demographics, cultural determinants, and psychographics. For the sake of focus, this thesis will only look at determinants from a psychographic perspective. This limitation is based on three major considerations: Firstly, operationalizing several components of each of the three categories would result in a confusingly extensive list of research hypotheses that would go beyond the usual scope of a master's thesis. Secondly, the three categories are not always clearly distinguishable and intersect in many aspects. Therefore their primary difference does not lie in the disparate nature of the criteria themselves, but instead in the perspective from which they seek to explain consumers' attitudes towards PLB. And thirdly, as mentioned earlier, psychographics alone are assumed to directly influence PLB attitude, since consumers' demographic characteristics only indirectly play a role through their effects on psychographics (Ailawadi et al., 2001, p. 73).

The focus of this thesis lies exclusively on the consumer side of PLB management and is therefore naturally limited in its explanatory power of the topic as a whole. Many authors have concluded that, apart from consumer-level factors, the product category itself is of decisive importance in determining whether or not a store brand will be successful (Batra, & Sinha, 2000, p. 187; Hoch, & Banerji, 1993, p. 65; Narasimhan, & Wilcox, 1998, p. 573). Such market-structure determinants shall however not be included in the scope of this paper. In the last decade, the market-structure approach has received great attention from researchers, partly at the expense of further investigations into the consumer side of PLB branding. None of both is alone sufficient in explaining the topic to full extent. However, both perspectives together can render a relatively holistic picture of the determinants of private label success. Concludingly, this thesis appeals to other researchers to use the results generated here and to combine them with those obtained from market-structure research in order to complete the picture. For the

sake of focus and clarity, this can unfortunately not be done within the scope of this thesis.

## 1.7 Thesis outline

Having provided an overview of the topic, goals, and limitations of this thesis, chapter 2 will concern itself with analyzing available literature on previous attitude research conducted on private label brands. The chapter will define central terms and introduce applicable theories before giving a critical assessment on the number, nature, and development of PLB research so far. It will then outline the reasons for selecting psychographic over demographic antecedents and close by introducing the psychographic variables to be used in the empirical part in greater detail and depth.

Chapter 3 will then present the methodological approach this thesis takes to answer the research questions. It will start by presenting the conceptual framework along with a more detailed overview of the hypothesized relationships between the variables used. Multiple regression as the method of choice will be explained in brief before providing details on the sampling procedure and design of the questionnaire. Lastly, a description of the procedure and results of the pre-test will close the chapter together with some general remarks on data validity and reliability.

Further, chapter 4 introduces the results of the data analysis, beginning with a general description of the respondent profile, followed by the most important output and key figures of the multiple regression analysis. The chapter will also describe measures to eliminate bias resulting from methodological deficiencies and take account of the possible influence of moderator variables on the outcome of the analysis.

And lastly, chapter 5 includes the answers to the research questions based on the interpretation and discussion of the findings generated in chapter 4, together with an elaborate discussion of the managerial implications that arise from the findings, both for manufacturers as well as retailers alike. This chapter also outlines some of the major limitations and shortcomings of this thesis and suggests areas for future research. A general conclusion will terminate this last chapter and the thesis.

# 2 Literature analysis

To answer the research questions outlined in chapter 1, chapter 2 is concerned with identifying psychographic antecedents with a potential influence on consumers' attitudes towards private label brands. After introducing the definitions of central terms and underlying theories, a critical assessment of available literature is followed by a discussion about the shortcomings of demographics in predicting PLB attitude as well as the reasons for selecting psychographics as the antecedents of choice. Those psychographic variables which are to be used in the empirical part of this paper will lastly be introduced in greater detail together with the formulation of the research hypotheses.

## 2.1 Theoretical preamble

To frame all following considerations in a well-defined context, it is necessary to first provide definitions for the most important concepts used in this paper. The underlying theories on which the logic of this thesis shall be based are complemented by a clarification of the fundamental assumptions, without which the design of the research would become invalid. Lastly, it is argued that attitudes – which form the central concept of this research – function as predictors of actual buying behaviour, thereby justifying their relevance and practical importance.

### *2.1.1 Definition of terms*

#### *2.1.1.1 Private label brand*

In accordance with the definition of the American Marketing Association (AMA, 2014), a brand identifies the goods and services of a manufacturer and differentiates them from those of the competition. Private label brands, in turn, are defined as *"products that encompass all merchandise sold under a retailer's brand"* (Private Label Manufacturer's Association, 2013, para. 3). Accordingly, they are intended to differen-

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tiate the offering of a retailer from that of competing retailers (Ailawadi, & Keller, 2004, p. 332), thereby creating a unique selling proposition (USP). Following Beneke (2010, p. 205-206), there exist three basic types of private label brands: representative brands that openly communicate their belonging to the retailer that owns them; exclusive PLBs that do not immediately disclose their ownership; and lastly there are confined labels, which by definition are manufacturer-owned brands, but sold exclusively through one retailer chain. This last category shall however not be considered relevant in the scope of this thesis. Hence, the definition used for the purpose of this thesis describes private label brands as *brands possessed, managed, and offered for sale by retailers as opposed to manufacturers*.

#### *2.1.1.2 Attitude*

The literature presents numerous definitions of attitude in general, one of the most prominent being that of Fishbein and Ajzen (1975, p. 6, as cited in Perloff, 2010, p. 43), according to which attitude can be defined as ..."a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object." While this definition broadly refers to attitude in general, and not attitude towards a certain, more narrowly defined concept, the definition of Burton et al. (1998, p. 298) shall be valid for this thesis: They define attitude towards PLB as *"a predisposition to respond in a favourable or unfavourable manner due to product evaluations, purchase evaluations, and/or self-evaluations associated with private label grocery products"*. This definition thereby reflects the logic of the research questions postulated earlier, since it integrates both a product-centric perspective (price/quality perceptions, risk perceptions, extrinsic cue reliance) as well as a self-centric perspective (smart-shopper self perception) on consumers' attitudes towards PLB.

On the basis of the definition of PLB attitude presented above, PLB-prone consumers are those consumers who consistently respond in a favourable manner to private label brands. A favourable response in this context shall be considered any positive evaluation (cognitive and emotional response) and corresponding positive behaviour (actual purchase) of private label brands.

#### *2.1.1.3 Antecedents of PLB attitude*

Antecedents in a general sense are *occurrences or causes that logically or timely preceed a given outcome*. For instance, violent childhood experiences are assumed to determine and ultimately lead to a higher tendency to use violence as a means of conflict solving also in adulthood. Similarly, high sugar consumption has been proven to be a reliable antecedent of Diabetes. It thereby assumes a relationship between the preceeding event and the resulting outcome, and in the ideal case this relationship would be causal. Causality, however, is very difficult to prove unless it can be claimed with certainty that no other factor could possibly have caused the observed outcome. This is a very complex task when it comes to human attitudes and behaviour.

In the course of this chapter, a number of potential antecedents of PLB attitude will be outlined based on the findings from available research. Arguably, many of them do preceed PLB attitude, without causing it however. Other will be considered more promising in explaining the causes that lead consumers to hold favourable attitudes towards PLB. These selected antecedents will be described in greater detail at the end of this chapter.

### *2.1.2 Underlying theories*

To answer the research questions, research hypotheses will be developed on the basis of four relevant theories suggested by the literature: Cue Utilization Theory, Theory of Planned Behaviour, Self-Perception Theory, and Expected Utility Theory.

Cue Utilization Theory describes how consumers use both direct (e.g. texture or taste) and indirect product cues (e.g. packaging or price) to draw inferences on product quality and make a purchase decision (Olson, 1972). It suggests that consumers use a combination of these cues to make estimate judgments on the likely performance of a product in order to simplify their decision-making processes. The concepts of extrinsic and intrinsic cue reliance and their resulting hypotheses will be derived from this underlying theory later in this chapter.

Secondly, the Theory of Planned Behaviour proposes an individual's desire for attitude-behaviour consistency (Ajzen, 1991) and therefore supports the assumption that a positive attitude towards PLB likely results in corresponding purchasing behaviour. It

states that, apart from attitude, a person's actions are also based on intentions and subjective norms of the environment as well as the degree to which this behaviour is controlled. This theory does not directly link to any of the specific antecedents this thesis investigates, but it rather supports the notion that attitude, among other factors, is a potent indicator of actual purchase behaviour, which justifies its relevance for managers and researchers alike.

Self-Perception Theory, initially introduced by psychologist Daryl Bem in 1967 as an alternative to cognitive dissonance theory, suggests that consumers observe their own shopping behaviour and consequently draw conclusions about their own attitudes that caused this behaviour. It is in some way the counterpart to the Theory of Planned Behaviour by suggesting that not only does attitude cause behaviour, but that vice versa behaviour can also explain attitude. Bem (1972, as cited in Allen, Schewe, & Wijk, 1980, p. 498) posits that people retrospectively interpret their own behaviour and derive conclusions about the attitudes that must underlie this behaviour in an attempt to make sense of themselves. This theory might become relevant in the discussion section of this paper in terms of an advice for retailers how to use and take advantage of its principles.

Lastly, Expected Utility Theory (Markus and Kunda, 1986) purports that consumers' self-concept is in part dependent on how their peers evaluate their consumption choices. This theory has originally been applied in a production and manufacturing context, but can also be applied broadly over numerous other research areas. In the social sciences, it gives answers to a person's decision-making process based on the expected utility or value of a choice and the particular person's overall risk averseness. This theory provides support for the hypotheses to be formulated on three different kinds of perceived risk (social risk, financial risk, and performance risk) and also has implications on consumers' evaluations of price and quality in grocery products.

More details on any of these theories will be discussed in the respective chapters of the psychographic antecedents further below. They shall be applied to analyze and evaluate current literature on the topic and ultimately develop hypotheses to answer the research questions outlined in chapter 1.

### *2.1.3 Fundamental assumptions*

The entire logic of this thesis is based on two important and interconnected assumption, without which there would be no reason to investigate the research question:

The first assumption or precondition is that consumers are actually able to distinguish a private label brand from a manufacturer brand. Various sources suggest that consumers are often not able to differentiate between both brand types, even in countries where PLB market shares are comparatively high. For instance, according to an article by Gabersek published in Lebensmittel Zeitung (28th April 2006, p. 58), 40% of consumers are not able to name any private label brand from memory, partly because they are not familiar with the term itself. This difficulty will deserve greater attention in the design of the survey questionnaire for the empirical part of this thesis. Aim will be to take care that consumers have a basic understanding of what a private label brand is before the questions are presented to them, making sure that this first precondition is fulfilled. This is important because, where no differences are perceived, there cannot be any differentiated attitude between PLB and NB.

Given that assumption number one is valid and consumers are able to tell both brand types apart, the second assumption is that there is actually still a difference in how consumers perceive the quality level of private label brands as opposed to national brands. In other words, they must not only be able to identify private label brands as such, but they must also find distinguishing traits that justify to view private label brands differently than national brands. Otherwise, it would at best be possible to assess the influence of various antecedents on consumers' attitudes towards brands as a whole, but not towards private label brands in particular. There have been several studies on whether and, if yes, to what extent shoppers perceive store brands and national brands differently. According to Omar (1996, p. 65), private label brands and national brands are perceived differently by consumers above all in terms of quality, but also in product packaging, consistency over time, and brand image. Bellizzi, Harry, John, and Warren (1981a, as cited in Pandya, & Joshi, 2011, p. 23) investigated consumers' perceptual differences between PLB and NB and found more positive ratings for NB for example in terms of quality, aroma, texture, freshness, packaging, and others. These and other studies have collectively come to the conclusion that consumers have very distinctive

perceptions of and attitudes towards PLB and national brands (Bellizzi, Krueckeberg, Hamilton, & Martin, 1981, p. 63; de Chernatony, 1989, p. 296; Cunningham, Hardy, & Imperia, 1982, p. 30). In case that the existence of differences in consumers' perceptions can be assumed as given, it would be interesting to determine whether this perceptual gap is unchanging, narrowing, or even expanding.

To account for possible consequences in case one or both of these assumptions are violated, they will be included into the research design in the form of control variables.

### *2.1.4 Attitudes as predictors of intention*

Why are consumers' attitudes actually relevant? And in what sense do positive attitudes contribute to the business success of private label brands? Consumers attitudes and preferences towards a brand together ultimately lead to brand loyalty (Goldsmith, R. E., Flynn, Goldsmith, E., & Stacey, 2010, p. 339). Hence, consumers are more likely to come back for a certain product over and over, instead of companies investing large sums of marketing investments to attract a customer once only to lose him or her to other brands again. In essence, an economic benefit for PLB sellers exists if, and only if, positive attitudes lead to corresponding behaviour, i.e. the actual purchase of the product. Goldsmith and Flynn, (2006, as cited in Goldsmith et al., 2010, p. 340) found that among those consumers who frequently buy private label products, attitudes towards these products was more favourable than towards manufacturer brands, and similarly vice versa, manufacturer brand buyers evaluated manufacturer brands more highly than PLB. The explanatory power of these findings are however limited, since they do not fully describe the causal relationship between attitude and purchase behaviour. In simple terms, they reveal that most people who buy PLB like them, but in reverse it does not necessarily mean that every consumer who likes PLB also buys them.

Grewal, Krishnan, Baker, and Borin (1998, p. 334) close this gap by testing a model which assumes a direct and positive relationship between a consumers' perceived value of a brand and his / her intention to actually purchase it. If a consumer hence perceives a store brand to be of high value in terms of constituting a good deal, his readiness to act is increased. By operationalizing factors that determine PLB success, Zielke and Dobbelstein (2007, as cited in Horvat, 2011, p. 192) have identified two of them to be

of particular relevance. According to the authors, consumers' attitude towards PLB as well as their actual purchase intentions are the two criteria with the highest capacity to predict PLB success.

In his work on the connection between a person's beliefs and behaviour, Ajzen (1991) postulates a theoretical model through which he explains why positive attitudes are likely to lead to corresponding behaviour. He largely contributed to the psychological Theory of Planned Behaviour through his theory of reasoned action, which suggests that individuals strive for attitude-behaviour consistency and hence tend to act according to their attitudes.

The arguments presented here should give sufficient reasoning and justification for selecting attitude as the concept of interest in this paper.

## 2.2 A critical assessment of the history of PLB research

After describing the process of identifying and selecting relevant PLB literature, this thesis will be placed in the context of consumer-focused PLB research and past and current academic approaches will be analyzed for observable trends and major theoretical or methodological shortcomings.

### *2.2.1 Identifying relevant literature*

In order to identify all academic literature with a possible relevance to the topic at hand, the EBSCO Business Source Premier Database has been searched using the keywords *private label brand, store brand, private label attitude, and store brand attitude*. No restrictions were made with regard to publication date or source type. When search results were available as full text, their abstracts were pre-scanned for potential applicability and bearing to the research questions. Articles have been included as relevant if they contained research findings that contribute to identifying any kind of antecedents to PLB attitudes, regardless of whether they were named as such. Critical and opposing views have thereby been equally taken into account. Further, the reference lists of two extensive literature reviews on PLB attitude have been searched on EBSCO Business Source Premier as well, in order to also integrate and pay attention to literature that is important to the research question, but may not include either one of

the search terms mentioned above in their headlines. Often, articles appeared of interest based on their headlines, but were unfortunately not available as full texts. These sources are hence not counted into the pool of useful research articles.

As a result of this approach, the EBSCO database yielded 156 full-text search results of articles with a topic related to PLB. In selecting those with a direct contribution to private label attitude, 57 scientific articles have been identified to be particularly relevant to the topic and analyzed for meaningful insights about the influence of psychographics on consumers' private label attitudes. The majority of articles with a relevance to this topic has been published between 1965 and 2013. Intentionally, there were no limits set with regard to the publication date, since the vast majority of attitude-related PLB research has been undertaken in the 1980s through 1990s. Excluding these articles on grounds of datedness would have eliminated more than half of the literature that has contributed to this thesis. The most promising findings of previous research will be introduced and evaluated in the following sections.

### *2.2.2 The consumer-focused perspective*

Generally, there are five different perspectives from which private label brands have so far been looked at by researchers: the consumer focused perspective, the retailer focused perspective, the market structure-focused perspective, the manufacturer-focused perspective, and the joint retailer-manufacturer-focused perspective (Hyman et al., p. 369). The thesis at hand belongs to the consumer-focused perspective, which for lack of clear and unambiguous results seems to have lost momentum in past years. Instead, the market structure-focused perspective has received steadily increasing attention from researchers since the beginning of the millennium. One reason for this development is the common notion that PLB success factors are rather category specific than consumer specific, which has led many authors to investigate differences between product categories instead of differences between consumers.

However, it would be incorrect to assume that a more consumer-centric perspective would be any less promising than any other perspective. What is more, the enormous complexity of consumers' thoughts and behaviours might indeed be difficult to investigate, but at the same time promise insights of immediate applicability and enormous

relevance to the industry as a whole, not only to particular segments of a market. So despite the fact that researchers' attention has partially shifted away from the consumer and moved more towards the structural peculiarities of the market, it is not a simple task to determine one single dominant perspective at PLB success factors. A multitude of approaches is more often than not extremely helpful in obtaining a holistic, integrative picture of a topic. Therefore, this thesis aims to contribute to and build on existing knowledge about consumers' attitudes towards PLB, and despite doing so from a consumer-centric perspective only, hopefully supports the identification of common denominators between this and other perspectives that research has taken up until now.

One of the few denominators that most of the articles on the topic have in common is the fact that the majority of research investigates into grocery product categories (Mann, Reeve, & Creed, 2002; Shannon, & Mandhachitara, 2005), albeit other categories such as apparel are increasingly included (Krishna, 2011; Liljander, Polsa, & van Riel, 2009). However, to account for PLBs' important role in that sector and to make results more comparable with previous academic research, grocery retail will form the basis of this thesis as well.

### *2.2.3 Past and current academic approaches*

Consumer-focused academic research, to which this thesis also belongs, has assessed the topic from a multitude of perspectives, ranging from merely demographic variables (Coe, 1971; Frank, & Boyd, 1965) to psychographics (Ailawadi et al., 2001; Batra, & Sinha, 2000) as well as cultural factors affecting attitudes towards PLB (Erdem et al., 2006), or combinations of these three types. While demographics relate to a population's socio-economic structure, e.g. in terms of age, gender or income, psychographics are on the other hand concerned with "classifying population groups according to psychological variables (as attitudes, values, or fears)" (Merriam-Webster, 2013, para. 1).Cultural factors, lastly, often refer to the cultural dimensions of Geert Hofsteede, such as time orientation or risk averseness.

In contrast to demographics, by which authors have not yet achieved to differentiate private label buyers from national brand buyers, psychographics have been found to distinguish both consumer types from each other (Ailawadi et al., 2001, p. 71), and

may therefore be considered stronger antecedents of private label proneness than demographic characteristics. Nonetheless, most researchers do not directly classify the factors they investigate into either one of these categories (Goldsmith et al., 2012, Gooner et al., 2012, Kara et al., 2009).This is in part because many authors focus on a small set of factors that make further sub-divisions obsolete, but in part also because each factor can theoretically be attributed to either one of the three categories, mainly depending on the angle from which is it looked at. For example, the influence of brand name on consumption choice can be explained in the following three different ways: as a means to display one's position in society in comparison to others (power distance according to Hofsteede = cultural approach); in terms of more expensive consumption choices as a result of disposable household income (=demographic approach); or as a means of expressing one's identity, personality or belonging to a peer group (=psychographic approach). Hence, even though such a distinction is usually not explicitly stated in the work of other authors, it is considered helpful and meaningful in homogenizing different approaches and shall therefore be applied in this thesis.

### *2.2.4 Shortcomings of previous research*

When assessing research that has been published so far on a given topic, it appears useful to also integrate the opinions of other researchers on the work of their peers. Since most scientific articles also include a literature discussion of some sort, the authors usually include a few evaluative judgments on the quality, quantity, shortcomings and achievements of previously conducted research. Ideally, they will point the interested reader to a rough direction of a dominant opinion. Less ideally, as is the case with PLB-related research, evaluations of available literature vary as widely as the approaches of this literature themselves. At best, a number of researchers agree on a lack of agreement. For instance, Kara et al. (2009, p. 129) observe that "findings of these studies were not conclusive and at best presented a weak relationship among the variables investigated".

In order to identify possible reasons for this lack of agreement and contradictory research findings, it is necessary to first clarify a number of relevant questions: Is previous research based on assumptions that are outdated or need revising? Has there been

any bias towards certain consumer groups or nationalities that explain these stark differences? If such a bias exists, has it shifted? When, and why? Has there been any dominant sampling procedure or analysis tool, or any dominant product category that has been investigated more often than others? What influence do these potential biases have on the findings that these studies generated? And most importantly, how can this thesis contribute to eliminating such biases?

Most of the information required to answer these questions is not easily obtainable. However, based on an extensive literature review, Hyman et al. (2010, pp. 371-374) have collected data on the sampling method, sample size, investigated product categories, place and year of data collection as well the statistical methodology used in research published between 1990 and 2008, so that a comparison of different works based on these parameters yields the following interesting results: Even though the statistical tools used are sufficiently diverse and the sample size of most studies is sufficiently large to exclude relevant biases on these grounds, there appear to be tendencies in the sampling procedure and nationality of respondents that might possibly cause the lack of consent between various studies' findings. Firstly, an overly large proportion of research has applied non-random sampling techniques such as mall-intercept surveys or similar types of convenience sampling. And secondly, there is a strong overweight of US-based studies, which reduces the generalizability of results onto consumers of other nationalities. A vast majority of findings is therefore based on the particularities of US American consumer groups with their special consumption habits, value systems, and industry maturity.

What the literature is therefore lacking are generalizable insights gained from random samples of more diverse consumer groups. Unfortunately, this thesis will not be able to address the first-mentioned problem due to a lack of financial and time resources which a completely random sampling procedure would require. But in terms of the latter, it can be assumed that responses from consumers in the DACH region, more specifically Germany and Austria, will provide a counterbalance to this otherwise US-dominated research field.

## 2.3 Demographics and their limitations

As mentioned previously, early research on PLB attitude has mainly attempted to identify demographic factors of influence on PLB attitude and preference (Burger, & Schott, 1972; Coe, 1971; Frank, & Boyd, 1965; Granzin, 1981). Most of these studies tried to reveal differences in consumer types (PLB consumers versus national brand consumers) by linking them to overarching demographic characteristics that differentiate one consumer type from the other. That way, they hoped to find a basis for market segmentation that retailers could use to effectively address both types with targeted communications and product offerings. However, many of the findings generated on demographics have so far been either inclusive at best, or contradicting at worst (Goldsmith et al., 2010, p. 340; Shannon, & Mandhachitara, 2005, p. 462; Wyatt, Gelb, Geiger-Oneto, 2008, p. 62). Or in short, demographics do not allow for empirical generalizations about PLB attitude or shopping behaviour. Proof for this statement shall be delivered in the following paragraphs. It shall be explained what precise limitations demographics have in explaining PLB attitude and why they have not been selected as the basis for this thesis.

Those demographic variables that have been most frequently studied by researchers in the past decade can be summarized as income (Batra, & Sinha, 2000), education (Ailawadi, et al., 2001), household size (Richardson, Jain, & Dick, 1996), age (Kara et al., 2009), and gender (Goldsmith et al., 2010). The table below summarizes major findings of PLB researchers, demonstrating the often contradicting insights they generated, while some of the most widely researched demographic (presumed) antecedents will be dealt with in greater detail further below.

Table 1 Research findings on the effect of demographics on PLB proneness

| Sources | Demographic antecedents |
|---|---|
| Richardson, Jain, & Dick (1996) | Household size (+)<br>Education (#) |
| Frank, Massy, & Boyd (1967) | Lower income (+) |

| | |
|---|---|
| Ailawadi, Neslin, & Gedenk (2001) | Education (-) |
| Batra, & Sinha (2000) | Lower income (+) |
| Kara, Rojas-Méndez, Kucukemiroglu, & Harcar (2009) | Age (+)<br>Gender (+)<br>Lower income (+)<br>Frequency of shopping (+)<br>Higher total grocery spending (+) |
| Goldsmith, R. E., Flynn, Goldsmith, E., & Stacey (2010) | Gender (#)<br>Household size (#)<br>Income (#) |
| Frank, & Boyd (1965); Burger, & Schott (1972) | No demographic differences whatsoever |
| Bell, Latin (1998) | Household size (+) |
| Coe (1971) | Lower income (-) |

Source 1 author's table

### *2.3.1 Income*

As one of the most classic demographic antecedents with a presumed influence on PLB attitude, lower household income has traditionally been associated with a higher private label proneness due to restrained economic conditions (Frank and Boyd, 1965, p. 32). It is assumed that families on a smaller budget would stretch their income by purchasing private labels instead of national brands. From a macro-economic perspective, this assumption seems to hold true considering that PLB shares tend to grow particularly during periods of economic recession when people's personal spending capacity is limited, and decrease during times of economic growth (Quelch, & Harding, 1996, p. 99), however the then following decrease is much smaller than the initial increase (Lamey et al., 2007, p. 1). In other words, once economic conditions improve again, people do switch back to national brands to the same degree they switched to private labels in the first place. This suggests that spending capacity alone is not able to explain differences in PLB proneness.

Instead, the opposite appears to be the case, as has been postulated by Coe (1971, pp. 62-63). According to the author, private label proneness has been found to be higher among higher income groups, whereas households on a smaller income tend to prefer national brands. Put differently, household income appears to be inversely related to PLB proneness (ibid, p. 72). Even though the author highlights that none of these assumptions has until then been supported by empirical research, the explanation she posits for this phenomenon is based on the logic that higher-income groups make more reasonable and confident consumption choices due to their advanced educational level, whereas lower-income groups attempt to secure and display status in the society by purchasing brands with a name and reputation. For them, it is a way of reducing the social risk tied to making a wrong consumption choice, as will be referred to again in later chapters. On the other hand, Batra and Sinha (2000, p. 187) find the opposite to be the case, with higher PLB proneness among lower income groups, and Frank and Boyd (1965, p. 27) in turn did not find any correlation between income and PLB proneness among 44 different product categories investigated.

### *2.3.2 Education*

With regards to education, Richardson et al. (1996, p. 175) find no statistically relevant effect of a higher or lower education on consumers' private label proneness. Ailawadi et al. (2001, p. 85), however, find that higher education is inversely related to PLB shopping, since it is related to quality consciousness and therefore favours national brands over private labels. It is not devious to assume that education and household income, as described above, are to some extent interrelated, so that whatever effect income supposedly has on consumers' attitudes towards PLB, it is likely that education will display similar effects. On the other hand, there is a possibility that higher educated consumers might challenge the notion that a well-known brand name is always synonymous to quality, so that he or she might be reluctant to over-simplify any correlation between brand name and quality.

### *2.3.3 Gender*

In terms of gender, the Colonial study of Progressive Grocer, which has been published in 1963 (as cited in Frank, & Boyd, 1965, p. 29), has identified men to be more prone to buying private label brands than women. The opposite has been postulated by Kara et al. (2009, p. 132) who identified women to be more likely than men to purchase store brands. In contrast, the findings regarding age differ widely for different studies (Coyle, 1978; Wall Street Journal, 1980; as cited in Granzin, 1981, p. 41). Gender is hence a very classic example for the widely contradicting findings that researchers have made so far, so that it is currently impossible to draw any valid conclusions from these results.

### *2.3.4 Household size*

One of the few demographic variables that most – though not all – researchers have agreed upon is household size. Even though they found the influence of family (or household) size to be relatively minor, Richardson et al. (1996, p. 177) see a correlation between the number of persons living in a household and the private label proneness of that household. Bell and Lattin (1998, p. 84) explain this phenomenon using the picture of "large basket shoppers" and "small basket shoppers". According to the authors, large basket shoppers shop to feed larger families and prefer Every Day Low Price (EDLP) formats over High Low Promotional Pricing (HILO). Hence, private label brands will appear more attractive to large basket shoppers than infrequent price promotions of national brands, because they are not that flexible to time their shopping trips in accordance with irregular price deals.

### *2.3.5 Lack of consistent results*

Some researchers have come to very specific demographic shopper profiles, such as for example Granzin (1981). Based on an analysis of previous literature on the topic he summarizes the typical generics consumer as "a younger, better educated, married woman, having a lower income, living in a house, and doing her shopping before sup-

per. She should be characterized by a larger household, a preschool child in the home, a higher grocery bill, and access to a car for shopping" (ibid, p. 41).3

But despite all their serious attempts to identify demographic characteristics that distinguish PLB-prone consumer segments from manufacturer-prone consumer segments, most research did not succeed in yielding statistically significant and consistent results that would allow for specific – and mutually exclusive – consumer profiles (Frank, & Boyd, 1965, p. 29). This is partly caused by the observed variances over different product categories (Goldsmith et al., 2010, p. 339), meaning that the demographic profile of yogurt PLB shoppers can differ from that of a bottled water PLB shopper. Also Burger and Schott (1972, p. 222) have come to the conclusion that demographics are very weak predictors of consumers' attitudes towards private labels, and their conclusion has not been refuted ever since. Ailawadi et al. (2001, p. 73) support the view that demographics do not seem to display a very strong correlation with PLB proneness, however they suggest that instead of influencing private label proneness directly, demographics rather indirectly affect consumers through their influence on psychographics. Although the extent to which this indirect funnelling takes place is doubted by some authors (Liu, & Wang, 2008, p. 283), Ailawadi et al. thereby confirm the findings of Urbany, Dickson, and Kalapurakal (1996, p. 94) who stated that demographic characteristics rather predict psychographics instead of PLB proneness. Hence, this thesis is based on the assumption that, in order to adequately describe the factors that directly influence private label attitude, psychographics are the nearest step in the causal chain of attitude formation.

In summary, demographics do play an important role in the attitude formation process, but viewed alone they are insufficient in explaining what differentiates store brand buyers from national brand buyers. It is their indirect working through – and the combination with – psychographics that renders a more holistic picture of the issue. Therefore, their potential for answering the research question is limited. Instead, psychographics shall be considered more meaningful – and above all direct – influencing factors of PLB attitude.

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[3] Please note: Even though private label brands and generics do not attract identical consumer groups (Bellizzi et al., 1981b, p. 67), generics are a sub-category of private labels at the lower end of the price/quality spectrum as opposed to high-quality, more expensive premium PLBs (Ailawadi, & Keller, 2004, p. 21).

## 2.4 The predictive power of psychographics

In how far are the antecedents used as independent variables in this paper psychographic? Remembering the definition of psychographics as cited earlier, this type of antecedent is concerned with "classifying population groups according to psychological variables (as attitudes, values, or fears)" (Merriam-Webster, 2013, para. 1). In the context of consumer decision-making, psychographics are those characteristics that differentiate how consumers evaluate products and what criteria they look at when forming an opinion or making a decision. All psychographics used in this research – those based on price and value perceptions, on the perceived significance of extrinsic or intrinsic product cues, on self-perception, and on the perception of different risk factors – depend on each individual person's psychological profile and decision-making style.

The argument that psychographics have a more direct and immediate influence on consumers attitudes towards private labels can be explained by outlining the causal relationships between demographics, psychographics and PLB attitude using a concrete example. Household income is a frequently cited demographic variable with a supposed influence on consumers' private label proneness (Batra, & Sinha, 2000, p. 187). Considering the fact that income determines whether and to what extent a person feels financially constrained, this feeling of financial restriction will then lead to a higher price consciousness, ultimately resulting in a more positive attitude towards store brands. In other words, the demographic variable lower income hereby causes the consumer's psychographic variable price consciousness, which supposedly leads to PLB proneness.

Burger and Schott (1972, p. 219) argue that psychographics are just as limited as demographics in their potential to explain and predict consumers' attitudes towards private label brands. Instead, they suggest that actual purchase behaviour is a more appropriate predictor of a person's membership of any given consumer segment. Their contention is true in the sense that behaviour is certainly the most precise predictor of behaviour, however the managerial usefulness and applicability of this statement may be doubted, since it tries to explain a phenomenon by the phenomenon itself. Rather, practical relevance emerges when the causal roots of that behaviour can be identified. Sure-

ly, neither demographics nor psychographics are by themselves able to fully predict a consumer's attitudes or purchase intentions. However, since Burger and Schott came to this conclusion in 1972, researchers have deepened and refined their knowledge and insights into the field, so that the predictive power of psychographics can certainly be expected to have risen substantially in the meantime. As a more recent example, Liu and Wang (2008, p. 293) also come to the conclusions that psychographics are indeed – in combination with store image – important drivers of consumers' attitudes.

The following table displays some of the most relevant psychographic characteristics that previous research has investigated and their presumed influence on consumers' attitudes towards private label brands. For the sake of brevity, there is however no claim to completeness.

Table 2 Research findings on the effect of psychographics on PLB proneness

| **Sources** | **Psychographic antecedents** |
|---|---|
| Ailawadi, Neslin, & Gedenk (2001) | Price consciousness (+)<br>Quality consciousness (-)<br>Store loyalty (+) |
| Batra & Sinha (2000) | Perceived risk (=perceived quality variance) (-) |
| Burger & Schott (1972) | Familiarity with PLB (#)<br>Advertising attitude (#)<br>Careful shopping (#)<br>Price consciousness (+) |
| Burton, Lichtenstein, Netemeyer & Garretson (1998) | Value consciousness (+)<br>Deal proneness (+)<br>Brand loyalty (-)<br>Price-quality perceptions (-)<br>Smart-shopper self perception (+)<br>Impulsiveness (-) |
| Wolinsky (1987) | Price-quality schema (-) |
| Dunn, Murphy, & Skelly (1986) | Perceived financial risk (+)<br>Perceived performance risk (-)<br>Perceived social risk (#) |

| | |
|---|---|
| Goldsmith, R. E., Flynn, Goldsmith, E., & Stacey (2010) | Smart-shopper self perception (+) |
| Erdem, Zhao, & Valenzuela (2004) | Perceived risk (-)<br>Price consciousness (+)<br>Value consciousness (-) |
| Kara, Rojas-Méndez, Kucukemiroglu, & Harcar (2009) | Previous experience (+)<br>Price consciousness (+)<br>Value consciousness (+) |
| Liu, & Wang (2008) | Retention attitude towards money(+)<br>Distrust attitude towards money (+) |
| Omar (1996) | Price consciousness (+)<br>Perceived value for money (+)<br>Adventure search (+) |
| Richardson, Dick, & Jain (1994) | Extrinsic cue reliance (-) |
| Richardson, Jain, & Dick (1996) | Familiarity with store brands (+)<br>Extrinsic cue reliance (-)<br>Perceived quality variation (-) |

Source 2 author's table

It would go beyond any reasonable scope to describe in detail any psychographic antecedent that has ever been investigated by previous research. Rather many of them, though labelled differently, describe the same phenomenon, for example the construct perceived quality variation suggested by Richardson et al. (1996) and the construct perceived performance risk (Dunn et al., 1986), which largely describe the same phenomenon. When disregarding all differences on the mere basis of phrasing, there is a certain number of psychographics that have repeatedly been investigated by various researchers, often with similar results, sometimes with contradicting ones. It is these selected psychographics that appear to be most promising in explaining consumers' PLB attitudes and which hence will be selected as the constructs of choice for the empirical part of this thesis. They are: consumers' price/value consciousness, which are closely interlinked but not identical; extrinsic as opposed to intrinsic cue reliance; a construct called smart-shopper self perception; and lastly consumers' risk perceptions

with regards to groceries in general and PLB in particular. All of these constructs will be dealt with in greater detail in the following sections below.

### *2.4.1 Price and value consciousness*

Price and quality belong to the most frequently discussed constructs in PLB literature and therefore deserve considerable attention in this paper. Price consciousness and value consciousness – though not identical – are often used interchangeably to describe a consumer's perception of and attitude towards price and product quality. According to Lichtenstein et al. (1993, p. 235) price consciousness can be defined as "the degree to which the consumer focuses exclusively on paying a low price". They define value consciousness on the other hand as "a reflecting concern for price relative to quality received" (ibid, p. 235). In a more subtle distinction between both terms, price consciousness can be described as a consumer's wish to pay the lowest price for a certain value or quality (Burton et al., 1998, p. 294), hence to minimize the input necessary to achieve a targeted output. On the other hand, value consciousness refers to consumers' desire to obtain the highest value (or quality) possible for a given price (ibid, p. 294), i.e. to maximize output from a fixed input. Phrased differently, price consciousness is looking at money for value, whereas value consciousness is looking at value for money.

When linking price consciousness to the Money Attitudes Scale developed by Yamauchi and Templer (1982), Roberts and Jones (2001, as cited in Liu, & Wang, 2008, p. 286) draw connections between price consciousness and the distrust dimension, arguing that consumers with high distrust scores are less confident in dealing with money and more concerned with making sensible buying decisions. As a result, consumers with a distrust attitude towards money are more likely to favor private label brands over national brands. The same applies to retention-time consumers, which Yamauchi and Templer (1982, p. 524) describe as carefully planning for their future, organizing their spending according to budgets, and saving money now to be prepared for their retirement. Private label brands meet those consumers' needs for savings, leading to the assumption that retention-time consumers hold more positive attitudes towards PLB than towards national brands.

Perceived value on the other hand is defined by Sweeney and Soutar (2001, p. 211) as a function of four components: emotional value, social value, financial value, and functional value. While it is safe to assume that nearly all consumers seek for value in their purchases, they might assign different weightings to the components that form the value perceptions in their minds. In conjunction with Expected Utility Theory (Markus and Kunda, 1986), perceived value can be determined to be a major antecedent of PLB attitude. Expected Utility Theory suggests that consumers will try to obtain maximum utility out of their consumption choices and therefore select those products that promise better utility than the available alternatives (Walsh, & Mitchell, 2001, p. 8). Therefore, the logic goes that those consumers who regularly purchase private label brands do so because they perceived PLB to be the better value alternatives.

***H1:*** *The higher a consumer's value consciousness, the more positive is his / her attitude towards private label brands.*

The term quality is difficult to define in a grocery product context. From a process-oriented perspective, quality may be achieved already by merely meeting the standard requirements with as little deviations as possible. From a consumer's perspective, however, quality is much more subjective (Mann et al., 2002, p. 14). When evaluating for example the quality of a yoghurt, consumer A may perceive it as too sweet, while for consumer B it is not sweet enough. In any case, there is no objective quality benchmark as to what level of sweetness a high-quality yoghurt is supposed to have. Instead, it is only possible to assess quality in the light of the deviations in product characteristics, i.e. changing levels of sweetness from one product batch to the next. Only if perceived quality levels between two products, in this case between national brands and private label brands, are identical, does the consumer refer to price to make a decision which product to buy (ibid, p. 14).

The way in which both terms are used suggests that value and quality are synonymous. Whether this assumption holds true in practice or not, consumers often tend to view price as an approximation and indicator of product quality and therefore of the value they get from buying the product. This tendency to use price as an indication of product quality is referred to as a price-quality schema (Leavitt, 1954). In short, a price-quality schema is most adequately described as "the generalized belief across product

categories that the level of the price cue is related positively to the quality level of the product" (Burton et al., 1998, p. 236). For Wolinsky (1987, as cited in Burton et al., 1998, p. 295) whether or not consumers perceive a correlation between price and quality is a major determinant of their tendency to buy either national brands or private label brands. Jacobi and Olson (1977, p. 84) posit the assumption that higher prices lead to higher perceived product quality and finally also to a higher willingness to buy.

***H2:*** *The weaker a consumer's price / quality-associations, the more positive is his / her attitude towards private label brands.*

Kara et al. (2009) support this view by arguing that extremely low prices only evoke consumers' suspicion towards a product. This assumption is challenged by Ailawadi et al. (2001) who found shoppers of PLB to be price conscious, but not quality conscious. Further support for this view is purported by Burton et al. (1998, p. 294) who conclude that PLB shoppers' price consciousness limits their purchasing criteria to price alone, thereby ignoring alternative factors that could influence their buying decisions.

***H3:*** *The higher a consumer's price consciousness, the more positive is his / her attitude towards private label brands.*

The average price differential between private labels and manufacturer brands is reported to be as much as 30% (Ailawadi et al., 2001. P. 71). Irrespective of the common belief that this price differential reflects back on a product's quality, PLB are usually quality equivalent to national brands (Goldsmith et al., 2010, p. 339). Proof for the statement can be found in an experimental setting by Mann et al. (2002, p. 15) who asked consumers to blind-test national and private label versions of bacon, bread, and orange juice and found out that that both brand types received equally positive ratings by consumers. They conclude that sensory attributes alone as significant components of product quality are insufficient in explaining consumers' perceived quality differences between manufacturer brands and private labels, and that – given no USP can be derived from unique sensory product attributes – the intangible elements of a brand become increasingly relevant for manufacturers to justify their price premiums (ibid, p. 18).

In a more critical assessment of price / quality associations, Rao and Monroe (1989, p. 352) argue that this supposed positive relationship is – to a larger or smaller extent –

attributable to deficiencies in the methodology used. In their view, single-cue price-quality studies will naturally yield more significant effects than multi-cue studies since they do not take other situational factors into account that usually influence consumers' attitude formation process. In any case, a large proportion of these findings has been obtained several decades ago already, which might imply that their validity at present may be limited, and that in the meantime consumers' perceptions of PLB quality and thereby also their attitude towards those brands have improved since then (Kara et al., 2009, p. 128). What is more important now is the question whether a consumer's positive evaluation of product quality is in any way related to a positive attitude and ultimately a higher willingness to buy that product. From a retailer's point of view, the implication is that there seem to be natural boundaries between a low price that means a good deal and a low price that disqualifies a product from consumers' consideration set. In any case, assuming that PLB-prone consumers can be described via price consciousness alone, meaning that they rarely take other factors than price into consideration when evaluating purchase options, is most likely an insufficient explanation of consumers' complex decision-making processes. It is therefore necessary to combine these price and value-related antecedents with other antecedents so that the combination of them will be more powerful in predicting PLB attitude than any of them alone.

### *2.4.2 Extrinsic and intrinsic cue reliance*

Consumers only rarely invest a large amount of time researching information about grocery items before they go into the store to buy them. This is largely caused by the fact that groceries are low-involvement products that cost comparatively little, involve relatively little risk and are purchased on a regular basis. It is common marketing knowledge that up to 80% of products in a supermarket are purchased on impulse (Gardner, & Rook, 1988, p. 129). As a result, consumers often tend to rely on heuristics or rules of thumb when judging a product's quality (Dawar, & Parker, 1994, p. 83). As suggested by Cue Utilization Theory (Burnkrant, 1978, Kara et al., 2009), these heuristics are frequently based on extrinsic or intrinsic cues, i.e. hints that help shoppers make judgments about the quality and nature of a product. Examples of extrinsic cues are a product's brand name, price, packaging, colour, etc. Intrinsic cues, on the other hand, refer to the physical characteristics of a product that, if they were modified

or changed, would alter the product itself (Rao, & Monroe, 1989, p. 352). Examples of intrinsic cues can be the taste, texture, or specific ingredients of a product. Cue Utilization Theory (Olson, 1972) not only suggests that extrinsic or intrinsic cues are used by consumers to make quality judgments, but more importantly it states that consumers tend to use several of these cues simultaneously and almost never in isolation (Purohit, & Srivastava, 2001, p. 124), so that the effect of each cue on its own is not easy to determine.

Kwon, Lee, and Kwon (2008, as cited in Horvat, 2011, p. 194) speak of search type products as opposed to experience type products, whereby search attributes can be roughly compared to extrinsic product cues and experience attributes are equivalent to intrinsic product cues. The major difference between both types is that the first can be assessed and evaluated from information provided around the product (e.g. brand name, packaging, informative text and so on), while the latter requires actual trial or experience of the product in order to assess its quality (as is the case for example with a perfume). Based on this distinction, Horvat (2011, p. 194) concludes that PLB will likely be more successful in product categories where search type attributes dominate, because it allows the consumer to get an impression of the product without having to try it first. For example, consumers are better able to judge the performance of single-ingredient products like peppermint tea or baking soda than they are able with more complex products like pasta sauce or canned soup.

Cue reliance theory looks at consumer decision-making from an information processing perspective (Burnkrant, 1978, p. 724). Whether or not and to what extent consumers use cues to draw inferences on product quality seems to depend largely on the product's real or perceived complexity (ibid, p. 727). Nelson (1974, as cited in Kirmani, 1990, p. 169) notes that perceived advertising expense is rather used in evaluating experience-type products (such as groceries) instead of search-type products (such as vacations). If two or more cues, from which the consumer draws the same inferences, are combined with each other and presented together, they speak louder than each cue would by itself, particularly when cues are consistent with each other (Burnkrant, 1978, p. 724). For example, if an attractive packaging is combined with a higher price and a well-known brand name, all of these cues consistently communicate high quality to the consumer. If in contrast a product possesses a well-known brand

name and commands a high price, but is packaged in cheap-looking cartons, the cues are inconsistent with each other and the consumer draws divided inferences from his perceptions.

In order to categorize which of the cues mentioned above have the largest impact on consumers' quality perceptions, researchers determine each cue's so-called diagnosticity, i. e. the extent to which a given cue allows an unambiguous allocation to a specific quality tier (Purohit, & Srivastava, 2001, p. 125). Highly diagnostic cues thereby clearly indicate a product's belonging to a high-, medium-, or low-quality tier, whereas cues with poor diagnosticity are applicable to more than one quality tier, so that diagnostic cues are perceived as more reliable than nondiagnostic cues (ibid, p. 125). Such differentiation between diagnostic and nondiagnostic cues it based on the assumption that a given cue possesses the same level of diagnosticity for every consumer. It is however necessary to investigate, if the perceived diagnositicity of a cue rather depends on the psychographic profile of the consumer instead of the nature of the cue itself. This thesis hence assumes that private label-prone consumers perceive intrinsic product cues as more diagnostic than extrinsic product cues, while for national brand-prone consumers the opposite is the case. Thereby, the significance and impact of a cue is largely dependent on its specificity (Dawar, & Parker, 1994, p. 84), meaning "the extent to which a particular signal is not shared across competitive products" (ibid, p. 84). The authors give examples according to which brand name is considered highly specific, since it is not shared with competing products on the shelf, whereas particular physical features, selling price, or the reputation of the retailer that sells them is much less specific and hence has less predictive power in terms of quality in the eyes of consumers (ibid, p. 91). The hypotheses concerning cue reliance will therefore be:

***H4:*** *The more consumers rely on intrinsic product cues when evaluating a product, the more positive is his / her attitude towards private label brands.*

***H5:*** *The less consumers rely on extrinsic product cues when evaluating a product, the more positive is his / her attitude towards private label brands.*

Drawing on the literature, Purohit and Srivastava (2001, p. 123) summarize the most frequently studied cues as brand name, price, advertising, retailer reputation, and war-

ranties. Similar to many other areas of private label research, there has so far been "little consensus on the magnitude, generalizability, or statistical significance" of different product cues as indicators of product quality (Rao, & Monroe, 1989, p. 351). The following cues are considered most potentially relevant to the research question and will be included in the research as investigated extrinsic product cues:

**Price:** Price, as discussed in the previous section, represents an important extrinsic cue itself. Jin and Sternquist (2002, as cited in Beneke, 2010, p. 208) even suggest that price influences shoppers' information search to as much as 40%. Even though price is just as well an extrinsic cue as packaging or brand name, it has been considered separately from the cues described in this section. This does not necessarily mean that its impact on consumers' attitudes is so large to deserve its own sub-heading. Which cues influence consumers' decision-making and to what extent shall be determined later in the course of this thesis. However, this separation is intended to reflect the way in which price discussions have been dealt with by the literature in the past. Price has often, though not always, been investigated individually (Lichtenstein et al., 1993), whereas other cues have been researched in combination with each other (Liu, & Wang, 2008; Burnkrant, 1978). Neither of both approaches is to be considered superior to the other, since both have their reasoning and derive their logic from different focuses in the underlying literature research. For the thesis at hand, price is considered at the same level with quality, not as an antecedent of it.

**Packaging:** Packaging is one of the few extrinsic cues that almost every consumer is confronted with while in the store. Is it the primary tool for conveying product information to consumers, for one through informative text, but also through more emotional elements such as shape, colour, weight, or pictures printed on it. Packaging is often overlooked by manufacturers in its capacity as a communication tool. Surely, the primary function of packaging is to enable transport and storage of the product it contains (Mann et al., 2002, p. 14). On a more abstract level, packaging is an ideal medium to communicate brand information to consumers, for example via the shape, weight, material, colour, or design of the packaging. To the disadvantage of most PLB producers, consumers still consider the packaging of store brands very unattractive (Beneke, 2010, p. 217). According to the author, PLB packaging is often unsuccessful in communicating quality to consumers and therefore fails to use its full persuasive potential. Even

though he limits this statement to the South African context in which his findings were generated, it can be assumed that the situation in Europe is comparable with regard to packaging attractiveness. Originally, private label packaging has been very basic, often merely containing the brand label without any elaborate design elements. In line with the low price positioning of these brands, the focus has mainly been on functionality of the packaging, communicating through its simplicity the brand's inexpensiveness (McDonald, & de Chernatony, 1998, as cited in Mann et al., 2002, p. 14). Where more attention was paid to attractive packaging, very often the design of the leading brand in the category has been copied in order to cause consumers to switch from the national brand to the PLB alternative, but rarely has private label packaging been designed independently from any competitor (Burt, 2000, as cited in Mann et al., 2002, p. 14).

**Advertising:** Further above it has been argued that consumers' perceptions of product quality are often closely linked to the price of that product, meaning that high quality products usually command higher prices (Burton et al., 1998, p. 236). Woodside and Taylor (1978, as cited in Bellizzi et al., 1981b, p. 59), however, suggested a similar schema between quality and advertising expense, arguing that consumers perceive better quality levels if the product in question is heavily advertised. Kirmani (1990, p. 169) comes to similar results, indicating that the higher the (perceived) advertising expense and effort, the better consumers perceive the brand's overall quality. It thereby seems to be relatively unimportant what messages that advertising contains, rather the mere fact that money is spent on advertising this product is already a sufficiently strong cue in itself (Nelson, 1974, as cited in Burnkrant, 1978, p. 725). However, there seem to be natural limits when consumers' evaluations turn from positive to negative as soon as advertising costs exceed a certain perceived limit. Kirmani (1990, p. 169) suggests that cost and positivity of perceptions are correlated in an inverted U-shape, as long as the content of the ad itself was uninformative.

In summary, this paper investigates whether the findings of Richardson et al. (1994, p. 34) hold true, i.e. that consumers' negative attitudes towards private label brands are mainly a result of their reliance on extrinsic product cues. Vice versa this implies that those consumers who pay more attention to intrinsic cues of product quality have more positive attitudes towards private label brands. The reason for this is that – at least according to the PLMA (as cited in Richardson et al., 1996, p. 161) – private labels are at

least equal in quality terms to national brands, if not superior. Following this logic, consumers who rely more on a product's intrinsic cues are aware of this quality similarity, whereas those who evaluate extrinsic cues more strongly perceived greater quality differences.

### *2.4.3 Smart-shopper self-perception*

Most discussions of private labels stress the economic factors of quality, price and value. Discussions of buying branded products add to these factors the symbolic, emotional or hedonic benefits that brands have for consumers. But, do only branded products provide symbolic and emotional meaning to consumers? Or can also low-profile brands like private labels occupy a distinctive mental space in consumers' heads?

Smart-shopper self-perception as a construct responds to this question by suggesting that consumers can derive meaning and identify for themselves based on the brand choices they make. The term smart-shopper self-perception hereby refers to the pride and self-esteem a consumers derives from making smart purchase decisions (Schindler, 1989, as cited in Liu, & Wang, 2008, p. 288). Consumers who actively and regularly compare different options of brands with each other and hold positive evaluations of store brands may derive pride from their shopping competence as well as their sensible and thoughtful decision making, as argued by Burton et. al (1998, p. 296). The authors purport the concept of "sophisticated smart shoppers" (p. 296) that rely less on extrinsic cues such as advertising. Therefore, smart-shopper self-perceptions and reliance on intrinsic rather than extrinsic product cues are assumed to go closely together. The authors also found that smart-shopper self-perception is closely related to a consumer's reduced impulsiveness, since impulsive buying would hinder his or her need for careful planning and comparative product evaluations (p. 304). These consumers' self concepts partly depend on the reactions of peers or reference groups who may either approve of or reject their consumption choices (Markus, & Kunda, 1986, as cited in Walsh, & Mitchell, 2010, p. 16). Self-expression hence not only refers to differentiating oneself as an individual from others, but it can also mean the exact opposite, being the wish to fit in seamlessly with the majority, i.e. the general wish to conform (Ailawadi et al., 2001, p. 75).

Brands can help consumers express their self-image and display to others the person's (perceived) role in society, i.e. their social status (Goldsmith et al., 2010, p. 340). It can thereby be expected that private label brands support a different self-image from that of national brands, because their price levels and (supposedly) lower quality reduce their suitability as signals of social status and prestige. Instead, consumers may derive some sort of pride from their ability to find the best deal for a product, independent from the brand name under which it is sold. Appealing to their "intellectual independence" (Granzin, 1981, p. 54) might hence be a smart positioning strategy for retailers wishing to address this target group. Given that store brands communicate values just as national brands do, they may come to be perceived as "representatives of the identity of their buyers" (Goldsmith et al., 2010, p. 341). Just as national brands can become lifestyle elements of their consumers, same can apply for consumers of store brands (ibid, pp. 345-346).

According to Ailawadi et al. (2001, p. 75), self-expression is particularly relevant to so-called "shopping mavens" or experts who draw enjoyment from applying their extensive shopping knowledge to get the best quality for the best price. Mavens can also draw this enjoyments from buying private label brands, given they perceive them as the optimal value for money alternative. Those consumers who are only interested in "pure value" (Garretson, Fisher, & Burton, 2002, p. 97) and do not mind any of the image-related benefits that national brands entail usually prefer private label brands over national brands. Value is thereby more concerned with the actual performance of the product rather than its popularity, media coverage or social prestige. On the other hand, Garretson et al. (2002, as cited in Liu, & Wang, 2008, p. 288) argue that promotions of national brands better cater to consumers' smart-shopper self-perception than private label brands, because PLB have a continuously low pricing level and hence are more easily identifiable as a good bargain than are national brands which are only occasionally price-reduced and therefore require more effort from the consumer to identify those deals. The authors therefore conclude that the more effort the bargain involves, the more it satisfies a shopper's need for smart-shopper self-perception.

From a theoretical perspective, Self-Perception Theory (Walsh, & Mitchell, 2010, p. 7) purports the view that consumers draw conclusions from their behaviour to their personalities, so that the consumption choices that they make influence the way they think

and feel about themselves. As a result, they are more likely to act in accordance with the person they want to be. For instance, if a person thinks of himself as particularly prudent, critical, and independent in his thinking, he might prefer to purchase private label brands that appeal to his self-perception, at least if he strives for attitude-behaviour consistency. This logic also works vice versa. Not only does the attitude determine a person's behaviour, but the behaviour itself is often used to draw conclusions about oneself in an attempt to make sense of one's own actions. As a consequence, buying prestige brands can also transmit a feeling of social elevation to the consumer. This phenomenon is closely related to the Veblen effect. The Veblen effect (Veblen, 1899) explains the – sometimes irrational – behaviour of consumers that choose to pay a price premium for national brands even if the lower-priced, unbranded alternative is the exact same basic product. These consumers look for social stratification and the prestige that is associated with their product choices. This behaviour is based on the belief that the products they consume tell something about who they are. This phenomenon is not restricted to prestige brands alone. This argument provides strong support for the findings made by Wyatt et al. (2008, p. 67), who reported that ethnic minorities in the US over-proportionately seek social value in their product choices in an attempt to relieve the social insecurity they feel in their environment. This partly contradicts the assumption that lower social classes are more prone to purchase private labels, which might make sense economically, however from an emotional perspective, the desire to reach a certain status in society often overrules all other arguments.

Most importantly however, people can differ very strongly in the strength and direction of their self-schemas, which in turn may also strongly affect the strength and direction of their attitudes (Sprott, Czellar, & Spangenberg, 2009, p. 92), towards brand in general and private labels in particular. Therefore, the theory appears to suggest that a strong tendency towards brand-related self-schemas together with a focus of these schemas on the consumer's perception as a smart shopper will ultimately lead to strong and positive attitudes towards those brands that appeal to this self-perception. Hence:

***H6:*** *The more a consumer perceives him- / herself as a smart shopper, the more positive is his / her attitude towards private label brands.*

### *2.4.4 Risk perceptions*

Dunn et al. define perceived risk as "the expected negative utility associated with the purchase of a particular product or brand" (1986, p. 205). Researchers generally distinguish between two different types of risk: inherent risk and handled risk (ibid, p. 205). Inherent risk at the primary demand level is the risk pertaining to the product type in general, such as the risk of having a car accident while driving), as opposed to the risk of having a breakdown in a Volvo as an example of handled risk at the brand level (Manikandan, 2012, p. 69). Research has so far mainly investigated the following eight risk dimensions: financial and economic risk, physical and performance risk, social and psychological risk, the risk of opportunity loss, and time-related risk (Jacoby, & Kaplan, 1972; Roselius, 1971, as cited in Dunn et al., 1986, p. 205-206). Any type of risk can be measured along the same dimensions that determine the impact of a risk: the likelihood of its occurrence, and the gravity of the consequences in case it does occur (Bettman, 1975¸Manikandan, 2012, p. 69, as cited in Dunn et al., 1986, p. 206).

Liljander et al. (2009, p. 21), like many other authors, argue that perceived risk is specific to the product, meaning that different types of products in different product categories possess different levels of inherent risk. As a logical consequence this would imply that any particular, given product would be perceived similarly risky by different consumers. This assumption will be challenged by this paper, which shall investigate and whether and to what extent perceived risk is consumer-specific, i.e. depending on the personality and characteristics of the person that buys them.

Despite impressive growth rates of private label brands in the last decades, their growth rates have been stronger in some product categories than in others (Hoch, & Banerji, 1993, as cited in Batra, & Sinha, 2000, p. 176). One major reason for those inter-category differences is the category-dependent risk perceptions of consumers, which can be further classified into financial, social, or performance risk (Dunn et al., 1986, p. 205). Consumers may perceive risk very differently. While for some consumers social risk can determine a large proportion of their consumption choices, such as for example consuming well-known national brand beverages in public or wearing prestigious apparel brands, others may pay more attention to aspects of financial risk by carefully selecting products that for them represent the best deal. Dunn et al. (1986,

p. 214) found that in the case of supermarket products, performance risk and financial risk were the most dominant risk types that consumers perceive, while social risk did not seem to have a large impact on consumption choices. The latter claim may however be challenged when considering people's tendency to prefer national brands for products that are consumed in public, such as beverages (Coca-Cola, Red Bull), sweets given as presents (Milka), or food served to guests. Therefore, social risk will not be excluded as a potential predictor of private label attitude just yet, so:

***H7:*** *The less social risk a consumer perceives in purchasing PLB, the more positive is his / her attitude towards private label brands.*

***H8:*** *The more financial risk a consumer perceives in groceries in general, the more positive is his / her attitude towards private label brands.*

***H9:*** *The less performance risk a consumer perceives in groceries in general, the more positive is his / her attitude towards private label brands.*

For Narasimhan and Wilcox (1998, as cited in Batra, & Sinha, 2000, p. 179), perceived risk and perceived quality variation are closely interrelated. So whenever consumers perceive significant differences in the quality of different products in the same product category, their purchase will become more risky in the sense that perceived performance risk in increased. When talking about performance risk, it is meant that a product might not – at least not reliably - live up to the consumers' expectations. With most national brands, consumers expect a constantly high and therefore predictable level of quality. If in any given product category consumers perceive large differences between the quality level of national brands as opposed to private labels, the risk associated with the PLB purchase increases accordingly (Batra, & Sinha, 2000, p. 179). And an increased level of perceived risk will ultimately lead to a lower willingness to buy (Erdem et al., 2004, p. 99). However, when the consequences and / or likelihood of making an "wrong" purchase decision decreases, such as when all brands in a given product category are perceived to be of more or less equal quality, private label shares usually rise in that category (Batra, & Sinha, 2000, p. 187). To account for this important finding, perceived quality variation will be included in the model as a control variable, since there is currently no strong support for this construct as an important

influencing factor on PLB attitude, however it may likely have moderating effects on the other variables and will therefore be integrated into the research.

Still, it appears intuitive to assume that consumers do perceive private label brands as riskier choices than national brands, and that those consumers who tend to avoid risk are not the typical PLB purchasers. However, research results might possibly reveal that in the case of grocery products, the consequences of a "wrong" purchase decision are bearable for most consumers, so that actually different risk perceptions are neutralized by a lack of severity of the consequences. This is mainly because in contrast to most durable products, groceries are typically low-involvement products that require less planning effort than for example a life insurance. Therefore – and despite the supposed superiority of national brands over private labels - the trade-offs for choosing a PLB are for many consumers not significant enough to defy from buying them. And once they bought them, the experiences a consumer has with a product will make consumers more familiar with and knowledgeable about it (Kara et al., 2009, p. 135). As a logical consequence, increasing experience should go hand in hand with decreasing risk perceptions.

## 2.5 Chapter summary

On the basis of an extensive EBSCO Business Source Premier database search, more than 50 articles related to consumers' attitudes towards PLB have been identified and analyzed. This analysis revealed an enormous multitude of perspectives on and approaches to the topic, in which a rather market structure-focused perspective has gained momentum over consumer-focused research in the last decades. Those researchers who directed their attention at the consumer and what causes consumers to hold positive or negative attitudes towards PLB have put their hopes into either one or a combination of demographic (Coe, 1971; Frank, & Boyd, 1965), psychographic (Ailawadi et al., 2001; Batra, & Sinha, 2000), or cultural antecedents of PLB attitude (Erdem et al., 2006). Even though each of these three categories of antecedents at first glance appear to be distinctively different from each other, they all attempt to answer the same question: What causes consumers to prefer private label brands over national brands? Up until today, there is still no sufficient answer to this question.

Earlier PLB research has primarily investigated into consumers' demographic profiles, assuming that their socio-economic status as characterized by income, age, gender, or household size might influence their evaluations of private labels as opposed to national brands (Burger, & Schott, 1972; Coe, 1971; Frank, & Boyd, 1965; Granzin, 1981). However, despite serious attempts to identify PLB-prone consumer segments on these grounds, demographics do not seem to allow for empirical generalizations about PLB attitude. Instead, as Ailawadi et al. (2001, p. 73) suggest, demographics seem to influence consumers' attitudes indirectly through their moderating effects via psychographics. In other words, demographics have an influence on psychographics, which in turn affect consumers' PLB attitudes. It is therefore the psychographic characteristics of consumers that this thesis is interested in, since they can be assumed to have the most direct and immediate effect on consumer decision-making. The most promising psychographic antecedents of PLB attitude as revealed by analyzing the literature can be summarized in four groups:

- antecedents related to *price and value* (i.e. value consciousness, price consciousness, and price / quality perceptions);
- antecedents related to *consumers' evaluation of product cues* (i.e. intrinsic cue reliance and extrinsic cue reliance);
- antecedents related to *consumers' self-perception* (more specifically smart-shopper self-perception); and
- antecedents related to *perceived risk* (i.e. perceived social risk, perceived financial risk, and perceived performance risk).

Each of these antecedents will be put into a hypothesized relationship to PLB attitude, as will be explained in greater detail in the methodology chapter 3.

However, as stated earlier, none of existing studies appears to have been particularly successful at establishing common grounds, because the major commonality between many of these authors' works is that their findings are in large parts inconclusive (Kara et al., 2009, p. 129) or sometimes even contradictory. This lack of consensus might be caused by the fact that there appear to be possible sources of bias resulting from non-random convenience sampling procedures and the predominantly US-American nationality of respondents in a majority of the surveys applied so far. Unfortunately, this

thesis will not be able to address the first-mentioned problem due to a lack of financial and time resources, which a completely random sampling procedure would require. But in terms of the latter, it can be assumed that responses from consumers in the DACH region, more specifically Germany and Austria, will provide a counterbalance to this otherwise US-dominated research field. The goal of this thesis shall be to generate insights that extend beyond the limited generalizability of predominantly American respondents and to contribute to the creation of valid middle range theory, so that future researchers may build and add on the findings obtained today.

# 3 Methodology

This chapter is concerned with presenting the methodological approach to answering the research questions. After introducing the conceptual framework and the hypothesized relationships between the variables to be investigated, multiple regression as the method of choice will be explained briefly, followed by a detailed description of the sampling procedure and questionnaire design. To close with, the procedure and results of the pre-test will be outlined together with some general remarks on data validity and reliability.

## 3.1 Conceptual framework

In the following, the research hypotheses that have been developed and formulated in the literature analysis will be presented with their corresponding null hypotheses before introducing in detail the dependent, independent, and control variables to be used in this research. Later, a summarized model framework will serve as a graphic representation of all hypothesized relationships between the variables and a description of all conceptual and operational definitions will lead over to the next sub-chapter.

### *3.1.1 Research and null hypotheses*

On the basis of the literature research and evaluation, a number of research hypotheses have been introduced in the previous chapter. In the following table below, they shall be presented in a condensed overview together with their corresponding null hypotheses. It is anticipated that, based on the statistical tools to be used in this research, the null hypotheses will likely be rejected and support for the research hypotheses may be presented. Due to the fact that many of the presumed relationships between the suggested antecedents and the dependent variable have already been investigated and support for various of these relationships has been presented by other authors, assumptions can be made on the directionality of the relationships as well. Therefore, the research and their corresponding null hypotheses are formulated in a way to indicate whether

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there is a positive or a negative relationship expected between the independent and dependent variable. All these hypotheses are summarized in table 3 below.

Table 3 Applied research and null hypotheses

| Research hypotheses | Null hypotheses |
|---|---|
| **$H_1$:** The higher a consumer's value consciousness, the more positive is his / her attitude towards PLB. | **$H_{01}$:** There is no positive relationship between a consumer's value consciousness and his / her attitude towards PLB. |
| **$H_2$:** The weaker a consumer's price / quality-associations, the more positive is his / her attitude towards PLB. | **$H_{02}$:** There is no negative relationship between a consumer's price / quality-associations and his / her attitude towards PLB. |
| **$H_3$:** The higher a consumer's price consciousness, the more positive is his / her attitude towards PLB. | **$H_{03}$:** There is no positive relationship between a consumer's price consciousness and his / her attitude towards PLB. |
| **$H_4$:** The more consumers rely on intrinsic product cues when evaluating a product, the more positive is his / her attitude towards PLB. | **$H_{04}$:** There is no positive relationship between a consumer's intrinsic cue reliance and his / her attitude towards PLB. |
| **$H_5$:** The less consumers rely on extrinsic product cues when evaluating a product, the more positive is his / her attitude towards PLB. | **$H_{05}$:** There is no negative relationship between a consumer's extrinsic cue reliance and his / her attitude towards PLB. |
| **$H_6$:** The more a consumer perceives him- / herself as a smart shopper, the more positive is his / her attitude towards PLB. | **$H_{06}$:** There is no positive relationship between a consumer's smart-shopper self-perception and his / her attitude towards PLB. |
| **$H_7$:** The less social risk a consumer perceives in purchasing PLB, the more positive is his / her attitude towards PLB. | **$H_{07}$:** There is no negative relationship between the social risk a consumer perceives when purchasing PLB and his / her attitude towards PLB. |
| **$H_8$:** The more financial risk a consumer perceives in groceries in general, the more positive is his / her attitude towards PLB. | **$H_{08}$:** There is no positive relationship between the financial risk a consumer perceives in groceries in general and his / her attitude towards PLB. |

| | |
|---|---|
| **$H_9$:** The less performance risk a consumer perceives in groceries in general, the more positive is his / her attitude towards PLB. | **$H_{09}$:** There is no negative relationship between the performance risk a consumer perceives in groceries in general and his / her attitude towards PLB. |

Source 3 author's chart

The research hypotheses are associated to the research questions in the following way:

RQ1: H1, H2, H3

RQ2: H4, H5

RQ3: H6

RQ4: H7, H8, H9

### *3.1.2 Dependent, independent, and control variables*

This study employs a total of nine independent variables that have an influence on one dependent variable. This dependent variable - attitude towards PLB - and the nine independent variables – price consciousness, value consciousness, price/quality associations, intrinsic cue reliance, extrinsic cue reliance, smart-shopper self-perception, perceived social risk, perceived financial risk, and perceived performance risk – all are continuous variables on an interval scale ranging from 1 (totally disagree) to 6 (totally agree).

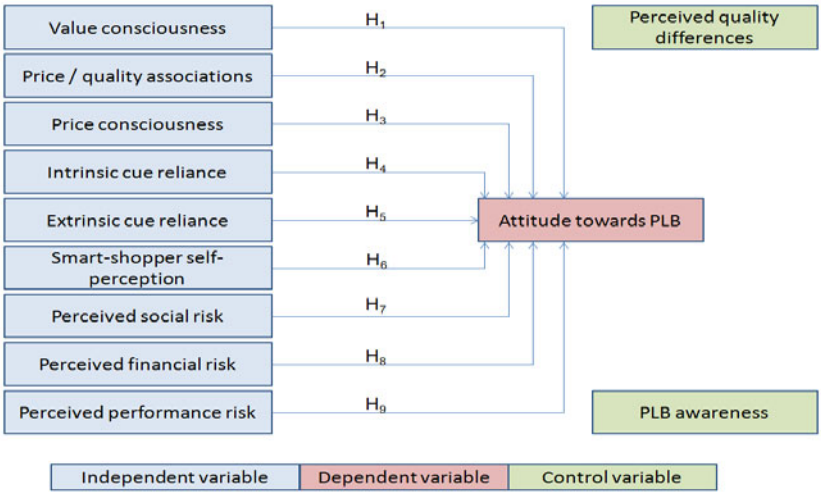
The first three independent variables – price consciousness, value consciousness, and price/quality associations – are all aimed at assessing how the consumer prioritizes price and value in the evaluation of a product. The intrinsic and extrinsic cue reliance variables then analyze to what extent consumers make use of internal and/or environmental cues in assessing product quality. Smart-shopper self-perception is probably the least thoroughly investigated antecedent from this model set, and its purpose is to integrate the perspective of how consumers view themselves vis-à-vis and in interaction with the brands they buy. And lastly, three different kinds of risk – perceived social risk, perceived financial risk, and perceived performance risk – will investigate whether and to what extent the risks consumers perceive have an influence on their brand preferences.

In order to account for possible extraneous factors of influence, two control variables are integrated into the framework: perceived quality differences between PLB and NB, and PLB awareness. These variables therefore closely reflect the fundamental assumptions on which this research is dependent, as outlined in chapter 2.1.3. While the variable perceived quality differences is supposed to test the mental quality gap between both brand types, the second variable PLB awareness controls whether consumers are actually able to tell both brand types apart and whether or not they know which type they typically consume. It is assumed that both control variables could possibly influence the strength and direction of the independent variables. Therefore, one questionnaire item is devoted to each of them as well.

Sample items can be found further below in table 5 as well as in their complete form in annex 3.

### *3.1.3 Summarized model framework*

Figure 1 Summarized model framework




Source 4 author's chart, based on the works of Ailawadi et al. (2001), Burton et al. (1998); Dunn et al. (1986), and Kara et al. (2009)

The relationships displayed between the nine independent variables and PLB attitude match the research hypotheses outlined above. The arrows indicate the assumed direction of causality, whereas for the sake of simplicity, no causal links are drawn between and among the independent variables themselves. It is however very likely that such inter-factor relationships do exist in reality. The following model graphically summarizes the research hypotheses postulated earlier and serves as a model framework based on which the final analysis is later conducted.

### *3.1.4 Conceptual and operational definition of constructs*

Since the constructs used in this thesis are more abstract and subject to personal interpretation than are constructs of the natural sciences for instance – where constructs like blood pressure or biodegradability are easier to define and operationalize – it is necessary to state clearly how each of the constructs used in this research is to be understood. For lack of commonly acknowledged measures of these abstract ideas, their operational definitions will be based on the self-reported applicability of each construct by the survey respondents.

Table 4 Conceptual and operational definitions of constructs

| Construct | Conceptual definition | Operational definition |
|---|---|---|
| Private label attitude | A predisposition to respond in a favourable or unfavourable manner due to product evaluations, purchase evaluations and / or self-evaluations associated with private label grocery products (Burton et al., 1998, p. 298) | Self-reported PLB proneness in terms of agreement to related statements on a 6-point Likert scale |
| Price consciousness | The degree to which the consumer focuses exclusively on paying a low price (Lichtenstein et al., 1993, p. 235) | Self-reported price consciousness in terms of agreement to related statements on a 6-point Likert scale |
| Value consciousness | A reflecting concern for price relative to quality received (ibid, p. 235) | Self-reported value consciousness in terms of agreement to related statements on a 6-point Likert scale |

| | | |
|---|---|---|
| Price / quality associations | The generalized belief across product categories that the level of the price cue is related positively to the quality level of the product (ibid, p. 236) | Self-reported price / quality associations in terms of agreement to related statements on a 6-point Likert scale |
| Intrinsic cue reliance | The degree to which the consumer bases his / her product assessment on intrinsic product attributes (e.g. taste, texture, smell) | Self-reported intrinsic cue reliance in terms of agreement to related statements on a 6-point Likert scale |
| Extrinsic cue reliance | The degree to which the consumer bases his / her product assessment on extrinsic product attributes (e.g. packaging, brand name, price) | Self-reported extrinsic cue reliance in terms of agreement to related statements on a 6-point Likert scale |
| Smart-shopper self-perception | The degree to which the consumer takes pride from making smart purchase decisions | Self-reported smart-shopper self-perception in terms of agreement to related statements on a 6-point Likert scale |
| Perceived social risk | The subjectively-sensed risk of suffering mal-appreciation or status loss in one's social environment | Self-reported perceived social risk in terms of agreement to related statements on a 6-point Likert scale |
| Perceived financial risk | The subjectively-sensed risk of spending money for a less than adequate return | Self-reported perceived financial risk in terms of agreement to related statement on a 6-point Likert scale |
| Perceived performance risk | The subjectively-sensed risk of acquiring a product that does not fulfil its function properly | Self-reported perceived performance risk in terms of agreement to related statements on a 6-point Likert scale |

Source 5 author's chart

### 3.2 Selecting a statistical technique

The careful choice of the right statistical technique is highly important considering that the results of the data analysis are used as a basis to answering the research questions.

It will therefore be explained why multiple regression has been selected as the most suitable technique for this research while also discussing alternative options and the reasons for their rejection.

### *3.2.1 Multiple regression as method of choice*

Multiple regression is a statistical tool that enables the researcher to make predictions on the outcome of one dependent variable based on the scores of two or more independent variables. It is thereby based on the principles of single linear regression, where only one independent variable is used to make predictions on the outcome of a dependent variable. What differentiates regression techniques from correlation techniques is that a mere correlation between two variables usually does not allow for any conclusions regarding causality, so that both variables can only be claimed to be observed together, but without one being likely to cause the other. Causality is in contrast a common goal of regression techniques, be it multiple regression or single linear regression. The primary difference between both techniques hence lies in the multivariate nature of multiple regression as opposed to only one investigated variable of single linear regression. Using the concrete case of this research, a set of independent variables or predictors such as price-consciousness or perceived social risk will be assessed in terms of its predictive capability of the variance in the dependent variable PLB attitude. All variables employed in this model are continuous variables.

The goal of employing the multiple regression technique to answer the research questions is that it is hoped to either confirm or reject the predictor variables commonly cited by PLB literature, however not by looking at each of them independently, but by establishing their combined predictive power of a consumer's score on a PLB attitude scale. The technique does so by accounting for the variance in the dependent variable which can be explained through the variance in the independent variables. Having more than one predictor variable is an almost bare precondition to being able to make kind of predictions on human thoughts and behaviour. People's mindsets are extremely complex, constantly changing, and usually influenced by a large number of factors, some obvious, others rather latent. Establishing causality is thereby highly desired, though extremely difficult to achieve.

According to Brace, Kemp, and Snelgar (2013, p. 208), multiple regression is a suitable technique to choose if the following conditions are met:

- The relationship between the dependent and independent variables is linear.
- The dependent variable can be measured on a continuous scale.
- The independent variables must be either interval/ratio, ordinal, or dichotomous variables.

The sample size is sufficiently large (10 cases per independent variable).

Since all requirements mentioned by these authors are met, multiple regression can be assumed to be an appropriate statistical technique to answer the research questions.

### *3.2.2 Evaluation of alternative statistical tools*

Given that all independent variables as well as the dependent variable in this model are measured on continuous scales, multiple regression appears to be the only reasonable choice among the available statistical tools. Had the independent variables in contrast been designed as nominal or categorical in nature, ANOVA would have qualified as a feasible and justifiable alternative tool. In the case of a dichotomous dependent variable, logistic regression would have been suitable as well. All of these techniques, despite their differences, attempt to explain the variance in the outcome variable based on the variance of one or more independent variables and as such have all been considered for this study. However, it can be assumed that multiple regression as the method of choice yields the most promising results in terms of establishing causality and high levels of practical applicability.

In the broadest sense, alternative research methodologies would however also include qualitative research methods such as focus groups, in the course of which participants would be asked to share their opinions on private label brands. The findings of these discussions would then lead to a new set of factors affecting attitudes towards PLB independent from the factors suggested by existing PLB research. This approach has been rejected due to the following reasons: Qualitative research resulting in a new set of factors would only contribute to the already confusing multitude of approaches in explaining PLB attitude. Instead, quantitatively evaluating the existing factors will help

in the validation and consolidation of current theory and hence facilitate the development of valid middle range theory.

## 3.3 Sampling

This section describes the target population from which the sample has been taken as well as the anticipated sample size and sampling procedure through which the data have been collected.

### *3.3.1 Defining the population*

The target population is defined very broadly as any individual that regularly consumes grocery products, which can with great certainty be said to be 100% of the world population. For the purpose of this study, hardly avoidable restrictions need to be made in terms of the geographic reach of the survey. Due to a very limited access to respondents out of the DACH region, the sample will naturally limit itself geographically. Limitations with regard to age are not applicable either, since in order to be a consumer of grocery products, one does not necessarily have to be the buyer of these products, which essentially includes children, teenagers, adults and seniors equally. Also, if asking only those who have recently bought or consumed PLB, this study would eliminate all those respondents with a very negative attitude towards PLB who deliberately no longer - or never did - purchase this type of brands. Only precondition is the respondent's ability to understand and answer the survey questions, which is supported by providing the questionnaire in German, given that this is the language used by the pool of possible respondents which the questionnaire will be targeted at.

### *3.3.2 Sample size*

In order for any regression model to yield reliable results, the sample size needs to be sufficiently large. In general, the larger the sample size – ideally gathered via a perfectly random sampling procedure – the more reliably the researcher can draw conclusions from the data. There exist several rules of thumb about recommended minimum sample sizes, as outlined by Field (2013, p. 313). His explanations have formed the basis of the following considerations.

As a more general rule of thumb, the author recommends 10-15 cases of data (=responses) for each one predictor (=antecedent) used in the model. Applied to the theoretical model outlined above, which contains nine supposed predictor variables, the minimum sample size for this research can be estimated between 90 and 135 cases of data. In a more complex approach to determining sample size he suggests varying numbers dependent on the expected effect, meaning the expected strength of the relationship between the predictor variables and the dependent variable. For models using less than 20 predictors, he posits that 77 responses are sufficient for expected strong relationships (R2 = .26), whereas for medium effects (R2 = .13) 160 responses are recommended. The lower the number of predictors, the lower is also the required sample size.

Considering that the model framework used contains only nine predictor variables, and assuming a strong to medium effect of these predictors on the dependent variable, the goal which was set before starting the data collecting was to gather a minimum of 100 responses. After the sampling process has been completed and after eliminating incomplete responses from the data set, a total of 130 responses have been collected. Measured against the benchmarks above, this sample size is sufficiently large to allow for reliable results.

### *3.3.3 Sampling procedure*

Via an online questionnaire, which has been constructed using the online survey provider www.surveymonkey.com, the data have been obtained by a convenient sampling method through two different sampling procedures: In a first round, a link to the questionnaire has been distributed via email to personal contacts of the author, consisting mainly of family, friends, and acquaintances. In a second step, the same link has then been published in the forum area of an online perfume community, www.parfumo.de, which the author is a member of. With a short explanation of the context and the request for support, forum readers were encouraged to respond to the questionnaire. Members of the community are primarily of German nationality, but also Austrian and Swiss members are represented. This justifies the dissemination of the online survey in German language, since all community activities are conducted in this language. The

link to the online survey has been active for three weeks beginning on March 1st, 2014.

There are two primary dangers to data reliability connected to this procedure. First of all, the described data collection method is a non-random sampling technique and hence suffers from several potential biases and a lack of representativeness of – and thereby also of generalizability to - the total population. Undetected biases often stem from extraneous variables that the researcher is not aware of and that pose a threat to any study's internal validity (Black, 2005, p. 116). In order to avoid the unintentional introduction of extraneous variables, random sampling techniques are always to be preferred over non-random ones. However, unfortunately a perfectly random sample is often very difficult or impossible to obtain, particularly within the financial and times resources of a regular Master thesis. Secondly, and this is closely linked to potential confounding variables, there is a possibility that the responses obtained from perfume community members might differ from those of the population average. It is for instance possible that persons with a high interest in perfume are particularly quality-sensitive or brand-prone, or that they belong to higher income classes. Similar biases can result from the responses of friends or family members, which usually share various psychographic and demographic traits. Also, the sample is limited to respondents with access to an Internet connection. These potential biases need to be taken into account when evaluating the research findings so that no generalizations are made where they would be unjustified.

## 3.4 Questionnaire design

The questionnaire is the central element to any consumer survey and needs to be carefully crafted in order to generate valid and reliable results. The following sections will therefore outline the choices made with regard to the structure and content of the online questionnaire and the measures that have been taken to increase response accuracy.

### *3.4.1 Structure and content of the questionnaire*

The final questionnaire version that resulted from the insights of the pre-test (see further below) has been designed to guide the respondent through the questions in a logical and intuitively navigable manner. The average time to complete the questionnaire has been taken care of not to exceed seven minutes. On average, five to six minutes were reported to be sufficient by several respondents. Questionnaire items have preferably been adopted from the items other researchers have been using so far, where available. This is intended to increase each item's contribution to the validity and reliability of the measurement instrument. Where no previously used items were available, they have been developed to reflect as closely as possible the operational definition of the construct they are intended to measure. The general structure and major content elements of the survey are outlined in the following. The complete questionnaire itself can be found in annex 1 in its original German version and in annex 2 in its English translation. In annex 3, the interested reader will also find a full list of all questionnaire items together with a remark on the sources from which these items were adopted.

When accessing the link to the online questionnaire, respondents have been greeted with an introduction page on which the author shortly introduces herself and the context of the questionnaire within her Master studies. On a second page, respondents have received a short explanation of the major differences between private label brands and manufacturer brands together with pictures of commonly known grocery PLB examples from the German and Austrian market. Within the grocery sector, no further limitations have been made with regard to any specific product category, so that statements would be interpreted in the context of groceries as a whole, thereby allowing a greater degree of generalization. This introduction has been intended to make clear what the then following questions were aiming at, since possibly respondents are familiar with the brands themselves, but not with their terminology as private labels. These introductory pages have then been followed by three pages on which respondents are asked to indicate their degree of agreement to the construct items on a 6-point Likert scale ranging from "I totally agree" to "I totally disagree". A neutral middle option has been dropped as a result of over-frequent use by pre-test respondents. Rather, respondents have been "forced" to choose between either side of the agreement scale,

having three incremental steps available for both sides. The items on the first page have hereby referred to the dependent variable and the two control variables, while the latter two pages have each contained ten items of the independent variables, presented in a random order. Two items have been reverse phrased to encourage the respondents' permanent attention. On a last page, survey respondents would then answer a number of questions regarding their demographics, so that conclusions could be drawn as to the representativeness of the sample. These demographic questions have been purposefully placed at the end of the questionnaire, so that respondents would not feel appalled by too personal questions right at the beginning of the questionnaire. A formal thank you-page has finally closed the questionnaire.

### *3.4.2 Measures to increase response accuracy*

In order to ensure that the survey yields valid responses, the questionnaire has been designed to account for a number of common pitfalls and biases. Such biases can result in distorted responses and are counteracted upon through the following measures with the goal to increase response accuracy:

- Desired response bias: Respondents may answer in accordance with what they believe is expected of them to answer. Particularly when measuring attitudes, biases can occur when respondents fear their true beliefs are not socially acceptable or politically incorrect, or when they believe they have uncovered the true intent of the questionnaire and answer in a way they assume supports the intended outcome. All questionnaire items have therefore been phrased as non-judgmental as possible. Further, presenting the items in a completely random order has been intended to avoid any response patterns from un-careful reading.
- Misinterpretation by lack of clarity: When survey questions are not carefully worded or ambiguous, they are subject to misinterpretations by respondents. The use of vocabulary that is too complex, involves technical terms or allows for more than one interpretation is hence to be strictly avoided. This is primarily achieved through pilot testing all questionnaire items prior to the final launch of the survey, so that each item has been validated as appropriately worded and understandable.

- Bias of extreme response patterns: Some respondents may tend towards either extreme end of Likert scales, preferring either the "I totally agree" or "I totally disagree" answer options. Alternatively, others may prefer to choose the indifferent middle option to avoid having to make a decision. The risk of both types of response patterns occurring is reduced by reverse coding some items so that respondents have to carefully read the questions before choosing an answer, and by eliminating the neutral middle option, thereby forcing respondents to take a position towards either side of the Likert scale.

## 3.5 Pre-test

To make sure that the survey would be administered without complications and that the obtained data would reflect closely on the associated hypotheses and underlying research questions, a pre-test has been conducted, during which the reliability of the questionnaire items has been tested. The final set of items then formed the basis for the multiple regression analysis as described in chapter 4.

### *3.5.1 Goals and procedures*

A pre-test is typically conducted in advance of the actual study in order to identify major weaknesses in the content or design of that study. For the research at hand, a pre-test was conducted for three major purposes: Firstly, to ensure that the online questionnaire could be accessed and completed smoothly without any technical problems or other obstacles to the proper handling of the tool. Secondly, participants of the pre-test were asked to report any items they considered unclear or ambiguous in wording or otherwise unintelligible. And thirdly, the responses to this pre-test were used to identify those items that should be included in the final questionnaire version as opposed to those which should be dropped. Items were dropped not only when their meaning was unclear to respondents, but also if they caused a significant decrease in the reliability of the scale, as will be explained in more detail below.

The pre-test was conducted with a total of ten respondents who received an extended questionnaire version. This version contained about twice as many items as the final version should contain, so that a selection of the most suitable items could be achieved

on the basis of their responses and feedback. More precisely, the extended pre-test version consisted of 36 question items, of which a total of 16 were dropped due to poor reliability values. Also, the neutral middle option was dropped from the Likert scale due to over-frequent use by pre-test respondents.

### *3.5.2 Reliability analysis of construct items*

According to Field (2013, p. 706), "reliability means that a measure (...) should consistently reflect the construct it is measuring". A common indicator used to measure the reliability of a scale is Cronbach's alpha, which has also been applied to the items used in the pre-test questionnaire. It is assumed that the more reliable the scale is, the greater is also the correlation of the items with the total. Items with a particularly low correlation have hence been dropped from the final questionnaire. To identify such items with a low correlation to the total, sub-scales were created for each construct and reverse-coded items were adjusted to fit the other items on each sub-scale. It was then assessed whether any item's Cronbach's Alpha if Item Deleted was larger than if the item was kept in the scale. If this was the case, items measuring a particular construct were dropped until Cronbach's alpha exceeded the critical mark of .7. As a generally acknowledged rule, alpha values above .7 are deemed acceptable, i.e. displaying a sufficiently large reliability of a scale. If research is still at an early stage, even .5 can be appropriate (Nunnally, 1978, as cited in Field, 2013, p. 709). Values lower than that usually indicate that one or more items of a scale or sub-scale are not sufficiently correlated to the total and should therefore be dropped from the questionnaire.

The following table shows one sample item for each construct together with their total number after deleting items from the pre-test version as well as the remaining items' Cronbach alpha values indicating their reliability. For a full list of all items for each construct including the items that were dropped from the questionnaire, please refer to annex 3.

Table 5 Sample items and associated reliability measures

| Construct | Sample item | Total items after pre-test | Cronbach's alpha after pre-test |
|---|---|---|---|
| PLB attitude | For grocery (=food) products, Private Label Brands are usually the best choice. | 2 | .764 |
| Price consciousness | When I shop for food, I search for the cheapest brand. | 2 | .863 |
| Value consciousness | I compare the price per kilo or per liter for different product options. | 2 | .827 |
| Price / quality associations | Quality has its price. | 2 | .973 |
| Intrinsic cue reliance | I can only find out if a product is good when I try it. | 2 | .892 |
| Extrinsic cue reliance | I often buy brands that I already know from advertising. | 3 | .389 |
| Smart-shopper self-perception | I take pride in making smart purchase decisions. | 3 | .852 |
| Perceived social risk | When I invite guests, I would feel uncomfortable to serve them Private Label Brands. | 3 | .872 |
| Perceived financial risk | I am careful not to buy more than I can afford. | 2 | .824 |
| Perceived performance risk | I am often worried that the food I buy won't meet my expectations. | 1 | / |

Source 6 author's chart

On the basis of the pre-test results, those questionnaire items that would increase Cronbach's alpha if deleted from the scale were eliminated from the final questionnaire. Through this procedure, 16 items were deleted from the set of originally 36 question items. The nine closing questions on consumers' demographics were kept in full. The third column of the table above now indicates how many items are left for each sub-scale after the deletion of unsuitable items. As a result, the constructs outlined in that table now contain a maximum of three items per construct. With the exception

of the extrinsic cue reliance items, all other construct items possess Cronbach's alpha values above the recommended minimum value of .7. Concerning the items related to extrinsic cue reliance, this result is not overly surprising. It appears that extrinsic cue reliance as a whole does not exist. Rather, consumers may often pay attention to one particular extrinsic cue, but not to another. Therefore, each of the three primary cues discussed in the literature - i.e. packaging, advertising, and brand name – will be analyzed separately from each other in the actual study. That way, the scale's reliability will remain intact.

### 3.6 Sources of validity of reliability

One of the most important problems any researcher finds him-/herself confronted with is the question whether the measuring instrument of whatever he or she investigates is appropriate and measures what it is designed to measure, or in other words, whether it displays a high degree of internal and external validity. There are numerous different kinds of validity and most of them are not easy to determine. However, it is still important to consider their existence and bear in mind the possible consequences when validity is not taken care of. In the following, a few remarks will be made on how construct validity and reliability have been handled in this paper, without making any claims of completeness:

- Construct validity: In simple terms, construct validity indicates whether and to what extent an instrument measures what it was designed to measure. To name an example, a barometer is highly unsuitable to determine water temperature, while a thermometer is the perfect instrument for this task. There are many ways to determine the degree of construct validity in a research, e.g. via establishing the convergent and discriminant validity of an instrument. Going into detail here would however exceed the scope of this thesis. Instead, Field (2013, p. 217) suggest three alternative ways to establish construct validity, one of which is the logical/rational approach. In this approach – which is also the approach taken by this thesis – each step in the design process of the research is carefully crafted to maintain logical connections between all elements of the research (ibid, p. 217). More precisely, the research question is the starting point of extracting concepts and constructs, which ul-

timately lead to the formulation of research hypotheses and the selection of suitable questionnaire items that reflect the operational definitions of the constructs they are supposed to measure. If the logical connection between any of these steps is missing, construct validity can be challenged. Great care has been taken to follow this process systematically in the design of this research, given that other ways to support construct validity are difficult to achieve.

- Reliability: As outlined in the previous section on the pre-test which has been conducted for this study, reliability has been a major consideration in the design of the questionnaire. An extended trial version containing nearly twice as many items as the final version should include has been piloted with a total of ten respondents and questionnaire items that contributed most to reliability (using Cronbach's alpha values) have been selected for the final instrument. The researcher was hereby strongly aware that consumers' perceptions and interpretations of a construct might not always reflect the formal definition of that construct as described in this thesis. The advantages of asking respondents directly about their opinions can however be expected to put up with these potentially negative consequences.

## 3.7 Chapter summary

Building on the theoretical insights from the literature analysis, a total number of nine research hypotheses have been introduced, each describing the hypothesized relationship of nine potential psychographic antecedents[4] to consumers' attitudes towards PLB. In other words, the study consists of nine independent variables and one dependent variable. The research hypotheses and their associated null hypotheses have been formulated in a directional manner, i.e. assuming either positive or negative relationships to the dependent variable. To account for possible moderating influences from extraneous factors, two control variables – perceived quality differences between PLB and NB, and PLB awareness – have been integrated into the model as well. Hypotheses 1 to 3 are intended to provide answers to research question 1, hypotheses 4 and 5 are as-

[4] These are: value consciousness, price / quality perceptions, price consciousness, extrinsic cue reliance, intrinsic cue reliance, smart-shopper self-perception, perceived, social risk, perceived financial risk, and perceived performance risk.

sociated to research question 2, hypothesis 6 is linked to research question 3, and lastly the hypotheses 7 to 9 are designed to shed light on research question 4.

The data to be obtained from this research will be analyzed using multiple regression with the goal to establish support for causality between the independent variables and the dependent variable. This method is therefore to be preferred to other statistical techniques like simple correlation, which would not take account of any causal relationships between the variables. Other suitable methods like ANOVA or logistic regression have been discarded due to the fact that all involved variables are continuous variables.

Targeting a very broad population of German-speaking consumers in general, an online questionnaire has been administered and distributed to potential respondents using convenience sampling techniques. More precisely, email invitations containing a link to the questionnaire have been sent out to a list of the author's personal contacts, while the same link was also published in the forum area of an online perfume community which the author is a member of. Potential biases or unintended limitations to the respondents' psychographic profiles resulting from this sampling technique will be accounted for in section 4.4. of the data analysis chapter where the potential influence of extraneous variables on the outcome is assessed. Via this procedure, a total of 130 complete data sets have been obtained. This sample size can be considered sufficiently large based on the recommendations of Field (2013, p. 313), who suggest a minimum of ten response cases per each independent variable.

Great care was taken in the design of the questionnaire to increase response accuracy to a maximum and prevent various sorts of response biases. This was implemented for example by reducing the risk of misinterpretation due to ambiguous wording, by reverse coding a number of questionnaire items to counteract questionnaire fatigue, and by eliminating the neutral response option usually applied by other researchers. The most important measure taken however has been the pre-test which was conducted with a total of ten respondents. The pre-test version of the questionnaire contained around twice as many items as would be needed, so that the most contributing items could be identified and used for the final version based on a reliability analysis and respondents' feedback. As a result of this analysis, the Cronbach alpha values of ques-

tionnaire items helped to identify those items with the greatest reliability, which were then integrated into the final questionnaire.

# 4 Data analysis and results

Chapter 4 introduces the results of the data analysis using the multiple regression technique, starting with a general description of respondents' demographic profiles, followed by the key results and SPSS output of the analysis. Checking for outliers and a possible violation of assumptions is intended to account for any potential biases resulting from methodological deficiencies. Lastly, the potential influence of extraneous and moderator variables on consumers' attitudes towards private label brands is analyzed.

## 4.1 Respondent profile

In the survey, respondents were asked to answer a number of demographic questions in order to determine their socio-economic situation and be able to identify any potential biases from the sample profile. Respondents gave particulars on their age, gender, nationality, education, household size, annual household net income, and access path to the questionnaire. For specifics on each of these demographic variables, please refer to the table in annex 4.

A total of 138 participants took part in the survey. Out of those, 130 completed the questionnaire, so that eight incomplete responses were deleted from the data set. In terms of respondents' demographics, only the most important distinctive features will be briefly outlined here. There is a clear overweight of female respondents in the sample, constituting as much as 65% of total responses. This might be due to the fact that a large proportion of responses (75%) were generated via the online perfume community www.parfumo.de, which might imply that in general females are more attracted to perfume than males, so that the community audience is predominantly female. Section 4.4 will analyze whether and to what extent this imbalance also has an impact on the scores of the investigated variables.

No apparent particularities are to be observed in the respondents' distribution of age and education, with a focus on the age range between 36 – 45 and approx. 40% of re-

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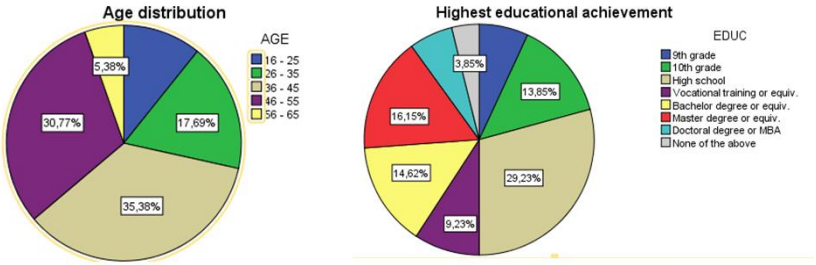
spondents having some sort of higher education. The vast majority, 92.4%, had German nationality. Only 4.6% of respondents were Austrian.

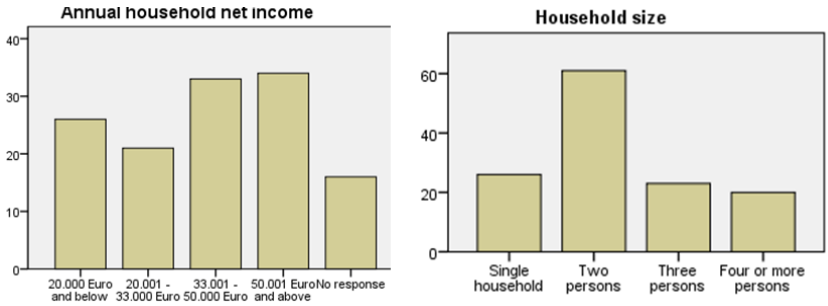
Figure 2 demographic respondent profile I: age distribution (left) and highest educational achievement (right)




Source 7 author's figure (SPSS output)

Regarding annual household net income, which is supposed to be equally distributed in all four income categories[5], a slight tendency towards the higher income classes can be observed. Also in terms of household size, respondents most frequently live in two-persons households, implying that they either live together with a partner without children, or as single parents with one child. Both observations may or may not influence respondents' rating of the dependent and/or independent variables. Their potential effect will also be analyzed in more detail further below.

Figure 3 demographic respondent profile II: annual household net income (left) and household size (right)




Source 8 author's figure (SPSS output)

[5] Categories are based on the 25th, 50th, and 75th percentile of annual net household income in Austrian households (Statistik Austria, 2012).

## 4.2 Results of the multiple regression analysis

After briefly mentioning what settings have been entered into the SPSS analysis, this section will first outline the basic descriptive of the investigated variables before analyzing the key figures of model fit and the specific model parameters. Lastly, a few remarks concerning multicollinearity will close this section.

### *4.2.1 SPSS settings*

To run the analysis using SPSS, a number of preliminary setting were necessary, the most important of which shall be briefly mentioned here:

- Confidence intervals were set at 95%
- Casewise diagnostics considered outliers beyond two standard deviations
- Variables were entered into the model using forward selection (i.e. based on the strength of their respective correlations with the dependent variable)

The complete output that SPSS generated based on these settings can be found in annex 5.

### *4.2.2 Basic descriptive*

Complete data sets were available from a total of 130 respondents self-reporting their scores on one dependent and nine independent variables as well as two control variables. Their variable type, abbreviated coding, means and standard deviations are reported in table 6 below.

Table 6 Basic descriptive statistics

| Variable | Variable type | Abbreviated coding | Mean | Standard deviation |
|---|---|---|---|---|
| Attitude towards private label brands | Dep. var. | PLBAT | 3.45 | 1.14 |
| Value consciousness | Indep. var. | VALUE | 4.16 | 1.22 |
| Price / quality perceptions | Indep. var. | PERCEP | 2.46 | 1.11 |
| Price consciousness | Indep. var. | PRICE | 3.18 | 1.24 |

| | | | | |
|---|---|---|---|---|
| Intrinsic cue reliance | Indep. var. | INTRIN | 5.25 | 0.88 |
| Extrinsic cue reliance (brand name) | Indep. var. | EXTRIN1 | 3.14 | 1.29 |
| Extrinsic cue reliance (advertising) | Indep. var. | EXTRIN2 | 2.77 | 1.10 |
| Extrinsic cue reliance (packaging) | Indep. var. | EXTRIN3 | 2.48 | 1.14 |
| Smart-shopper self-perception | Indep. var. | SMART | 3.25 | 1.22 |
| Perceived social risk | Indep. var. | SOCIAL | 2.04 | 0.89 |
| Perceived financial risk | Indep. var. | FINAN | 4.56 | 1.16 |
| Perceived performance risk | Indep. var. | PERFORM | 2.73 | 1.11 |
| Perceived quality differences | Control var. | CONTROL1 | 3.31 | 1.16 |
| PLB awareness | Control var. | CONTROL2 | 4.91 | 1.40 |

N = 130
Source 9 author's table (SPSS output)

### *4.2.3 Assessing model fit*

Using the forward selection method, SPSS entered three variables with a significant correlation to the dependent variables, thereby creating three incremental models. The most important model parameters are summarized in table 7.

Table 7 Model summary of regression results

| Model | Variables | $R^2$ | Adjusted $R^2$ | Change in $R^2$ |
|---|---|---|---|---|
| 1 | PRICE | **.233** | .227 | .233 |
| 2 | PRICE, CONTROL1 | **.338** | .328 | .105 |
| 3 | PRICE, CONTROL1, VALUE | **.365** | .350 | .026 |

N = 130; $p \leq .05$
Source 10 author's table (SPSS output)

In a first step, PRICE was entered into the model due to its significant correlation with the dependent variable PLBAT. In a second step, the control variable CONTROL1 was

added to the model, resulting in an increase in R2 of .105. And lastly, VALUE entered the model in step three, bringing an additional increase in R2 of 0.26. As a result, the final model 3 consists of three predictor variables, which together explain 36.5% of the variance in the dependent variable PLBAT. The remaining independent variables have not been included into the model, since they do not contribute to a higher standardized R2 value and therefore do not improve the predictive value of the model. Against expectations, neither of the remaining predictor variables has yielded any significant contribution to the model, despite their strong theoretical support in PLB literature. With an adjusted R2 of merely .35, the model is only moderately successful at predicting consumers' attitudes towards private label brands. In other words, 65% of the variance in PLBAT is not explained by the variance of those predictors constituting the model.

Model fit can furthermore be assessed using the ANOVA results provided by SPSS, which analyze whether the applied model is significantly more accurate at predicting scores of the dependent variable than the mean values of the independent variables. The ANOVA table yields the F-ratio for each of the three models described above, which indicate a significant improvement of the model over using the mean. For model 1, the F-ratio is 38.95, $p \leq 0.05$, for model 2, the F-ratio is 32.46, $p \leq 0.05$, and for the third model, the F-ratio is 24.11, $p \leq 0.05$. Hence, all three models significantly improve the ability to make predictions on the dependent variable scores over using the mean and therefore confirm sufficient model fit. Still, in all consecutive sections, only model 3 shall be discussed, since it possessed the greatest predictive value of the outcome variable.

### *4.2.4 Specifying model parameters*

The b-values calculated by SPSS are necessary to define each independent variable's contribution to the model as a whole, which is the final model 3 in the case of the values specified in table 8 below. This table also contains all other parameters relevant for making judgments on each variable's contribution to the model.

If b-values of a predictor variable are positive, they indicate a positive relationship between that variable and the outcome variable, while the opposite is the case for

negative b-values. Looking at all three variables of model 3, a positive relationship with PLBAT can be observed for the variables PRICE and VALUE, whereas CONTROL1 has a negative relationship to the outcome variable. Interpreting the values for each of them, an increase of PRICE (consumers' price consciousness) by one unit (one interval on the 6-point Likert scale) increases PLBAT (consumers' attitude towards PLB) by 0.251 units. Similarly, an increase of one unit of VALUE causes an increase of 0.175 units of PLBAT, whereas an increase of one unit in CONTROL1 results in a reduction of the PLBAT score by -0.325 units. Alternatively, the standardized beta values make similar statements about the relationship of the independent variables to the dependent variable, only that here the increments in PLBAT are measured in standard deviations instead of score units.

Table 8 Summarized model paramters

| Model | Variable | b-values | Std. Error | Std. Beta | Lower CI | Upper CI | Sig. |
|---|---|---|---|---|---|---|---|
| 3 | PRICE | .251 | .078 | .275 | .098 | .405 | .002 |
| | CONTROL1 | -.325 | .074 | -.332 | -.472 | -.178 | .000 |
| | VALUE | .175 | .076 | .188 | .024 | .326 | .024 |

N = 130; $p \leq .05$
Source 11 author's table (SPSS output)

Whether or not these b-values are significantly different from zero is determined by the t-values with their associated levels of significance in the same table above. These indicate that the variables' b-values are significant, i.e. significantly different from zero, with 95% confidence. Applying these figures to testing the null hypotheses introduced in chapter 3, it can be concluded that:

- H01 can be rejected at 95% confidence; and
- H03 can be rejected at 95% confidence;
- Hence: the data suggest support for both research hypotheses H1 and H3.
- The null hypotheses for all other investigated variable relationships cannot be rejected at a 95% level of confidence.

### *4.2.5 Multicollinearity*

Multicollinearity assesses whether and to what degree the independent variables are correlated to each other. Inter-item correlation was highest between PRICE and VALUE (r = .497), EXTRIN 1 and PERCEP (r = .453), and EXTRIN3 and PERCEP (r = .413). However, none of the independent variables displays a correlation larger than r = .5 to any of the other independent variables, implying the absence of multicollinearity as a possible distorting data bias. To confirm the absence of multicollinearity, VIF and tolerance statistics need to have values below and above 0.2, respectively (Field, 2013, p. 342), with both statistics being reciprocal to each other.

Table 9 Multicollinearity statistics

| Model | Variable | Tolerance | VIF |
|---|---|---|---|
| 3 | PRICE | .698 | 1.433 |
| | CONTROL1 | .875 | 1.143 |
| | VALUE | .749 | 1.335 |

N = 130; $p \leq .05$
Source 12 author's table (SPSS output)

The result presented in table 9 above indicate that tolerance statistics for all three independent variables are well above the threshold of 0.2, with VIF relatively close to 1. The average VIF of all three variables is 1.304. These figures confirm that there is no multicollinearity in the data.

## 4.3 Eliminating bias

There are two common sources of bias within data: One potential source of bias are outliers influencing the model parameters, and the other is a violation of the assumptions underlying parametric tests like multiple regression. Both sources shall be analyzed in the following sections.

### *4.3.1 Outliers*

In order to identify extreme cases in the data, the casewise diagnostics table produced by SPSS provides an overview of those cases with standardized residuals above or below the default criterion of 2. According to Field (2013, p. 345), not more than 5%

of sample cases should have standardized residuals beyond this limit of ± 2, and not more than 1% of sample cases beyond ± 2.5 standardized residuals.

Table 10 Casewise diagnostics

| Case number | 2 | 7 | 39 | 50 | 65 | 71 | 109 | 111 | 113 | 122 |
|---|---|---|---|---|---|---|---|---|---|---|
| Standar-dized residuals | 2.108 | -2.094 | 2.465 | 2.013 | -2.511 | 2.096 | -2.049 | 2.477 | 3.553 | -2.049 |

Source 13 author's table (SPSS output)

Having a total sample size of 130 complete cases, not more than six to seven cases should exceed ± 2 standardized residuals, and not more than one to two cases should exceed ± 2.5 standardized residuals. As can be seen in table 10, a total of ten cases has standardized residuals beyond ± 2, out of which two cases, 65 and 113, have standardized residuals beyond ± 2.5. Despite exceeding the guidelines suggested by Field (2013, p. 345), the number of cases with large standardized residuals appear to be within acceptable limits, under the precondition that no regression assumptions have been violated. Should this however not be the case, further investigations will need to be made into Cook's distance and the Centered Leverage Value to determine whether cases need to be eliminated.

### *4.3.2 Violations of assumptions*

Each statistical procedure has a specific set of assumptions, which – if violated – can impact the quality of the model, of the results, and particularly of the conclusions drawn from it. In order to qualify for parametric statistical methods like multiple regression, the data need to be assessed against four major assumptions, as suggested by Field (2013, p. 165): additivity and linearity, normality, homoscedasticity, and independence. They will be dealt with individually below.

**Additivity and linearity:**

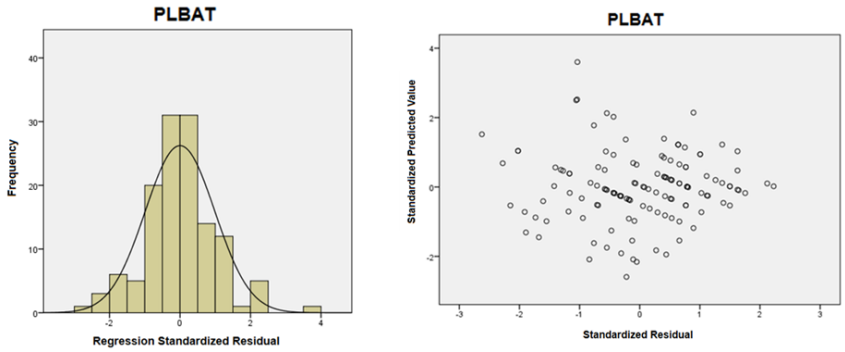
The assumption of additivity and linearity holds that there is a linear relationship between the dependent variable and its independent variables, and that the combined effect of these independent variables is the sum of their individual effects on the dependent variable. Similar to the assumption of homoscedastictity, linearity can be assessed by looking at the partial plots of each of the independent variables with the

outcome variable PLBAT. (For these plots, please refer to annex 6.) None of the three plots display any curves in their residuals, so that the assumption of a linear relationship between PLBAT and its predictors is met.

**Normality:**

In general, significance tests of skew and kurtosis are used to indicate whether the scores of a variable are normally distributed or not. However, for larger sample sizes ($N \geq 100$) such tests also tend to show a deviation from normality even when there is none. This is explained by the Central Limit Theorem, which supports that a population's parameter estimates will be normally distributed also when the shape of that population indicates otherwise (Field, 2013, p. 170). Therefore, inspecting the histogram of the dependent variable appears necessary (see figure 4 (left)). Since the histogram displays approximately normally distributed data for the dependent variable PLBAT and sample size for this research is as large as 130 cases, the Central Limit Theorem can be assumed to hold true and normality appears given.

Figure 4 normality and homoscedasticity: histogram (left) and box plot (right)




Source 14 author's figure (SPSS output)

**Homoscedasticity:**

Homoscedasticity is concerned with the homogeneity of variance in the scores of the dependent variable across all values of the associated independent variables. When this assumption is violated, the spread of the dependent variable scores differ at changing

points along the independent variable. In figure 4 (right) it can be seen that the dots in the graph are relatively randomly spread across the graph, although displaying some minor tendencies towards funnelling. However, overall there seems to be no systematic relationship between the model's standardized residuals (i.e. its error) and the model outcomes.

**Independence:**

The assumption of independence states that model errors are unrelated to – and thereby independent from - each other. By looking at the Durbin-Watson statistic provided by SPSS in the model summary table, the assumption of independent errors can be tested. Field (2013, p. 337) suggests values between 1 and 3, but ideally as close as possible to a reference value of 2. The Durbin-Watson statistic in the case at hand is 1.949, suggesting that very likely the assumption of independent errors has not been violated.

### 4.4 Checking for moderator variables

As it was discussed in the literature analysis of chapter 2, previous research has frequently investigated into demographics as predictors of consumers attitudes towards PLB, with gender, age, education, and income among the most controversely discussed. Also, it was noted in the description of the methodology that possible biases could emerge from sampling via the perfume community platform parfumo.de, which might possibly attract visitors with a more narrowly defined psychographic profile. These potential moderators have been assessed using t-test and ANOVA analyses, with the following results based on a 95% level of confidence:

- There is no significant difference in the ratings of PLB attitude between **males** and **females**;
- There is no significant difference in the ratings of PLB attitude between respondents who answered via **parfumo.de** and those who answered based on **email invitation**;
- There is no significant difference in the ratings of PLB attitude based on respondents' **achieved educational level**;

- There is no significant difference in the ratings of PLB attitude based on respondents' **age**;
- There is a significant difference in the ratings of PLB attitude based on respondents' **household income**. Higher income groups hereby evaluate PLB less positively than do lower income groups. The moderating effects of household income on consumers' price consciousness has also found support at 95% confidence.

For more details on the precise test results, please refer to annex 7 and 8.

This research also took account of two control variables which represent the fundamental assumptions made in chapter 2.1.3. Control variable 1, perceived quality differences between PLB and manufacturer brands, proved to be a strong predictor of the dependent variable itself, so that it has been included into the model as one of three predictor variables with an influence on consumers' attitudes towards private label brands. This means that the less quality differences consumers perceive between PLB and NB, the more positively they will evaluate the PLB option. Control variable 2, PLB awareness, in turn had no significant impact on the outcome variable. An average score of 4.91 on PLB awareness also indicates that consumers are well aware of the existence of private labels, so that uninformed responses to the questionnaire have been rather unlikely.

## 4.5 Chapter summary

The results of the multiple regression analysis have yielded a number of insights into the adequacy of the suggested model and ultimately help answering the research questions by rejecting – or failing to reject – the corresponding null hypotheses formulated between nine independent variables and one dependent variable. The multiple regression has been run on SPSS using the forward selection method of entering variables. In general, results were deemed significant at 95% confidence.

This process resulted in three incremental models as calculated by SPSS, the last of which possesses the greatest predictive power of the dependent variable. This final model 3 contains two independent variables, PRICE (price consciousness) and VALUE

(value consciousness), and against prior expectations also one of the control variables, CONTROL1 (perceived quality differences between PLB and NB). The first two variables display a positive correlation to the dependent variable, PLBAT (attitude towards PLB), whereas CONTROL1, less surprisingly, is negatively correlated. All of the other variables have not displayed significant relationships to the outcome variable.

The predictive value of the model, i.e. of all three variables combined, can be derived from an adjusted R2 of merely .35. In other words, only 35% of the variance in the dependent variable is explained by the variance in all three independent variables, so that 65% of the variance in consumers' attitudes towards private label brands is explained by other factors than those suggested by the model. Therefore, the investigated model is only moderately successful at predicting consumers' attitudes towards PLB. Still, when looking at the results of the ANOVA statistics, given an F-ratio of 24.11, $p \leq 0.05$, model 3 significantly improves the ability to make predictions on the dependent variable scores over using the mean. The figures thereby confirm sufficient model fit. For more detailed information on model parameters and other key figures, please refer to the tables 7 and 8 in section 4.2.3. and 4.2.4., respectively.

It can be concluded from the analysis that the findings support the predicted relationship between price and value consciousness and consumers' attitudes towards private label brands in the same direction as predicted by the research hypotheses at a 95% level of confidence. With associated b-values significantly different from zero (none of their confidence intervals contains zero), H01 and H03 both can be rejected at a 95% level of confidence, thereby providing support for their respective research hypotheses H1 and H3. The null hypotheses for all other investigated variable relationships cannot be rejected at a 95% level of confidence.

To account for possible biases in the data, multicollinearity has been assessed by looking at the VIF and tolerance statistics, which suggest that no multicollinearity exists between the independent variables. The potential influence of outliers has also been accounted for by analyzing cases with standardized residuals larger than ± 2 standard deviations. Although the total number of cases outside this benchmark slightly exceed the guidelines suggested by Field (2013, p. 345), they appear to be within acceptable limits. And lastly, to the test for any violations of assumptions that underlie

parametric tests like multiple regression, the assumptions of linearity, normality, homoscedasticity and independence of variance have been confirmed to hold true, so that no major biases can be expected on these grounds.

To close this chapter, a number of demographics have been analyzed for potential moderating effects on the outcome variable. In effect, no differences in consumers' attitudes towards private labels have been found on the basis of gender, achieved educational level, or age, as opposed to often suggested by previous PLB research. Only household income seemed to have an impact on consumers' evaluations of private label brands. The data suggests that as household income rises, consumers perceive PLB less positively, while lower income groups tend to be more PLB-prone. Income also appears to have moderating effects on PLB attitude via its direct effect on consumers' price consciousness. Further, it has been assessed whether respondents who accessed the online questionnaire via www.parfumo.de answered significantly differently from those who took part in the survey via direct mail invitation. It has been found that no significant differences exist in the way both groups responded to the questionnaire. In conclusion, the findings generated by this research can be assumed to be void of any major distorting biases, fulfilling the preconditions for establishing causality and drawing valid generalizations from the data.

# 5 Discussion

This final chapter 5 will interpret and discuss the findings generated in the previous chapter and thereby provide answers to all four research questions. Also the managerial implications for both manufacturers and retailers will be discussed together with a description of this thesis' major limitations and suggestions for future research. A general conclusion then closes this chapter.

## 5.1 Antecedents related to price and quality

It has been hypothesized that a consumer's value consciousness, meaning his / her "reflecting concern for price relative to quality received" (Lichtenstein et al., 1993, p. 235) would be positively related to his / her attitude towards private label brands. The findings generated from the data analysis support this predicted relationship, thereby rejecting the associated null hypothesis. The same applies to price consciousness, defined as "the degree to which the consumer focuses exclusively on paying a low price" (ibid, p. 235), whose positive relationship to private label attitude has also been confirmed by the results of the multiple regression analysis.

These results appear little surprising in view of the substantial track record of those two antecedents in previous PLB literature. Of the vast array of factors that researchers have investigated in the past, price and value consciousness are among the very few that have regularly been found to display significant effects on the outcome variable (Ailawadi et al., 2001; Burton et al., 1998; Goldsmith et al., 2010). An interesting observation from the results is however the fact that, in the eyes of consumers, there seems to be no mutually exclusive trade-off between paying a low price and getting good value. Otherwise they would not rate price and value as equally important and still evaluate PLB in a favourable way. Instead it appears that those consumers who hold positive attitudes towards private labels do so because, not in spite of their orientation towards good quality. Therefore, the question of price versus quality for them is not a question of either / or, but rather of AND.

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This raises the question whether these consumers are likely to hold price / quality schemas, as suggested by Leavitt (1954). By price / quality schemas it is referred to the consumer's belief that price functions as an indicator of quality, and vice versa. Shoppers with strong price /quality schemas will judge products to be of inferior quality if their prices are too low, and of particularly high value with correspondingly higher prices. Hypotheses 3 assumed that in the absence of such schemas, consumers' PLB attitude would improve. Failing to reject the null hypothesis, the result of this study suggest no such beliefs for PLB consumers, however neither the absence of such. There has been neither a positive nor a negative correlation been observable from the data, which does not seem to convene with the findings regarding price and value consciousness. Given a consumer favours paying low prices and obtaining a high quality at the same time, and given he / she finds these qualities in private label brands, it would be a logical consequence that he / she does not belief in price as an indicator of product quality.

A possible explanation for the lack of a significant (negative) relationship between price / quality perceptions and private label attitude might be a poor fit of the questionnaire item that was supposed to measure this construct. It has been reported earlier that the questionnaire items tested in the pre-test version in many parts displayed only little internal reliability, meaning that seemingly two items of the same construct have been measuring different things. Unfortunately, for the construct price / quality perceptions there were no established questionnaire items available from other researchers, so that they had first to be developed specifically for this study. Possibly, the way in which they were formulated has caused consumers who actually hold strong such perceptions to not answer correspondingly. Alternatively, it might not have been the formulation of the questionnaire item that led respondents to answer inadequately, but the concern to appear uneducated or uncritical when agreeing to a belief that opposes the public opinion.

Overall, the results seem to confirm the notion of Germany as a particularly price-sensitive market. This overall price-sensitivity in the retail sector is demonstrated by the comparatively high market shares that discount supermarkets hold in Germany (Herrmann, Möser, & Weber, 2009, p. 15). In 2012, grocery discounters accounted for as much as 38.3% of total value share (AC Nielsen, 2013, p. 14). The German food

discounter Aldi for instance is world-famous for his uncompromising and aggressive low-pricing strategy. The success of these discounter business models would not have been possible without a majority of the German population favouring low prices over anything else. Furthermore, German grocery retail is a highly saturated market (Seitz, 2013, p. 127), enabling consumers to choose among numerous places to shop and to hold high demands concerning prices. With several supermarkets close by, the German consumer finds it easy to choose the cheapest option for his shopping. Considering these peculiarities of the German grocery market, it makes sense that over the last years private label research has increasingly focused on market-structure determinants of PLB success, moving away from consumer-focused research like this thesis. It is assumed that structural factors like product categories or competitive rivalry are better predictors of PLB success than consumer-level factors. And without making any judgments as to the superiority of either of these two perspectives, the results obtained from this study only prove how well both would perform at complementing each other.

It is now possible to close the loop to research question 1, with which the hypotheses 1 to 3 have been concerned. Research question 1 has been formulated as: Do consumers' perceptions of price and value affect their evaluations of private label brands? Based on the insights discussed above, this study provides strong support for both price and value playing a dominant role in determining consumers' evaluations of private label brands. It thereby puts itself in line with previous studies that answered positively to similar research questions.

### 5.2 Antecedents related to extrinsic and intrinsic cue reliance

Extrinsic cue reliance has been defined as the degree to which consumers base their product assessment on extrinsic product attributes like packaging, brand name, or advertising intensity, while intrinsic cue reliance describes the opposite tendency to evaluate products on the basis of intrinsic attributes like taste, smell, and texture. Even though both factors appear to be the exact opposite of each other, they do not measure the same psychographic concept. Otherwise they would simply be two extreme ends on one single cue reliance scale. This research has treated both factors separately, since there is no scientifically supported reason to assume that one would exclude the other.

In other words, consumers can evaluate product quality on both or neither of both cue types as well. Assuming a mutually exclusive relationship between both would seem intuitive, but might not correspond to reality unless proven.

Hence, two separate research hypotheses have been formulated, one assuming a positive relationship between intrinsic cue reliance and PLB attitude, the other assuming a negative relationship between extrinsic cue reliance and PLB attitude. Interestingly, the topic of cue reliance as a whole is so complex that already the pre-test version generated an important insight: The items applied to measure extrinsic cue reliance (one each concerning packaging, advertising, and brand name) appear to be totally unrelated to each other. The lack of correlation between the three items seems to indicate that consumers do not judge products on extrinsic cues in general, but rather on each extrinsic cue individually. For example, a consumer may pay great attention to product packaging, but may still be (reportedly) unimpressed by expensive product advertising. As a result of these observations, extrinsic cue reliance has not been measured as a whole, but instead each of the three extrinsic cues has been analyzed and treated as an antecedent separate from the others.

Still, despite these efforts to ensure sufficient construct validity, neither of the hypothesized relationships have found support by the results of the data analysis. No significant relationships have been found between consumers' PLB attitudes and any of the suggested extrinsic or intrinsic cues. Potential reasons for this lack of relationship are manifold. With an average score of 5.25 on a 6-point Likert scale, self-reported intrinsic cue reliance is extremely high among all survey respondents, without any differences associated to their PLB attitudes. Measured in terms of agreement to the statement : "I can only find out if a product is good when I try it", this response either signals a profound distrust towards any manipulative marketing elements that exceed the basic product level, or once again the perceived fear to appear superficial or uneducated when responding otherwise. The latter reason appears to be the more likely explanation when comparing this observation to the results of the extrinsic product cues. Also here, the results offer no support for the research hypotheses, suggesting that none of the three investigated extrinsic cues significantly contribute to predicting consumers' PLB attitude. If consumers truly held the belief that only a product's most immediate, inner properties allow for judgments on its quality, this would have meant

that their rating of packaging, brand name, and advertising needed to be correspondingly negative. Observing that this is not the case, the previously introduced assumption that extrinsic and intrinsic cue reliance are independent from each other seems to hold true.

When evaluating any kind of survey data, researchers are often subject to the risk of overestimating the adequacy of the responses. For consumers, answering a questionnaire on their grocery purchasing habits is not particularly interesting or promises any valuable rewards, so that they respond rather quickly, spontaneously, and without any deep thinking or questioning of their own thoughts and behaviours. It is important not to forget that survey respondents - who do not have any personal interest whatsoever in the outcome of the survey – simply do not put more effort into their answers than necessary. They usually do not dwell on the thought about what motives their own behavior and in many cases, they could not tell even if they tried. More often than not, consumers do not know themselves what motivates them to prefer one product over another. So the researcher runs the risk to obtain answers that correspond to how consumers think they should think or behave and what they can best justify vis-à-vis their own self-concepts. These natural human tendencies might distort the accuracy of respondents' answers and any interpretations of the results should therefore bear these factors in mind.

By and large, research question 2 (Do shoppers of PLB rather rely on extrinsic or intrinsic product cues when making their purchase decisions?) can be answered in favour of intrinsic cues playing a much greater role in consumers' quality evaluations than extrinsic cues. However, this is not a factor that differentiates them in any way from less PLB-prone consumers. Whether or not a consumer holds positive attitudes towards private labels seems not to be influenced by the degree to which consumers refer to advertising, brand name, taste, or texture of a product. At least not in a way that the consumers themselves were aware of. The weaknesses associated with self-reporting measures might hence play a major role in this outcome.

### 5.3 Antecedents related to consumers' self-perception

This type of antecedent dealing with the way in which consumers view and express themselves is the most recent of the variables that this paper investigates. The concept of smart-shopper self-perception has been first introduced by Schindler (1988, as cited in Liu, & Wang, 2008, p 288) and denotes a consumers' tendency to derive pride from making smart purchase decisions. It has been hypothesized that consumers who perceive themselves as smart shoppers will display more favourable attitudes towards PLB due to this brand type's attractive prices in relation to good quality levels. The assumption has been that this consumer group would derive pride from their independent and critical thinking capabilities as opposed to the blind belief in the seductive marketing strategies of popular manufacturer brands. Against expectations, the findings from the multiple regression analysis did not support this hypothesized relationship. With an average score of 3.25 out of a maximum of six, survey respondents considered themselves neither experts nor uninformed shoppers and the variance in their responses is not significantly related to the variance in their PLB attitudes.

Initially, smart-shopper self-perception as a potential antecedent of PLB attitude appeared promising, since it accounts for consumers' increasing desire to express themselves through the consumption choices they make. This tendency is apparent in various industries like fashion, travel, or even education. It was therefore not illogical to suppose that similar patterns might extend into the grocery sector as well. There are two major factors that are potential causes for the failure to reject the null hypothesis: As opposed to fashion or travel, groceries are in large parts not consumed in public and are therefore naturally limited in their ability to support consumers' self-expression. As products to be consumed in private, they lack prestige or the display of social status and are overall simply not as important to consumers as higher involvement durable products or services. The second explanation would be however that smart shoppers in the sense of the definition above simply do not feel challenged enough in their smart shopping capabilities by PLB, meaning that they are less drawn towards private labels with their constantly low price levels, but rather towards promotional offers of manufacturer brands, which require more effort from the side of the consumer to

identify and make use of. In other words, buying PLB might simply appear too easy to consumers who perceive themselves as smart shoppers, so that these brands automatically fall out of consumers' consideration sets. These thoughts would also match the findings of Ailawadi et al. (2001, p. 71), who have found very distinctive traits between shoppers of PLB and shoppers of NB promotions.

To answer research question 3, How does consumers' self-perception influence their private label attitude?, it can therefore be concluded that consumers' self-perception as smart shoppers is not related to how positively they evaluate private label brands. Against prior assumptions, it appears that PLB do not appeal to this specific consumer segment, so that a number of practical implications arise from these findings. These practical implications will be dealt with in more detail further below in section 5.7.

## 5.4 Antecedents related to risk perceptions

Out of the numerous risk dimensions that researchers have investigated so far in different contexts, three have been considered potentially relevant in the groceries sector: social, financial, and performance risk. It has been hypothesized that those consumers who concern themselves with how their peer groups evaluate their consumption choices would feel less drawn towards private label brands for fear of social disapproval. Similarly, consumers with a constant fear of over-spending beyond their financial capabilities would hold more favourable attitudes towards PLB due to their affordable price levels. And lastly, consumers who perceive high levels of performance risk in groceries in general (i.e. products not meeting their expectations) were expected to evaluate PLB less favourably. Again, neither of these hypothesized relationships has found support in the data.

With an average score of 2.04, respondents' self-reported social risk perceptions are significantly lower than any of the other investigated variables, with no differential effects on consumers PLB attitudes. It appears as if respondents vehemently rejected any statements that would make them appear insecure or dependent on the opinions of other people. Possibly, many consumers may not be aware of the inherent motives that drive their own consumption choices. Also, it is possible that they feel that such social anxieties do not conform with the way in which they would like to perceive

themselves. Of course it is also simply possible that the opinions of others truly do not matter to the majority of consumers. This explanation would however be in stark contrast to the same consumers' prestige-seeking behaviours in other product categories such as cars, jewelry, or lifestyle activities. If the vast majority of German and Austrian consumers truly considered the social approval of their consumption choices irrelevant, why would the same consumers then stop caring in other aspects of their lives? If they did not, then dozens of industries would have been appealing to the wrong consumption motives for decades, which appears highly unlikely.

The case with respondents' ratings of their perceived financial risk levels is the exact opposite to perceived social risk. Here, an average rating of 4.56 indicates that consumers are indeed concerned with how much money they spend on groceries, though without differences between PLB and NB consumers. This lack of difference between both consumer groups appears counterintuitive when considering the close theoretical connection between perceived financial risk and consumer price consciousness. It is surprising that, even though price consciousness does indeed influence consumers' PLB attitudes, no such observations hold true for consumers with a constant fear of overspending. A possible explanation for this finding is that, regardless of the actual budget size, consumers in general do not want to appear wasteful, lavish, or even decadent in their shopping expenses, also when they could actually afford it. As a consequence, the majority of consumers might tend to agree strongly with sentences like "I am careful to only buy products that I really need" also when they do not pay much attention to the prices of the products they buy, which then in turn leads to a loss in the predictive capability of perceived financial risk on consumers' attitudes towards PLB.

Perceived performance risk also appears not to be a prominent issue for grocery shoppers. This risk dimension has been concerned with how well consumers perceive their expectations towards grocery items are met in reality. Overall, consumers seem to perceive a generally low performance risk across all brand types equally, which also leads to conclude that private labels are not seen as riskier choices than well-known manufacturer brands. This is an important insight which will find further attention in section 5.6 when the preliminary assumptions of this thesis are discussed. At this point it is however important to note that apparently the lower price level of private labels is

no cause for suspicion towards a potentially lower level of quality, which is indirectly measured by perceived performance risk. This is certainly good news to the retailers that own the private labels, does it show that consumers trust their products no less than any other manufacturer brand.

In conclusion, research question 4, which has been stated as "What impact do consumers' perceptions of risk have on their attitudes towards PLB?", on the basis of the finding outlined above generates no clear-cut answer. The data suggest no evidence or support for either of the three risk types social, financial, or performance risk having any significant impact on consumers' attitudes towards private label brands.

## 5.5 Demographic variables

Even though demographics have been explicitly excluded from the scope of this research, the lack of statistically significant relationships between the majority of the investigated psychographic antecedents and the outcome variable justifies another brief look at the potential impact of consumers' demographic profiles on their attitudes towards private label brands. Previous research has focused mainly on consumers' age, gender, education and income to explain variances in PLB attitude. While the first three have not been found to significantly impact the outcome variable, there appears to be a negative relationship between rising income levels and attitude towards PLB. Earlier in the theoretical part of this thesis it has been argued that demographics might indirectly influence PLB attitude through more immediate effects on consumers' psychographic profiles, as argued by Ailawadi et al. (2001, p. 76). In the case of household income, this indirect effect can be observed in this variable's influence on price consciousness, which then in turn directly affects PLB attitude. In simple words, it appears that consumers' household income is the direct cause of their price consciousness, which ultimately affects the way in which they perceive private label brands. From all demographic variables investigated, income is thereby the only factor with a significant (indirect) relationship to the outcome variable.

What is most interesting in this context is that this relationship only applies to three of the four income groups that respondents could choose in the questionnaire, which were based on the 25th, 50th, and 75th percentile of annual net income of Austrian

households. A fifth no-response category was also provided to avoid questionnaire dropout. Now, while rising income levels above the 25th percentile displayed the negative relationship described above, respondents with extremely low income levels below the 25th percentile seem to have opposite tendencies, meaning they evaluate PLB slightly less positively than the group above them. This phenomenon is highly interesting in that it appears to denote an invisible border when consumption is indeed used to gain and display status for a financially restrained segment of society. Wyatt et al. (2008, p. 67) already described the tendency of ethnic minorities in the USA to prefer national brands, even though PLB would be a much more rational and sensible choice. Possibly, similar reasons underlie the findings of this research as well, even though respondents of this survey were to 92.4% of German nationality. This explanation would illustrate that not only rational thinking processes are the basis of consumers' decision-making, but that indeed the emotional value of brands influences how national brands and private labels are perceived by consumers. Also, these insights would suggest that social risk is indeed an important factor, at least to specific segments of consumers, whether or not they themselves are aware of it.

### 5.6 Control variables

It has been explained earlier under section 2.1.3 that this thesis is based on two fundamental assumptions without which the logic of the entire research design and above all of the questionnaire would no longer be coherent. These assumptions were: (1) that consumers actually perceive quality differences between PLB and NB, since otherwise it would not make sense to examine both brand types separately and this thesis would instead be concerned with identifying antecedents of brand attitude in general; and (2) in order to perceive differences, consumers must above all be able to tell both brand types apart and know whether the brands they consume are private labels or manufacturer brands. To assess whether these assumptions hold true, they have been included into the research design as control variables. They have however not been considered potential antecedents themselves.

The more surprising are the results in this regard, when the analysis revealed that control variable 1 is actually the second strongest predictor of PLB attitude after price

consciousness. Apparently, those consumers who see particularly little quality differences between PLB and NB consequently tend to prefer the private label option, which is based on the solid logic that ceteris paribus, price will serve as the decisive factor. It has originally been assumed that perceived quality differences – or better to say the lack thereof – would act as a precondition to the validity of the suggested model, not as a causing factor in itself. Still, the rationale behind it is very convincing when compared to the other price / quality-related findings explained earlier. Given that consumers who favour PLB tend to be more price conscious and value conscious than other consumer groups, such a focus on price levels in many ways requires that other criteria or decision factors play a less dominant role or are even eliminated from the consumer's consideration set. If now a consumer saw particular quality differences between PLB and NB, he would no longer be able to focus on price (almost) exclusively since this would bring a performance risk dimension into the process. Therefore, only when the consumer feels no need to worry about quality levels can he direct his attention to the price of a product as the single most important purchase criterion.

With regards to control variable 2, the second assumption has as well been met, as proven by an average score of 4.91 out of a maximum of 6 on this dimension. Interpreting this figure leaves only little doubt that the vast majority of German and Austrian consumers are well able to tell PLB and NB apart, despite little effort from the side of the retailers to market private labels as such to the consumers. What is more, in view of the increasing number of premium PLB which are currently introduced to the German and Austrian market, it would not have been surprising to see the perceptual gap between private labels and manufacturers narrow. Many PLB nowadays are introduced with much more elaborate packaging, premium quality, and even advertising expenses than it used to be the case only ten years ago (see for example REWE Feine Welt or Spar Premium). However, as long as these premium PLB continue to be marketed under the retailers' brand names, there is no reason to expect that consumers will not be able to tell both apart.

## 5.7 Managerial implications

The results obtained from this study are relevant to both retailers and manufacturers alike, providing answers to a number of strategy-related questions. First of all, the presented model lends itself as a basis for market segmentation for both PLB and NB manufacturers. The benefit of predictive models like the one used in this paper is that, based on known and given characteristics of the consumers, target segments are more easily identified and addressed. Above all, the results suggest that consumers of private labels differ from those of national brands primarily in terms of their price and value consciousness and their perceived quality differences between both brand types. Therefore it appears that PLB and NB attract two separate and mutually exclusive consumer types, which would make direct competition between retailers and manufacturers obsolete. These consumer groups exclude each other insofar as they seek to satisfy inherently different motives in their shopping behaviour. Shoppers of PLB are motivated most strongly by savings, with a low price in relation to a maximized value for money being more important than well-known brand names or elaborate marketing strategies. This quest for low prices is the main differentiating criterion to consumers of national brands, who perceive the quality levels of established national brands to be significantly higher than private labels and prefer the latter for their supposedly superior performance. Retailers and manufacturers should take account of these differences in their target consumers and apply these insights consequently in their marketing communication, brand positioning, product development, pricing and product packaging strategies, among others. They should do so by reinforcing those measures that appeal particularly to the own consumer group, while at the same time assuming a clearer positioning vis-à-vis consumers of other brand type. More detailed implications for each of these strategic areas from the viewpoint of manufacturers and retailers will follow below.

### *5.7.1 Implications for retailers*

For the retailers that own and sell PLB it is important to know that the lower consumers perceive the quality differences between PLB and NB, the more favourable are their attitudes towards private labels. As a consequence, retailers should position

their brands on the promise of quality equivalence or even superiority to national brands to reinforce the positive beliefs that PLB consumers have about their brands. This can for instance be achieved by backing up quality promises through independent, third-party quality certification such as Stiftung Warentest or Öko-Test in Germany or AMA Gütesiegel or Gutes aus der Region in Austria. Such labels might act as signs of proof for consumers who are doubtful about the quality of private labels and reassure those consumers who already hold favourable beliefs in this regard. Blind taste tests immediately in the store would be another means of encouraging trial consumption and convincing consumers of the lack of quality differences to well-known manufacturer brands. Such blind taste tests would then also reach those consumers who would otherwise not have tried private labels by themselves and positive outcomes of these tests can be used as a basis for further brand communication to and with consumers.

On the other hand, recently more and more PLB have entered the premium segment, providing further support for constantly improving quality levels by narrowing the perceptual gap to manufacturer brands. Not only are these premium PLB even more quality-competitive, but also their pricing, packaging, and promotional strategies are far more elaborate than in the case of classic, low-cost PLB. Examples for such premium private labels include the Spar Premium brand in Austria and REWE Feine Welt in Germany. Interestingly, retailers even invest into advertising for these brands, which only a few years ago was largely uncommon. However, advertising is a difficult issue for retailers when trying to maintain low price levels. TV advertisements would consequently not be advisable, also considering the fact that consumers might perceive those as unnecessary expenses that they themselves would have to pay for in the form of higher prices. Therefore, price-conscious consumers can be more easily and more credibly reached through in-house promotion efforts such as POP displays and in-house magazines featuring suggestions of the week. It is very likely that price-conscious consumers will pay attention to such magazines, since they might expect to find the best price bargains in these weekly offers. Such promotional strategies will not only reach the intended target group, but they are also way more cost-effective and easy to implement for most retailers.

Similarly, the insight that PLB consumers actively look for the cheapest price when shopping has important implications on retailers' visual merchandizing strategies. It

essentially means that it is not necessary for supermarkets to display their PLB in prominent places in the store and on the shelves. Instead, it makes more sense to place popular manufacturer brands on eye level in the shelf, while PLB can also be placed on lower levels or in less attractive locations within the store, because consumers will likely engage in search behaviour and single out the least expensive brand regardless of its location. This also has the advantage that retailers are able to make use of shelf space that NB manufacturers typically would not like to pay a slotting fee for.

Lastly, when it comes to increasing market saturation with PLB consumers offering no more growth potential for retailers, they may try to introduce private labels not easily recognizable as such, meaning under a brand name that does not immediately reveal the retailer as the owner of the brand. Instead, a brand name just as any other manufacturer brand with promotional and pricing strategies similar to any other brand might attract customers from consumer segments that PLB previously have not targeted. More precisely, this kind of PLB would take away market share from manufacturer brands and ultimately affect and reshape the distribution of sales within the retailers' brand portfolio itself. Consequently, it makes sense for retailers to introduce such brands if, and only if, their profit margins are larger than those of the manufacturer brands that it is stealing sales from. But even if that is the case, there are further serious disadvantages to such a growth strategy. Considering that national brand manufacturers are actually the primary customers of any retailer, it is important to not over-stress the mutual relationships, because it is still the well-known manufacturer brands that draw traffic into the stores. Retailers have a strong interest in ensuring that manufacturers are satisfied with the cooperation as well. Otherwise they might at some point look for alternative channels of distribution. After all, retailers and manufacturers are not primarily competitors but also business partners seeking for mutually beneficial long-term relationships. Therefore, a more cooperative rather than competitive approach to each other will surely not be to either side's detriment.

### *5.7.2 Implications for manufacturers*

The implications for NB manufacturers on the other hand are equally relevant. As mentioned previously, private labels and manufacturer brands attract different

consumer segments who seek to satisfy different consumption needs. Accordingly, positioning strategies, and particularly price positioning strategies, are different for manufacturers than they are for retailers. Manufacturer brands often make use of promotions to encourage brand switching and attract more price-conscious consumers to try their brands. In order to get PLB consumers to switch, they would hence need to set promotional prices that are as low as the price of the reference PLB. While this may indeed cause part of PLB consumers to try the national brand version, this does however not prevent them from switching back to the private label as soon as the promotion is over. Above all, manufacturer brands can hardly sustain such low price levels in the long run to keep price-conscious consumers with the brand. The problem is that this consumer segment will stay loyal to the lowest price, not the brand that happens to have this lowest price. What is more, consumers in general will easily get used to the promotion price and will consequently not buy the brand anymore at the regular list price, but only during promotion periods. This is also the major reason why manufacturers of national brands should not engage in price promotions too frequently or too regularly. Also, this would put the national brand's perceived quality superiority at risk, particularly with consumers that hold strong price-quality schemas. Ultimately, competing with PLB on the basis of price is not recommendable for national brands because it would completely destroy profitability levels in the industry and harm quality in general.

Instead, manufacturers will want to make sure that the perceived quality difference between their own brands and private labels remains as large as possible. If perceived quality differences between private labels and national brands lower further in the future, national brand manufacturers will find it hard to justify their price premiums, therefore a strict focus on quality as opposed to price appears mandatory. This makes constant innovation, R&D, and thorough market research an absolute must for these brands to remain competitive. Regularly introducing innovations to the market that add value in consumers' eyes seems to be one of the last resorts for manufacturer brands to set themselves apart from private labels. Considering the enormous investments that real innovations require, PLB will find it hard to follow suite while at the same time retaining their low price levels.

Overall, retailers and manufacturers alike are well-advised to install regular attitude monitoring tools to complement their sales data. This will help them track changes in consumers attitudes and enables them to assess these changes for their associated causes such as changes to the business strategy. For instance it can be analyzed whether and to what extent a newly introduced packaging has caused shifts in consumers' attitudes towards the brand, particularly when these changes do not immediately translate into higher sales. That way, other factors than those suggested by this thesis can be identified to positively or negatively influence brand attitude, generating important key learnings for future strategic decisions.

All aspects mentioned above are concerned with identifying factors that draw customers to private labels as opposed to national brands. What it does however not answer is the question what keeps customers loyal to a brand. Brand loyalty is usually very difficult to achieve on the basis of price alone. Binding consumers to a brand long-term, for example via loyalty programs, involves far more elaborate branding techniques. Most importantly, retailers need to make sure that consumers' positive attitudes towards private labels ultimately turn into action. After all, a positive attitude alone does not generate any revenue, but ideally causes the corresponding purchase behaviour. Similarly, purchases of private labels that are not caused by an underlying positive attitude might not be sustainable in the long run. It needs both, the emotional as well as the behavioural component to make for lasting PLB success. How this can be achieved in practice is well worth consecutive studies adding on the insights generated from this thesis.

## 5.8 Limitations and suggestions for future research

Like any other research, this study suffers from a number of deficiencies arising from various different causes such as shortcomings in the survey design, sampling method, and applied methodology. Therefore, this section will outline some of the major aspects that should be addressed by future researchers to bring PLB attitude research further.

First of all, the results generated from this thesis merely provide a snapshot of consumers' PLB attitudes in Germany and Austria. This means that the insights drawn from it are per definition outdated by the time this thesis is handed in. In order to be

able to detect long-term trends and developments in this matter, which is actually a precondition to developing any branding strategy, longitudinal data comparisons are required, e.g. repetitions of this study at fixed time intervals, using the same methodology with the same sample of respondents. Alternatively, long-term household scanner panels that monitor participants' private label consumption over time can also yield valuable insights. Such comparisons over longer periods of time will also help make researchers aware of other factors that possibly influence consumers' private label attitudes, considering that the ones identified by this thesis obviously only explain PLB attitude to an insufficient degree.

Further, this study has been subject to a number of geographical limitations. Survey respondents were almost exclusively of German and Austrian nationality, so that the findings generated here do not extend beyond these national borders. To allow for a greater degree of generalizability of the data, it will be necessary to extend the scope to larger nationality sample, possibly even pan-European data, even though such a study would be very costly and difficult to implement. Also, an attempt needs to be made to apply random sampling techniques as opposed to the convenience sampling methods applied in this study. National comparisons would be most interesting with markets where PLB are either more or less dominants than in Germany, for example by conducting the same study simultaneously in GB with 50.5% PLB value share and Italy with only 16.8% PLB value share (Symphony IRI Group, 2012, p. 6).

Considering that this study merely achieved to identify three psychographic antecedents of PLB attitude – price consciousness, quality consciousness, and perceived quality differences between PLB and NB – and considering that these three antecedents together only explain about 35% of the differences in consumers' PLB attitudes, further qualitative research techniques might be needed to identify other possible antecedents apart from those include in this thesis. This can be achieved for example via focus groups or one-on-one interviews with consumers of private labels and manufacturer brands to determine which factors consumers actually pay attention to and what reasons they mention for preferring PLB over NB, or vice versa. The antecedents identified by such techniques can then be used as a basis for further quantitative investigation like the research at hand. Again, this presumes that the consumers actually know themselves what motives drive their purchase behaviour.

Alternatively, since most of the psychographics investigated here did not appear to have a significant influence on consumers' PLB attitudes, it is possible that their effect on consumers' purchase behaviour directly is larger. This would account for the possibility that, against expectations, behaviour is not strongly caused by attitudes, so that the same study where private label attitude is replaced by PLB purchase behaviour as the dependent variable might render more significant results. Similarly, future research could also focus on investigating the direct causal links between demographics and psychographics to provide further support for the notion of Ailawadi et al. (2001) that demographics influence private label attitude indirectly via psychographics. Since not many researchers have devoted themselves to this question yet, this would provide important insights into the kind and direction of causality between variables. In essence researchers should get encouraged to try out different variations of causal relationships, opening up new possibilities by ignoring at first what seems the most logical option.

Furthermore, future researchers might also attempt to identify more objective measures of whatever it is they are looking at. Measuring psychographics via self-reported scores suffers from some inherent weaknesses. It pre-supposes that consumers are able and / or willing to analyze the motives of their own behaviour, but instead there is the danger that respondents answer in a way they perceive to be socially acceptable and that puts themselves in the best light, not only vis-à-vis the researcher, but also vis-à-vis themselves. To avoid such biases, experimental research settings can be applied by future researchers. Such experimental settings, for example in the store directly where consumers' authentic behaviours can be observed, may well be more difficult to analyze and codify, but they will more closely reflect consumption reality and yield a more realistic picture of consumers' actual buying behaviour. If the psychographics investigated in this paper were observable via such experimental settings with consumers acting much more naturally, this would make a great contribution to eliminating bias from the data.

As has been noted earlier, more recent studies on PLB attitude have shifted their focus away from consumer-centric research to a more market structure-centric approach. It is doubtful whether a perspective that focuses exclusively on structural determinants of the PLB market and that largely ignores the consumer as the most important

contributing actor is truly able to yield meaningful insights into the private label market. However, the relative scarcity of significant results from research like this thesis proves that a consumer-centric approach alone is also not sufficient to explain PLB success or failure. Instead, as previously argued, future researchers might want to combine both approaches to a holistic, multi-perspective research domain that takes advantage of the strengths of either one of these approaches. In any case, future researchers are highly encouraged to learn from and avoid the mistakes that have been made in this research today and to build on the insights it was able to generate.

## 5.9 Summary and conclusion

Understanding what drives consumers to prefer private labels over national brands is not only interesting for the retailers that market those private labels, but also for the manufacturers that are competing with them on a daily basis. Such success drivers are however, as PLB research history confirms, not easy to determine. This thesis has concerned itself with addressing the problem of a highly confusing multitude of factors that researchers believe have an influence on consumers' attitudes towards private label brands. Not only do these supposed influencing factors approach the topic from various different angles (the demographic, psychographic, or cultural perspective), but they have also so far been mostly unsuccessful at explaining or predicting what drives consumers to buy these brands. In order to address the fact that a majority of the studies on this topic have been conducted with US consumers, this research adds on the existing literature by examining the attitudes of respondents from Germany and Austria, however from a psychographic perspective exclusively. The goal has thereby been to uncover generalized perceptions of private labels that would be shared by a majority of PLB consumers, regardless of the precise brand, product category or consumer demographic profile. Also, measuring attitude has been preferred over watching actual behaviour for one primary reason: One and the same behaviour can manifest itself from two totally different motivations. What this study has been interested in is the underlying motivations that ultimately cause the behaviour, so that the outcome can be predicted and not only observed.

Based on available literature, the most promising psychographic antecedents have been selected as predictor variables of PLB attitude, which have been put in a total of nine hypothesized relationships to the outcome variable. An analysis based on multiple regression techniques was intended to establish causality between the investigated variables. The results generated from this research empirically support only two of the predicted relationships between private label attitudes and its antecedents and thereby answer the research questions in the following way: In summary, the results offer general support for price and value consciousness as well as perceived quality differences between PLB and NB as significant predictors of PLB attitude, while on the other hand all remaining supposed predictors – price / quality perceptions, intrinsic and extrinsic cue reliance, smart-shopper self-perception, and three different kinds of perceived risk – have not been found to significantly influence consumers' PLB proneness.

Despite the fact that support could be found for only a fraction of the hypothesized relationships, the primary advantage of the study conducted here is that it enables to immediately and directly compare the investigated antecedents with each other, since all of them have been measured using the same, comparable scale. Such a joint examination helps put each antecedent in a larger context and sets their impact in relation to each other. Still, the insights drawn from it are far from satisfactory. The reason for such a lack of significant results could be that there are either major misconceptions in the design and implementation of the study, or the majority of research conducted up until today has been following the wrong path. It will therefore be up to future researchers to improve on this study and to remain open to alternative influencing factors that have not been considered potentially impactful so far.

Even though this study has not been overly successful at achieving its initial objective, i.e. confirming the impact of antecedents that the literature suggests as relevant, the absence of such major insights is just as practically important. The consequences that arise for retailers and manufacturers are manifold, suggesting to them a number of strategic aspects such as price and quality positioning to be particularly important, while seemingly other factors they concerned themselves with are less relevant to consumers, such as advertising and packaging design. However, for all results suggested here, it is important to bear in mind that consumers may not always be the

most knowledgeable to ask when it comes to explaining their own motives, perceptions and preferences.

There have intentionally not been any limitations made to the product category, specific brand, purchasing occasion, or other context information, so that respondents had to envision the context themselves. It is only logical that this produces vastly different outcomes, so that common denominators between responses are not easily found. It was the purpose of this study to ensure vast generalizability of the results, if there were any. Now that it has become obvious that the context may have been much too broadly specified, future researchers might define more narrow frames aspect by aspect, so that the sum of the puzzles will provide the complete picture in the end. In reality, it has already been quite optimistic in the first place to believe that such complex processes like consumers' attitude formation and decision making could be grasped in one single, simple model. There is rarely such thing as the PLB consumer or the NB consumer. Most consumers are both, and they cannot easily be classified into either of these groups. If they could, this would after all be the most convincing indicator that research has done something wrong.

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# Annex



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**Annex 1: Survey questionnaire German version**

Sehr geehrte/r Teilnehmer/in,

vielen Dank, dass Sie an meiner Umfrage mitwirken.

Ich bin Studentin im Fach Marketing & Sales an der IMC Fachhochschule in Krems, Österreich, und schreibe momentan meine Masterarbeit zum Thema Lebensmittel-Eigenmarken.

Die Umfrage dauert etwa 5-6 Minuten.

Ich garantiere, dass alle Antworten anonymisiert verarbeitet und streng vertraulich behandelt werden.

Ihre Teilnahme trägt enorm zum Erfolg meiner Masterarbeit bei!

Vielen Dank und freundliche Grüße,

Stefanie Weiß

Ich würde gerne mehr über Ihre Gedanken zu Supermarkt-Lebensmitteln, im Speziellen Eigenmarken, erfahren. Eigenmarken oder auch Handelsmarken sind jene Produkte, die direkt von den Supermarkt-Ketten besessen werden, die sie auch vertreiben, nicht wie sonst üblich von externen Markenartikel-Herstellern. Beispiele für den deutschen und österreichischen Markt finden Sie auf den Photos unten.

**Ausgewählte Eigenmarken in Deutschland**


**Ausgewählte Eigenmarken in Österreich**


ja! Natürlich.


***1. Bitte geben Sie an, inwiefern Sie den folgenden Aussagen (1-4 von 24) zustimmen oder nicht zustimmen:**

| | Stimme überhaupt nicht zu | Stimme überwiegend nicht zu | Stimme eher nicht zu | Stimme eher zu | Stimme überwiegend zu | Stimme uneingeschränkt zu |
|---|---|---|---|---|---|---|
| Bei Lebensmitteln sind Eigenmarken im Allgemeinen die beste Wahl. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich wähle, wenn verfügbar, bevorzugt die Eigenmarken-Variante. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich empfinde keine Qualitätsunterschiede zwischen Eigenmarken und Herstellermarken. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich weiß gar nicht, ob die Marken, die ich kaufe, Eigenmarken oder Herstellermarken sind. | ○ | ○ | ○ | ○ | ○ | ○ |

***2. Bitte geben Sie an, inwiefern Sie den folgenden Aussagen (5-14 von 24) zustimmen oder nicht zustimmen:**

| | Stimme überhaupt nicht zu | Stimme überwiegend nicht zu | Stimme eher nicht zu | Stimme eher zu | Stimme überwiegend zu | Stimme uneingeschränkt zu |
|---|---|---|---|---|---|---|
| Der Markenname ist ein guter Indikator für die Qualität eines Lebensmittels. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich kann nur sagen, ob ein Produkt gut ist, wenn ich es probiere. | ○ | ○ | ○ | ○ | ○ | ○ |
| Welche Lebensmittel ich kaufe hat Einfluss darauf, wie andere mich wahrnehmen. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich kaufe häufig Marken, die ich bereits aus der Werbung kenne. | ○ | ○ | ○ | ○ | ○ | ○ |
| Bekannte Lebensmittel-Marken zu kaufen sichert mir die Anerkennung anderer. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich achte darauf, nur Produkte zu kaufen, die ich auch wirklich brauche. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich vergleiche verschiedene Produkte auf ihren Preis pro Kilo oder pro Liter. | ○ | ○ | ○ | ○ | ○ | ○ |
| Die Qualität eines Lebensmittels kann ich auch ohne es zu probieren zuverlässig beurteilen. | ○ | ○ | ○ | ○ | ○ | ○ |
| Was Lebensmittel angeht ist mir ein niedriger Preis wichtiger als ein großer Markenname. | ○ | ○ | ○ | ○ | ○ | ○ |
| Am Preis erkennt man die Qualität. | ○ | ○ | ○ | ○ | ○ | ○ |

***3. Bitte geben Sie an, inwiefern Sie den folgenden Aussagen (15-24 von 24) zustimmen oder nicht zustimmen:**

| | Stimme überhaupt nicht zu | Stimme überwiegend nicht zu | Stimme eher nicht zu | Stimme eher zu | Stimme überwiegend zu | Stimme uneingeschränkt zu |
|---|---|---|---|---|---|---|
| Ich achte darauf, nicht mehr zu kaufen als ich mir leisten kann. | ○ | ○ | ○ | ○ | ○ | ○ |
| Wenn ich Gäste einlade, wäre es mir unangenehm, ihnen Eigenmarken zu servieren. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich bin oft besorgt, dass die Lebensmittel, die ich kaufe, meinen Erwartungen nicht entsprechen. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich bin stolz darauf, schlaue Kaufentscheidungen zu treffen. | ○ | ○ | ○ | ○ | ○ | ○ |
| Man sieht einem Lebensmittel schon an der Verpackung an, ob es Qualität hat. | ○ | ○ | ○ | ○ | ○ | ○ |
| Qualität hat ihren Preis. | ○ | ○ | ○ | ○ | ○ | ○ |
| Wenn ich einkaufen gehe, kaufe ich einfach das, was ich möchte, ohne vorher die Alternativen zu vergleichen. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich bin so etwas wie ein Experte was Lebensmittel-Einkäufe angeht. | ○ | ○ | ○ | ○ | ○ | ○ |
| Wenn ich Lebensmittel einkaufe, suche ich nach der preisgünstigsten Marke. | ○ | ○ | ○ | ○ | ○ | ○ |
| Ich weiß genau, wo ich das beste Angebot für verschiedene Produkte bekomme. | ○ | ○ | ○ | ○ | ○ | ○ |

Zu guter Letzt beantworten Sie bitte ein paar Fragen zu Ihrer Person. Ihre Angaben werden helfen, die Datenqualität der Studie zu verbessern. All Ihre Angaben werden anonymisiert verarbeitet und streng vertraulich behandelt.

***4. Was ist Ihr Geschlecht?**

○ weiblich ○ männlich

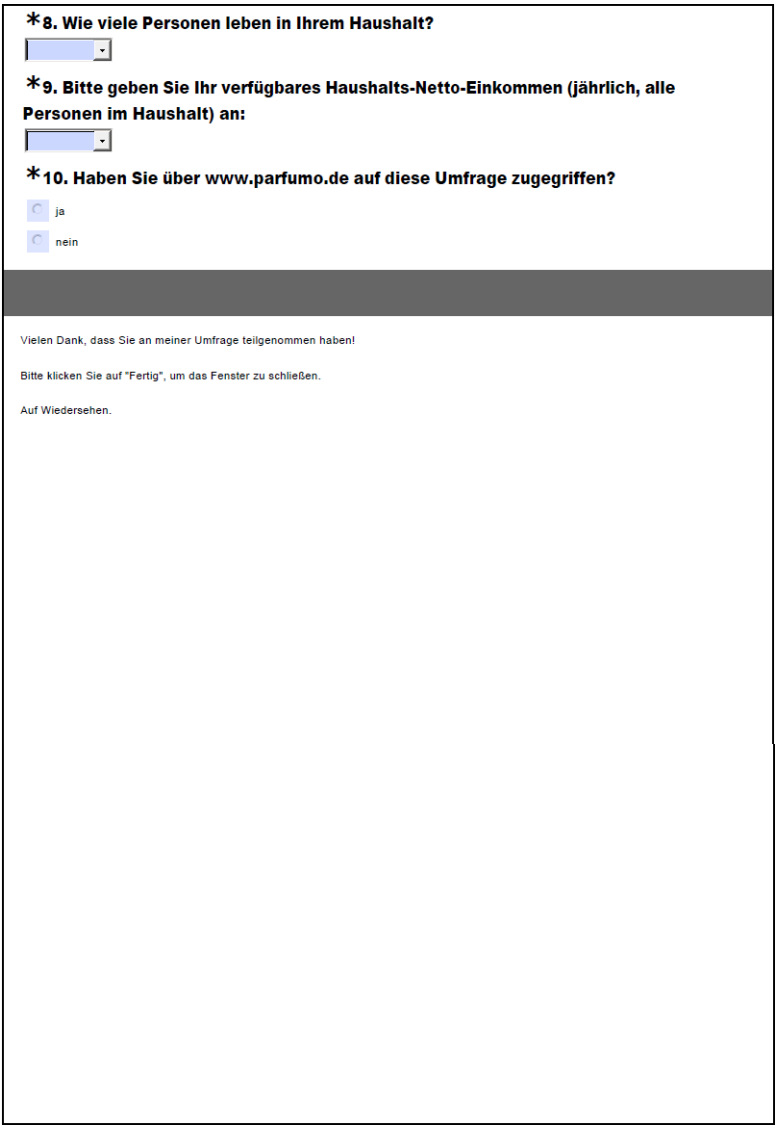
***5. Wie alt sind Sie?**

***6. Bitte geben Sie Ihre Nationalität an:**

Andere (bitte angeben):

***7. Bitte geben Sie Ihren höchsten Bildungsabschluss an:**

Sonstiges (bitte angeben):



*8. Wie viele Personen leben in Ihrem Haushalt?

*9. Bitte geben Sie Ihr verfügbares Haushalts-Netto-Einkommen (jährlich, alle Personen im Haushalt) an:

*10. Haben Sie über www.parfumo.de auf diese Umfrage zugegriffen?

ja

nein

Vielen Dank, dass Sie an meiner Umfrage teilgenommen haben!

Bitte klicken Sie auf "Fertig", um das Fenster zu schließen.

Auf Wiedersehen.

**Annex 2: Survey questionnaire English version**

Dear respondent,

thank you for participating in my survey.

I am a Marketing & Sales student at the IMC University of Applied Sciences in Krems, Austria, and am currently writing my Master thesis on Private Label food brands.

The survey will take about 5-6 minutes to complete.

I guarantee that all answers are processed anonymously and will be kept strictly confidential.

Your participation is highly appreciated and will contribute greatly to the success of my thesis!

Thank you very much and kind regards,

Stefanie Weiß

I would like to find out more about your thoughts on supermarket food products, more specifically Private Label Brands. Private Label Brands are owned by the supermarket chains that sell them, NOT by external brand manufacturers. For examples from the German and Austrian market, please refer to the pictures below.

**Selected Private Label Brands in Germany**


**Selected Private Label Brands in Austria**




***1. Please indicate how much you agree or disagree with the following statements (1-4 of 24):**

| | I totally disagree | I mostly disagree | I somewhat disagree | I somewhat agree | I mostly agree | I totally agree |
|---|---|---|---|---|---|---|
| For grocery (=food) products, Private Label Brands are usually the best choice. | ○ | ○ | ○ | ○ | ○ | ○ |
| I prefer to buy the Private Label option, if available. | ○ | ○ | ○ | ○ | ○ | ○ |
| I don't see any quality differences between Private Label Brands and Manufacturer Brands. | ○ | ○ | ○ | ○ | ○ | ○ |
| I don't know if the brands I buy are Private Labels or Manufacturer Brands. | ○ | ○ | ○ | ○ | ○ | ○ |

***2. Please indicate how much you agree or disagree with the following statements (5-14 of 24):**

| | I totally disagree | I mostly disagree | I somewhat disagree | I somewhat agree | I mostly agree | I totally agree |
|---|---|---|---|---|---|---|
| For food products the brand name is a good indicator of product quality. | ○ | ○ | ○ | ○ | ○ | ○ |
| I can only find out if a product is good when I try it. | ○ | ○ | ○ | ○ | ○ | ○ |
| What food products I buy influences the way others see me. | ○ | ○ | ○ | ○ | ○ | ○ |
| I often buy brands that I already know from advertising. | ○ | ○ | ○ | ○ | ○ | ○ |
| Buying well-known food brands gives me the approval of others. | ○ | ○ | ○ | ○ | ○ | ○ |
| I take care to only buy products that I really need. | ○ | ○ | ○ | ○ | ○ | ○ |
| I compare the price per kilo or per litre for different product options. | ○ | ○ | ○ | ○ | ○ | ○ |
| I can reliably tell the quality of a product even without trying it. | ○ | ○ | ○ | ○ | ○ | ○ |
| When it comes to food, a low price is more important to me than a big brand name. | ○ | ○ | ○ | ○ | ○ | ○ |
| One can tell quality from the price. | ○ | ○ | ○ | ○ | ○ | ○ |

***3. Please indicate how much you agree or disagree with the following statements (15-24 of 24):**

| | I totally disagree | I mostly disagree | I somewhat disagree | I somewhat agree | I mostly agree | I totally agree |
|---|---|---|---|---|---|---|
| I am careful not to buy more than I can afford. | ○ | ○ | ○ | ○ | ○ | ○ |
| When I invite guests I would feel uncomfortable to serve them Private Label products. | ○ | ○ | ○ | ○ | ○ | ○ |
| I am often worried that the food I buy won't meet my expectations. | ○ | ○ | ○ | ○ | ○ | ○ |
| I take pride in making smart purchase decisions. | ○ | ○ | ○ | ○ | ○ | ○ |
| You can tell from the packaging if a product has good quality. | ○ | ○ | ○ | ○ | ○ | ○ |
| Quality has its price. | ○ | ○ | ○ | ○ | ○ | ○ |
| When I do the shopping, I just take what I like without comparing it to other options. | ○ | ○ | ○ | ○ | ○ | ○ |
| I am somewhat of an expert when it comes to shopping for food. | ○ | ○ | ○ | ○ | ○ | ○ |
| When I shop for food, I search for the cheapest brand. | ○ | ○ | ○ | ○ | ○ | ○ |
| I know exactly where to find the best deal for different products. | ○ | ○ | ○ | ○ | ○ | ○ |

For last, please answer a few questions about yourself. This will help to improve the data quality of the survey. All of your data will be processed anonymously and will be kept strictly confidential.

***4. What is your gender?**

○ female ○ male

***5. What is your age?**

***6. Please indicate your nationality:**

Other (please specify):

***7. Please indicate your highest level of education:**

Other (please specify):

***8. How many persons are living in your household?**

***9. Please specify your total household net income (per year, all persons in your household).**

***10. Did you access this questionnaire via www.parfumo.de?**

yes

no

Thank you very much for taking part in my survey!

Please click on "Submit" to close the window.

Goodbye.

**Annex 3: Full list of questionnaire items before and after deletion**

| **Retained items** | | |
|---|---|---|
| **Measured construct** | **Questionnaire item** | **Source** |
| PLBAT | For grocery (=food) products, Private Label Brands are usually the best choice. | Modified from Liu, & Wang (2008) |
| PLBAT | I prefer to buy the private label option, if available. | Developed by the author |
| CONTROL1 | I don't see any quality differences between Private Label Brands and Manufacturer Brands. (reverse coded) | Modified from Batra, & Sinha (2000) |
| CONTROL2 | I don't know if the brands I buy are Private Labels or Manufacturer Brands. | Developed by the author |
| PRICE | When I shop for food, I search for the cheapest brand. | Adopted from Kara et al. (2009) |
| VALUE | I compare the price per kilo or per liter for different product options. | Modified from Lichtenstein et al. (1993) |
| PERCEP | Quality has its price. | Modified from Burton et al. (1998) |
| INTRIN | I can only find out if a product is good when I try it. | Developed by the author |
| EXTRIN1 | The brand name is a good indicator of product quality. | Developed by the author |
| EXTRIN2 | I often buy brands that I already know from advertising. | Developed by the author |
| EXTRIN3 | You can tell from the packaging if a product has good quality. | Developed by the author |
| SMART | I take pride in making smart purchase decisions. | Adopted from Liu, & Wang (2008) |
| SMART | I am somewhat of an expert when it comes to shopping. | Adopted from Ailawadi et al. (2001) |
| SOCIAL | What food products I buy influences the way how others see me. | Modified from Lichtenstein et al. (1993) |
| SOCIAL | Buying well-known food brands gives me the approval of others. | Modified from Lichtenstein et al (1993) |
| SOCIAL | When I invite guests, I would feel uncomfortable to serve them Private Label prod- | Developed by the author |

| | | |
|---|---|---|
| | ucts. | |
| FINAN | I am careful to only buy products that I really need. | Developed by the author |
| PERFORM | I am often worried that the food I buy won't meet my expectations. | Developed by the author |

| **Items eliminated after pre-test** | | |
|---|---|---|
| **Measured construct** | **Questionnaire item** | **Source** |
| PLBAT | In general, Private Label Brands are of poor quality. | Developed by the author |
| PLBAT | In comparison to Manufacturer Brands, Private Label Brands offer better value for money. | Developed by the author |
| PRICE | When I go shopping, I rarely pay attention to the price of the products. (reverse) | Developed by the author |
| PRICE | The price is the most important criterion when I choose a brand. | Adopted from Kara et al. (2001) |
| PERCEP | One can tell quality from the price. | Modified from Burton et al. (1998) |
| EXTRIN3 | I pay great attention to the attractiveness of a product's packaging. | Developed by the author |
| SMART | I feel overwhelmed by the variety of products on offer nowadays. (reverse) | Developed by the author |
| SMART | I enjoy giving other people tips on shopping. | Adopted from Ailawadi et al, (2001) |
| SOCIAL | I tend to buy the same brands my friends are buying. | Developed by the author |
| SOCIAL | I don't like to be non-conforming. | Modified from Ailawadi et al. (2001) |
| FINAN | I often worry about spending too much money on food. | Modified from Liu, & Wang (2008) |
| PERFORM | Many brands fail to keep what they promise. | Developed by the author |
| PERFORM | When I try something new, I first only buy one piece in case I don't like it. | Developed by the author |

| **Items eliminated after final data collection** | | |
|---|---|---|
| **Measured construct** | **Questionnaire item** | **Source** |
| PRICE | When it comes to food, a low price is more important to me than a big brand name. | Modified from Ailawadi et al. (2001) |
| VALUE | When I do the shopping, I just take what I like without comparing it to other options. (reverse) | Developed by the author |
| PERCEP | One can tell quality from the price. | Modified from Lichtenstein et al. (1993) |
| INTRIN | I can reliably tell the quality of a product also without trying it. (reverse) | Modified from Batra, & Sinha (2000) |
| SMART | I know exactly where to find the best deal for different products. | Developed by the author |
| FINAN | I am careful not to buy more than I can afford. | Developed by the author |

**Annex 4: summary table of respondents' demographic profiles**

| Demographic characteristics | Choice options | Percentage of sample | Total of sample |
|---|---|---|---|
| Gender | Female | 65.4% | 85 |
| | male | 34.6% | 45 |
| Age | 16-25 | 10.8% | 14 |
| | 26-35 | 17.7% | 23 |
| | 36-45 | 35.4% | 46 |
| | 46-55 | 30.7% | 40 |
| | 56-65 | 5.4% | 7 |
| Nationality | Germany | 92.4% | 120 |
| | Austria | 4.6% | 6 |
| | Switzerland | 1.5% | 2 |
| | None of the above | 1.5% | 2 |
| Education | 9th grade | 6.9% | 9 |
| | 10th grade | 13.8% | 18 |
| | High school | 29.2% | 38 |
| | Vocational training or equiv. | 9.2% | 12 |
| | Bachelor degree or equiv. | 14.6% | 19 |
| | Master degree or equiv. | 16.2% | 21 |
| | Doctoral degree or MBA | 6.2% | 8 |
| | None of the above | 3.8% | 5 |
| Household size | Single household | 20.0% | 26 |
| | Two persons | 46.9% | 61 |
| | Three persons | 17.7% | 23 |
| | Four or more persons | 15.4% | 20 |
| Annual household net income | Less than 20.000 Euro | 20.0% | 26 |
| | 20.001 – 33.000 Euro | 16.2% | 21 |
| | 33.001 – 50.000 Euro | 25.4% | 33 |
| | 50.001 Euro and more | 26.2% | 34 |

| | | | |
|---|---|---|---|
| | No response | 12.3% | 16 |
| Questionnaire accessed via www.parfumo.de? | Yes | 75.4% | 98 |
| | No | 24.6% | 32 |
| Total | | 100.0% | 130 |

**Annex 5: SPSS output from multiple regression analysis**

**Deskriptive Statistiken**

| | Mittelwert | Standardabweichung | N |
|---|---|---|---|
| PLBAT | 3,4538 | 1,13685 | 130 |
| VALUE | 4,1577 | 1,22004 | 130 |
| PERCEP | 2,46 | 1,108 | 130 |
| PRICE | 3,18 | 1,244 | 130 |
| INTRIN | 5,25 | ,881 | 130 |
| EXTRIN1 | 3,14 | 1,293 | 130 |
| EXTRIN2 | 2,77 | 1,096 | 130 |
| EXTRIN3 | 2,48 | 1,143 | 130 |
| SMART | 3,2538 | 1,22355 | 130 |
| SOCIAL | 2,0436 | ,89152 | 130 |
| FINAN | 4,56 | 1,161 | 130 |
| PERFORM | 2,73 | 1,112 | 130 |
| CONTROL1 | 3,31 | 1,160 | 130 |
| CONTROL2 | 4,91 | 1,400 | 130 |

**Aufgenommene/Entfernte Variablen[a]**

| Modell | Aufgenommene Variablen | Entfernte Variablen | Methode |
|---|---|---|---|
| 1 | PRICE | . | Vorwährts- (Kriterium: Wahrscheinlichkeit von F-Wert für Aufnahme <= ,050) |
| 2 | CONTROL1 | . | Vorwährts- (Kriterium: Wahrscheinlichkeit von F-Wert für Aufnahme <= ,050) |
| 3 | VALUE | . | Vorwährts- (Kriterium: Wahrscheinlichkeit von F-Wert für Aufnahme <= ,050) |

a. Abhängige Variable: PLBAT

**Korrelationen**

| | | PLBAT | VALUE | PERCEP | PRICE | INTRIN | EXTRIN1 | EXTRIN2 | EXTRIN3 | SMART | SOCIAL | FINAN | PERFORM | CONTROL1 | CONTROL2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Korrelation nach Pearson | PLBAT | 1,000 | ,402 | -,121 | ,483 | ,139 | ,081 | -,033 | ,047 | ,132 | -,011 | -,007 | -,133 | -,471 | ,019 |
| | VALUE | ,402 | 1,000 | -,180 | ,497 | -,004 | -,110 | -,144 | -,079 | ,348 | -,110 | ,293 | ,114 | -,234 | ,174 |
| | PERCEP | -,121 | -,180 | 1,000 | -,074 | -,173 | ,453 | ,184 | ,413 | ,019 | ,320 | -,010 | ,139 | ,112 | -,112 |
| | PRICE | ,483 | ,497 | -,074 | 1,000 | ,135 | ,076 | ,077 | ,107 | ,170 | -,047 | ,126 | -,042 | -,346 | ,068 |
| | INTRIN | ,139 | -,004 | -,173 | ,135 | 1,000 | -,091 | -,141 | -,041 | -,116 | -,132 | -,007 | -,027 | -,143 | ,075 |
| | EXTRIN1 | ,081 | -,110 | ,453 | ,076 | -,091 | 1,000 | ,340 | ,359 | ,014 | ,349 | -,068 | -,049 | ,002 | -,177 |
| | EXTRIN2 | -,033 | -,144 | ,184 | ,077 | -,141 | ,340 | 1,000 | ,237 | -,072 | ,330 | -,062 | -,026 | -,041 | ,031 |
| | EXTRIN3 | ,047 | -,079 | ,413 | ,107 | -,041 | ,359 | ,237 | 1,000 | -,037 | ,352 | -,075 | ,077 | -,065 | -,055 |
| | SMART | ,132 | ,348 | ,019 | ,170 | -,116 | ,014 | -,072 | -,037 | 1,000 | -,106 | ,063 | ,062 | ,065 | ,084 |
| | SOCIAL | -,011 | -,110 | ,320 | -,047 | -,132 | ,349 | ,330 | ,352 | -,106 | 1,000 | -,169 | ,210 | -,041 | -,162 |
| | FINAN | -,007 | ,293 | -,010 | ,126 | -,007 | -,068 | -,062 | -,075 | ,063 | -,169 | 1,000 | ,058 | -,054 | ,070 |
| | PERFORM | -,133 | ,114 | ,139 | -,042 | -,027 | -,049 | -,026 | ,077 | ,062 | ,210 | ,058 | 1,000 | ,065 | -,230 |
| | CONTROL1 | -,471 | -,234 | ,112 | -,346 | -,143 | ,002 | -,041 | -,065 | ,065 | -,041 | -,054 | ,065 | 1,000 | -,049 |
| | CONTROL2 | ,019 | ,174 | -,112 | ,068 | ,075 | -,177 | ,031 | -,055 | ,084 | -,162 | ,070 | -,230 | -,049 | 1,000 |
| Sig. (Einseitig) | PLBAT | . | ,000 | ,084 | ,000 | ,057 | ,180 | ,353 | ,298 | ,066 | ,452 | ,470 | ,066 | ,000 | ,414 |
| | VALUE | ,000 | . | ,020 | ,000 | ,482 | ,107 | ,052 | ,185 | ,000 | ,107 | ,000 | ,098 | ,004 | ,024 |
| | PERCEP | ,084 | ,020 | . | ,203 | ,025 | ,000 | ,018 | ,000 | ,416 | ,000 | ,454 | ,057 | ,103 | ,102 |
| | PRICE | ,000 | ,000 | ,203 | . | ,063 | ,196 | ,192 | ,114 | ,026 | ,298 | ,076 | ,317 | ,000 | ,222 |
| | INTRIN | ,057 | ,482 | ,025 | ,063 | . | ,150 | ,054 | ,324 | ,094 | ,067 | ,467 | ,381 | ,052 | ,198 |
| | EXTRIN1 | ,180 | ,107 | ,000 | ,196 | ,150 | . | ,000 | ,000 | ,436 | ,000 | ,222 | ,289 | ,489 | ,022 |
| | EXTRIN2 | ,353 | ,052 | ,018 | ,192 | ,054 | ,000 | . | ,003 | ,209 | ,000 | ,242 | ,385 | ,321 | ,361 |
| | EXTRIN3 | ,298 | ,185 | ,000 | ,114 | ,324 | ,000 | ,003 | . | ,337 | ,000 | ,199 | ,191 | ,232 | ,268 |
| | SMART | ,066 | ,000 | ,416 | ,026 | ,094 | ,436 | ,209 | ,337 | . | ,115 | ,240 | ,242 | ,232 | ,171 |
| | SOCIAL | ,452 | ,107 | ,000 | ,298 | ,067 | ,000 | ,000 | ,000 | ,115 | . | ,028 | ,008 | ,323 | ,032 |
| | FINAN | ,470 | ,000 | ,454 | ,076 | ,467 | ,222 | ,242 | ,199 | ,240 | ,028 | . | ,256 | ,269 | ,214 |
| | PERFORM | ,066 | ,098 | ,057 | ,317 | ,381 | ,289 | ,385 | ,191 | ,242 | ,008 | ,256 | . | ,232 | ,004 |
| | CONTROL1 | ,000 | ,004 | ,103 | ,000 | ,052 | ,489 | ,321 | ,232 | ,232 | ,323 | ,269 | ,232 | . | ,289 |
| | CONTROL2 | ,414 | ,024 | ,102 | ,222 | ,198 | ,022 | ,361 | ,268 | ,171 | ,032 | ,214 | ,004 | ,289 | . |

**Modellzusammenfassung[d]**

| Modell | R | R-Quadrat | Korrigiertes R-Quadrat | Standardfehler des Schätzers | Änderungsstatistiken | | | | | Durbin-Watson-Statistik |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Änderung in R-Quadrat | Änderung in F | df1 | df2 | Sig. Änderung in F | |
| 1 | ,483[a] | ,233 | ,227 | ,99931 | ,233 | 38,952 | 1 | 128 | ,000 | |
| 2 | ,582[b] | ,338 | ,328 | ,93205 | ,105 | 20,143 | 1 | 127 | ,000 | |
| 3 | ,604[c] | ,365 | ,350 | ,91689 | ,026 | 5,234 | 1 | 126 | ,024 | 1,949 |

a. Einflußvariablen : (Konstante), PRICE

b. Einflußvariablen : (Konstante), PRICE, CONTROL1

c. Einflußvariablen : (Konstante), PRICE, CONTROL1, VALUE

d. Abhängige Variable: PLBAT

**ANOVA[a]**

| Modell | | Quadratsumme | df | Mittel der Quadrate | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 38,899 | 1 | 38,899 | 38,952 | ,000[b] |
| | Nicht standardisierte Residuen | 127,824 | 128 | ,999 | | |
| | Gesamt | 166,723 | 129 | | | |
| 2 | Regression | 56,397 | 2 | 28,198 | 32,460 | ,000[c] |
| | Nicht standardisierte Residuen | 110,326 | 127 | ,869 | | |
| | Gesamt | 166,723 | 129 | | | |
| 3 | Regression | 60,797 | 3 | 20,266 | 24,106 | ,000[d] |
| | Nicht standardisierte Residuen | 105,926 | 126 | ,841 | | |
| | Gesamt | 166,723 | 129 | | | |

a. Abhängige Variable: PLBAT

b. Einflußvariablen : (Konstante), PRICE

c. Einflußvariablen : (Konstante), PRICE, CONTROL1

d. Einflußvariablen : (Konstante), PRICE, CONTROL1, VALUE

**Koeffizienten[a]**

| Modell | | Nicht standardisierte Koeffizienten | | Standardisierte Koeffizienten | T | Sig. | 95,0% Konfidenzintervalle für B | | Korrelationen | | | Kollinearitätsstatistik | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Regressionskoeffizient B | Standardfehler | Beta | | | Untergrenze | Obergrenze | Nullter Ordnung | Partiell | Teil | Toleranz | VIF |
| 1 | (Konstante) | 2,048 | ,342 | | 8,472 | ,000 | 1,570 | 2,526 | | | | | |
| | PRICE | ,441 | ,071 | ,483 | 6,241 | ,000 | ,302 | ,581 | ,483 | ,483 | ,483 | 1,000 | 1,000 |
| 2 | (Konstante) | 3,514 | ,397 | | 8,853 | ,000 | 2,729 | 4,300 | | | | | |
| | PRICE | ,332 | ,070 | ,364 | 4,727 | ,000 | ,193 | ,471 | ,483 | ,387 | ,341 | ,880 | 1,136 |
| | CONTROL1 | -,338 | ,075 | -,345 | -4,488 | ,000 | -,487 | -,189 | -,471 | -,370 | -,324 | ,880 | 1,136 |
| 3 | (Konstante) | 3,002 | ,450 | | 6,667 | ,000 | 2,111 | 3,893 | | | | | |
| | PRICE | ,251 | ,078 | ,275 | 3,235 | ,002 | ,098 | ,405 | ,483 | ,277 | ,230 | ,698 | 1,433 |
| | CONTROL1 | -,325 | ,074 | -,332 | -4,373 | ,000 | -,472 | -,178 | -,471 | -,363 | -,311 | ,875 | 1,143 |
| | VALUE | ,175 | ,076 | ,188 | 2,288 | ,024 | ,024 | ,326 | ,402 | ,200 | ,162 | ,749 | 1,335 |

**Ausgeschlossene Variablen[a]**

| Modell | | Beta In | T | Sig. | Partielle Korrelation | Kollinearitätsstatistik | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Toleranz | VIF | Minimale Toleranz |
| 1 | VALUE | ,215[b] | 2,462 | ,015 | ,213 | ,753 | 1,327 | ,753 |
| | PERCEP | -,086[b] | -1,114 | ,267 | -,098 | ,995 | 1,005 | ,995 |
| | INTRIN | ,075[b] | ,963 | ,337 | ,085 | ,982 | 1,019 | ,982 |
| | EXTRIN1 | ,045[b] | ,573 | ,567 | ,051 | ,994 | 1,006 | ,994 |
| | EXTRIN2 | -,071[b] | -,915 | ,362 | -,081 | ,994 | 1,006 | ,994 |
| | EXTRIN3 | -,005[b] | -,060 | ,953 | -,005 | ,989 | 1,012 | ,989 |
| | SMART | ,052[b] | ,658 | ,512 | ,058 | ,971 | 1,030 | ,971 |
| | SOCIAL | ,012[b] | ,154 | ,878 | ,014 | ,998 | 1,002 | ,998 |
| | FINAN | -,069[b] | -,880 | ,381 | -,078 | ,984 | 1,016 | ,984 |
| | PERFORM | -,112[b] | -1,456 | ,148 | -,128 | ,998 | 1,002 | ,998 |
| | CONTROL1 | -,345[b] | -4,488 | ,000 | -,370 | ,880 | 1,136 | ,880 |
| | CONTROL2 | -,014[b] | -,174 | ,862 | -,015 | ,995 | 1,005 | ,995 |
| 2 | VALUE | ,188[c] | 2,288 | ,024 | ,200 | ,749 | 1,335 | ,698 |
| | PERCEP | -,057[c] | -,781 | ,436 | -,069 | ,986 | 1,014 | ,873 |
| | INTRIN | ,042[c] | ,570 | ,569 | ,051 | ,971 | 1,030 | ,871 |
| | EXTRIN1 | ,055[c] | ,752 | ,453 | ,067 | ,993 | 1,007 | ,875 |
| | EXTRIN2 | -,076[c] | -1,053 | ,295 | -,093 | ,994 | 1,006 | ,876 |
| | EXTRIN3 | -,014[c] | -,198 | ,844 | -,018 | ,988 | 1,012 | ,873 |
| | SMART | ,097[c] | 1,322 | ,188 | ,117 | ,954 | 1,049 | ,843 |
| | SOCIAL | -,008[c] | -,106 | ,916 | -,009 | ,994 | 1,006 | ,877 |
| | FINAN | -,072[c] | -,996 | ,321 | -,088 | ,984 | 1,016 | ,869 |
| | PERFORM | -,095[c] | -1,321 | ,189 | -,117 | ,995 | 1,005 | ,878 |
| | CONTROL2 | -,023[c] | -,310 | ,757 | -,028 | ,995 | 1,005 | ,878 |
| 3 | PERCEP | -,031[d] | -,433 | ,666 | -,039 | ,961 | 1,041 | ,697 |
| | INTRIN | ,057[d] | ,792 | ,430 | ,071 | ,963 | 1,038 | ,687 |
| | EXTRIN1 | ,084[d] | 1,170 | ,244 | ,104 | ,965 | 1,036 | ,682 |
| | EXTRIN2 | -,044[d] | -,597 | ,552 | -,053 | ,949 | 1,054 | ,680 |
| | EXTRIN3 | ,011[d] | ,157 | ,875 | ,014 | ,964 | 1,038 | ,682 |
| | SMART | ,049[d] | ,635 | ,526 | ,057 | ,855 | 1,170 | ,671 |
| | SOCIAL | ,009[d] | ,132 | ,896 | ,012 | ,983 | 1,017 | ,698 |
| | FINAN | -,125[d] | -1,697 | ,092 | -,150 | ,914 | 1,094 | ,696 |
| | PERFORM | -,125[d] | -1,743 | ,084 | -,154 | ,970 | 1,031 | ,692 |
| | CONTROL2 | -,050[d] | -,692 | ,491 | -,062 | ,969 | 1,032 | ,697 |

a. Abhängige Variable: PLBAT

b. Einflußvariablen im Modell: (Konstante), PRICE

c. Einflußvariablen im Modell: (Konstante), PRICE, CONTROL1

d. Einflußvariablen im Modell: (Konstante), PRICE, CONTROL1, VALUE

**Korrelation der Koeffizienten[a]**

| Modell | | | PRICE | CONTROL1 | VALUE |
|---|---|---|---|---|---|
| 1 | Korrelationen | PRICE | 1,000 | | |
| | Kovarianzen | PRICE | ,005 | | |
| 2 | Korrelationen | PRICE | 1,000 | ,346 | |
| | | CONTROL1 | ,346 | 1,000 | |
| | Kovarianzen | PRICE | ,005 | ,002 | |
| | | CONTROL1 | ,002 | ,006 | |
| 3 | Korrelationen | PRICE | 1,000 | ,272 | -,456 |
| | | CONTROL1 | ,272 | 1,000 | ,077 |
| | | VALUE | -,456 | ,077 | 1,000 |
| | Kovarianzen | PRICE | ,006 | ,002 | -,003 |
| | | CONTROL1 | ,002 | ,006 | ,000 |
| | | VALUE | -,003 | ,000 | ,006 |

a. Abhängige Variable: PLBAT

**Kollinearitätsdiagnose[a]**

| Modell | Dimension | Eigenwert | Konditionsindex | Varianzanteile | | | |
|---|---|---|---|---|---|---|---|
| | | | | (Konstante) | PRICE | CONTROL1 | VALUE |
| 1 | 1 | 1,932 | 1,000 | ,03 | ,03 | | |
| | 2 | ,068 | 5,328 | ,97 | ,97 | | |
| 2 | 1 | 2,810 | 1,000 | ,01 | ,01 | ,01 | |
| | 2 | ,162 | 4,166 | ,00 | ,38 | ,28 | |
| | 3 | ,028 | 10,076 | ,99 | ,61 | ,71 | |
| 3 | 1 | 3,753 | 1,000 | ,00 | ,01 | ,01 | ,00 |
| | 2 | ,175 | 4,632 | ,00 | ,18 | ,31 | ,02 |
| | 3 | ,049 | 8,752 | ,01 | ,72 | ,11 | ,66 |
| | 4 | ,023 | 12,751 | ,99 | ,09 | ,58 | ,31 |

**Fallweise Diagnose**[a]

| Fallnummer | Standardisierte Residuen | PLBAT | Nicht standardisierter vorhergesagter Wert | Nicht standardisierte Residuen |
|---|---|---|---|---|
| 2 | 2,108 | 6,00 | 4,0675 | 1,93252 |
| 7 | -2,094 | 1,50 | 3,4198 | -1,91975 |
| 39 | 2,465 | 5,00 | 2,7395 | 2,26054 |
| 50 | 2,013 | 5,00 | 3,1547 | 1,84527 |
| 65 | -2,511 | 1,00 | 3,3024 | -2,30235 |
| 71 | 2,096 | 5,00 | 3,0783 | 1,92171 |
| 109 | -2,049 | 1,50 | 3,3788 | -1,87880 |
| 111 | 2,477 | 5,00 | 2,7284 | 2,27157 |
| 113 | 3,553 | 6,00 | 2,7421 | 3,25791 |
| 122 | -2,049 | 1,00 | 2,8787 | -1,87869 |

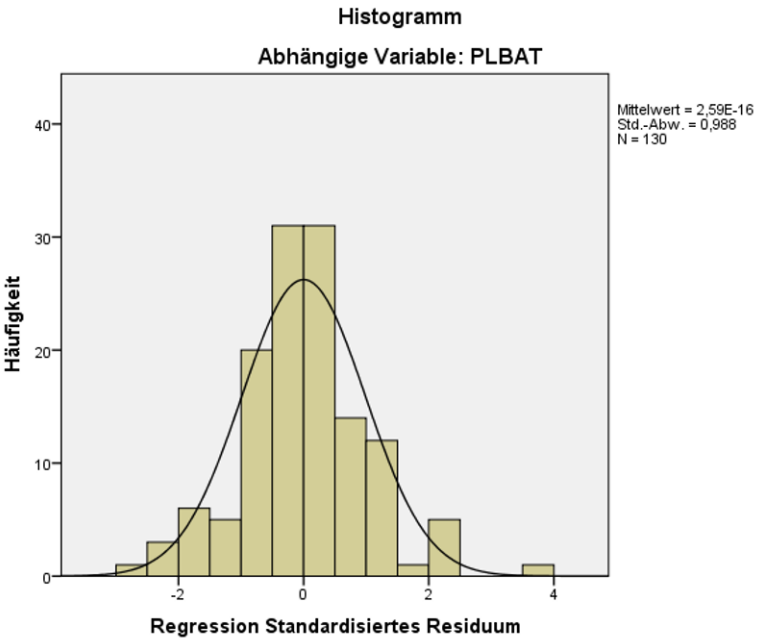
a. Abhängige Variable: PLBAT

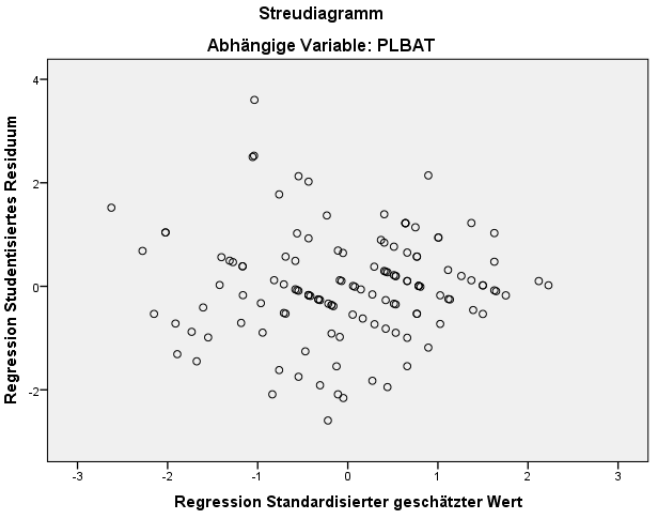
**Residuenstatistik**[a]

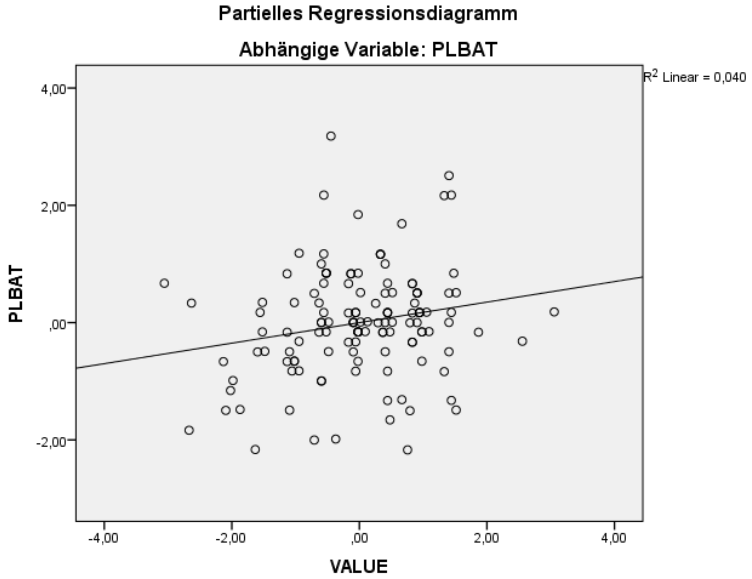
| | Minimum | Maximum | Mittelwert | Standardabweichung | N |
|---|---|---|---|---|---|
| Nicht standardisierter vorhergesagter Wert | 1,6518 | 4,9829 | 3,4538 | ,68651 | 130 |
| Standardisierter vorhergesagter Wert | -2,625 | 2,227 | ,000 | 1,000 | 130 |
| Standardfehler des Vorhersagewerts | ,091 | ,321 | ,155 | ,045 | 130 |
| Korrigierter Vorhersagewert | 1,5601 | 4,9820 | 3,4565 | ,68628 | 130 |
| Nicht standardisierte Residuen | -2,30235 | 3,25791 | ,00000 | ,90616 | 130 |
| Standardisierte Residuen | -2,511 | 3,553 | ,000 | ,988 | 130 |
| Studentisierte Residuen | -2,593 | 3,602 | -,001 | 1,007 | 130 |
| Gelöschtes Residuum | -2,45470 | 3,34721 | -,00265 | ,94008 | 130 |
| Studentisierte ausgeschlossene Residuen | -2,654 | 3,788 | ,000 | 1,020 | 130 |
| Mahalanobis-Abstand | ,283 | 14,791 | 2,977 | 2,434 | 130 |
| Cook-Distanz | ,000 | ,111 | ,009 | ,019 | 130 |
| Zentrierter Hebelwert | ,002 | ,115 | ,023 | ,019 | 130 |

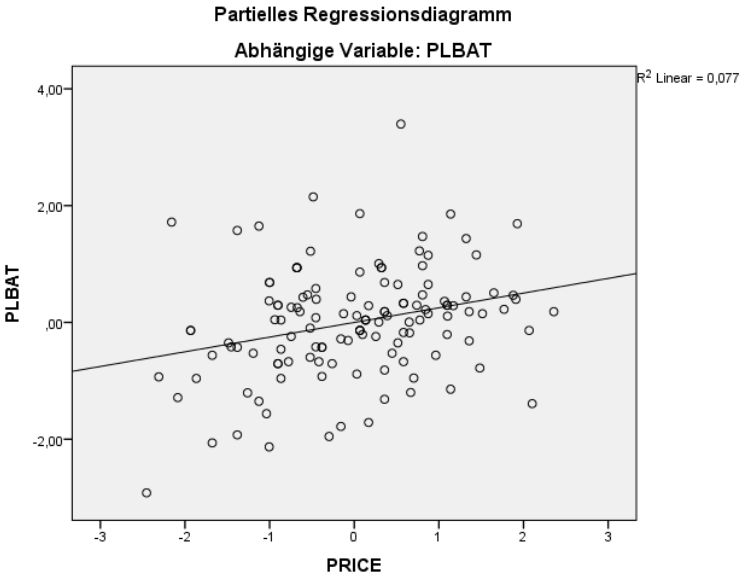
a. Abhängige Variable: PLBAT

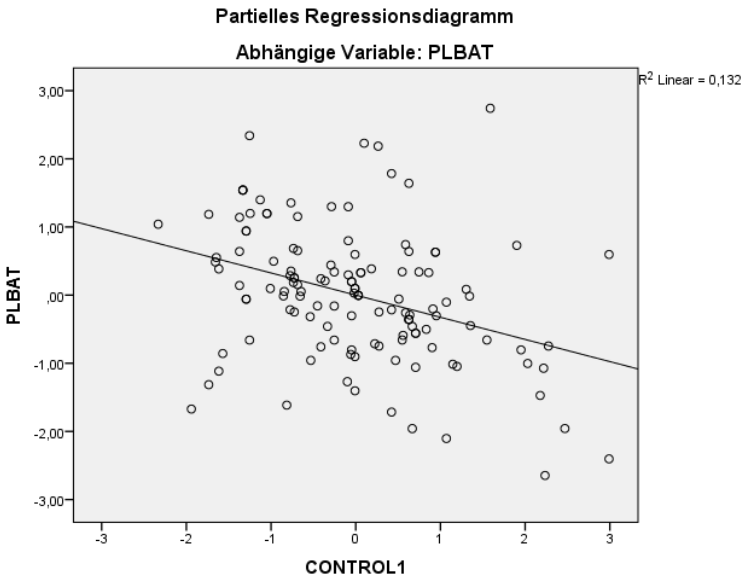
**Annex 6: Diagrams**




Streudiagramm
Abhängige Variable: PLBAT
Regression Studentisiertes Residuum
Regression Standardisierter geschätzter Wert
4
2
0
-2
-3
-2
-1
0
1
2
3


Partielles Regressionsdiagramm
Abhängige Variable: PLBAT
R² Linear = 0,040
PLBAT
VALUE
4,00
2,00
,00
-2,00
-4,00
-2,00
,00
2,00
4,00


Partielles Regressionsdiagramm
Abhängige Variable: PLBAT
R2 Linear = 0,077
PLBAT
4,00
2,00
,00
-2,00
-3
-2
-1
0
1
2
3
PRICE


Partielles Regressionsdiagramm
Abhängige Variable: PLBAT
R² Linear = 0,132
PLBAT
CONTROL1
3,00
2,00
1,00
,00
-1,00
-2,00
-3,00
-3
-2
-1
0
1
2
3

**Annex 7: Results of the t-tests**

**Gruppenstatistiken**

| | GENDER | N | Mittelwert | Standardabweichung | Standardfehler des Mittelwertes |
|---|---|---|---|---|---|
| PLBAT | 1 | 85 | 3,5706 | 1,16791 | ,12668 |
| | 2 | 45 | 3,2333 | 1,05313 | ,15699 |

**Test bei unabhängigen Stichproben**

| | | Levene-Test der Varianzgleichheit | | T-Test für die Mittelwertgleichheit | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Konfidenzintervall der Differenz | |
| | | F | Signifikanz | T | df | Sig. (2-seitig) | Mittlere Differenz | Standardfehler der Differenz | Untere | Obere |
| PLBAT | Varianzen sind gleich | ,755 | ,387 | 1,619 | 128 | ,108 | ,33725 | ,20828 | -,07486 | ,74937 |
| | Varianzen sind nicht gleich | | | 1,672 | 98,153 | ,098 | ,33725 | ,20173 | -,06306 | ,73757 |

**Gruppenstatistiken**

| | PARFUMO | N | Mittelwert | Standardabweichung | Standardfehler des Mittelwertes |
|---|---|---|---|---|---|
| PLBAT | 1 | 98 | 3,4592 | 1,09515 | ,11063 |
| | 2 | 32 | 3,4375 | 1,27475 | ,22535 |

**Test bei unabhängigen Stichproben**

| | | Levene-Test der Varianzgleichheit | | T-Test für die Mittelwertgleichheit | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Konfidenzintervall der Differenz | |
| | | F | Signifikanz | T | df | Sig. (2-seitig) | Mittlere Differenz | Standardfehler der Differenz | Untere | Obere |
| PLBAT | Varianzen sind gleich | 1,174 | ,281 | ,093 | 128 | ,926 | ,02160 | ,23236 | -,43808 | ,48145 |
| | Varianzen sind nicht gleich | | | ,086 | 46,872 | ,932 | ,02160 | ,25104 | -,48337 | ,52674 |

## Annex 8: Results of the ANOVA

**ONEWAY deskriptive Statistiken**

PLBAT

| | N | Mittelwert | Standardabweichung | Standardfehler | 95%-Konfidenzintervall für den Mittelwert | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Untergrenze | Obergrenze | | |
| 9th grade | 9 | 3,6667 | 1,03078 | ,34359 | 2,8743 | 4,4590 | 2,00 | 5,00 |
| 10th grade | 18 | 3,5000 | 1,23669 | ,29149 | 2,8850 | 4,1150 | 1,00 | 6,00 |
| High school | 38 | 3,6447 | 1,12050 | ,18177 | 3,2764 | 4,0130 | 1,50 | 6,00 |
| Vocational training or equiv. | 12 | 3,2083 | 1,21465 | ,35064 | 2,4366 | 3,9801 | 1,00 | 5,00 |
| Bachelor degree or equiv. | 19 | 3,5263 | 1,23010 | ,28221 | 2,9334 | 4,1192 | 1,00 | 5,50 |
| Master degree or equiv. | 21 | 2,8810 | 1,05954 | ,23121 | 2,3987 | 3,3632 | 1,00 | 5,00 |
| Doctoral degree or MBA | 8 | 3,6250 | 1,02644 | ,36290 | 2,7669 | 4,4831 | 2,00 | 5,00 |
| None of the above | 5 | 3,9000 | ,65192 | ,29155 | 3,0905 | 4,7095 | 3,00 | 4,50 |
| Gesamt | 130 | 3,4538 | 1,13685 | ,09971 | 3,2566 | 3,6511 | 1,00 | 6,00 |

**Test der Homogenität der Varianzen**

PLBAT

| Levene-Statistik | df1 | df2 | Signifikanz |
|---|---|---|---|
| ,383 | 7 | 122 | ,911 |

**Einfaktorielle ANOVA**

PLBAT

| | Quadratsumme | df | Mittel der Quadrate | F | Signifikanz |
|---|---|---|---|---|---|
| Zwischen den Gruppen | 10,776 | 7 | 1,539 | 1,204 | ,306 |
| Innerhalb der Gruppen | 155,947 | 122 | 1,278 | | |
| Gesamt | 166,723 | 129 | | | |

**ONEWAY deskriptive Statistiken**

PLBAT

| | N | Mittelwert | Standardabweichung | Standardfehler | 95%-Konfidenzintervall für den Mittelwert | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Untergrenze | Obergrenze | | |
| 20.000 Euro and below | 26 | 3,3846 | 1,14287 | ,22414 | 2,9230 | 3,8462 | 1,00 | 5,50 |
| 20.001 - 33.000 Euro | 21 | 4,0000 | ,89443 | ,19518 | 3,5929 | 4,4071 | 2,00 | 6,00 |
| 33.001 - 50.000 Euro | 33 | 3,4394 | 1,19738 | ,20844 | 3,0148 | 3,8640 | 1,50 | 6,00 |
| 50.001 Euro and above | 34 | 3,0000 | 1,11464 | ,19116 | 2,6111 | 3,3889 | 1,00 | 5,00 |
| No response | 16 | 3,8438 | 1,01191 | ,25298 | 3,3045 | 4,3830 | 1,50 | 5,00 |
| Gesamt | 130 | 3,4538 | 1,13685 | ,09971 | 3,2566 | 3,6511 | 1,00 | 6,00 |

**Test der Homogenität der Varianzen**

PLBAT

| Levene-Statistik | df1 | df2 | Signifikanz |
|---|---|---|---|
| ,867 | 4 | 125 | ,486 |

**Einfaktorielle ANOVA**

PLBAT

| | Quadratsumme | df | Mittel der Quadrate | F | Signifikanz |
|---|---|---|---|---|---|
| Zwischen den Gruppen | 15,831 | 4 | 3,958 | 3,279 | ,014 |
| Innerhalb der Gruppen | 150,892 | 125 | 1,207 | | |
| Gesamt | 166,723 | 129 | | | |

**ONEWAY deskriptive Statistiken**

PRICE

| | N | Mittelwert | Standardabweichung | Standardfehler | 95%-Konfidenzintervall für den Mittelwert | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Untergrenze | Obergrenze | | |
| 20.000 Euro and below | 26 | 3,50 | ,860 | ,169 | 3,15 | 3,85 | 2 | 5 |
| 20.001 - 33.000 Euro | 21 | 3,48 | 1,167 | ,255 | 2,94 | 4,01 | 2 | 6 |
| 33.001 - 50.000 Euro | 33 | 3,30 | 1,380 | ,240 | 2,81 | 3,79 | 1 | 6 |
| 50.001 Euro and above | 34 | 2,56 | 1,211 | ,208 | 2,14 | 2,98 | 1 | 5 |
| No response | 16 | 3,38 | 1,310 | ,328 | 2,68 | 4,07 | 1 | 5 |
| Gesamt | 130 | 3,18 | 1,244 | ,109 | 2,97 | 3,40 | 1 | 6 |

**Test der Homogenität der Varianzen**

PRICE

| Levene-Statistik | df1 | df2 | Signifikanz |
|---|---|---|---|
| 1,449 | 4 | 125 | ,222 |

**Einfaktorielle ANOVA**

PRICE

| | Quadratsumme | df | Mittel der Quadrate | F | Signifikanz |
|---|---|---|---|---|---|
| Zwischen den Gruppen | 18,729 | 4 | 4,682 | 3,236 | ,015 |
| Innerhalb der Gruppen | 180,840 | 125 | 1,447 | | |
| Gesamt | 199,569 | 129 | | | |

**Annex 9: Frequency tables**

**PLBAT**

| | | Häufigkeit | Prozent | Gültige Prozente | Kumulierte Prozente |
|---|---|---|---|---|---|
| Gültig | 1,00 | 4 | 3,1 | 3,1 | 3,1 |
| | 1,50 | 9 | 6,9 | 6,9 | 10,0 |
| | 2,00 | 7 | 5,4 | 5,4 | 15,4 |
| | 2,50 | 9 | 6,9 | 6,9 | 22,3 |
| | 3,00 | 31 | 23,8 | 23,8 | 46,2 |
| | 3,50 | 14 | 10,8 | 10,8 | 56,9 |
| | 4,00 | 22 | 16,9 | 16,9 | 73,8 |
| | 4,50 | 16 | 12,3 | 12,3 | 86,2 |
| | 5,00 | 14 | 10,8 | 10,8 | 96,9 |
| | 5,50 | 2 | 1,5 | 1,5 | 98,5 |
| | 6,00 | 2 | 1,5 | 1,5 | 100,0 |
| | Gesamt | 130 | 100,0 | 100,0 | |

**PRICE**

| | | Häufigkeit | Prozent | Gültige Prozente | Kumulierte Prozente |
|---|---|---|---|---|---|
| Gültig | 1 | 14 | 10,8 | 10,8 | 10,8 |
| | 2 | 22 | 16,9 | 16,9 | 27,7 |
| | 3 | 43 | 33,1 | 33,1 | 60,8 |
| | 4 | 31 | 23,8 | 23,8 | 84,6 |
| | 5 | 17 | 13,1 | 13,1 | 97,7 |
| | 6 | 3 | 2,3 | 2,3 | 100,0 |
| | Gesamt | 130 | 100,0 | 100,0 | |

**VALUE**

| | | Häufigkeit | Prozent | Gültige Prozente | Kumulierte Prozente |
|---|---|---|---|---|---|
| Gültig | 1,50 | 5 | 3,8 | 3,8 | 3,8 |
| | 2,00 | 9 | 6,9 | 6,9 | 10,8 |
| | 2,50 | 7 | 5,4 | 5,4 | 16,2 |
| | 3,00 | 11 | 8,5 | 8,5 | 24,6 |
| | 3,50 | 8 | 6,2 | 6,2 | 30,8 |
| | 4,00 | 19 | 14,6 | 14,6 | 45,4 |
| | 4,50 | 21 | 16,2 | 16,2 | 61,5 |
| | 5,00 | 26 | 20,0 | 20,0 | 81,5 |
| | 5,50 | 16 | 12,3 | 12,3 | 93,8 |
| | 6,00 | 8 | 6,2 | 6,2 | 100,0 |
| | Gesamt | 130 | 100,0 | 100,0 | |

**CONTROL1**

| | | Häufigkeit | Prozent | Gültige Prozente | Kumulierte Prozente |
|---|---|---|---|---|---|
| Gültig | 1 | 2 | 1,5 | 1,5 | 1,5 |
| | 2 | 36 | 27,7 | 27,7 | 29,2 |
| | 3 | 37 | 28,5 | 28,5 | 57,7 |
| | 4 | 36 | 27,7 | 27,7 | 85,4 |
| | 5 | 13 | 10,0 | 10,0 | 95,4 |
| | 6 | 6 | 4,6 | 4,6 | 100,0 |
| | Gesamt | 130 | 100,0 | 100,0 | |