



Faculteit Bio-ingenieurswetenschappen

Academiejaar 2012 – 2013

Consumers' attitude on private label organic food
products: a study of Flemish consumers

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Masterproef voorgedragen tot het behalen van de graad van
Master in de bio-ingenieurswetenschappen: landbouwkunde

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Preface

This master thesis tries to discover more about Flemish consumers' attitudes towards organic food from retailer brands (also called private labels), and attempts to find what influences their purchasing intentions for these products. A survey (n=1041) was conducted and both attitudes towards private labels and towards organic food were measured, as well as consumer shopping attitudes and socio-demographics. The results are relevant for marketing purposes, public policy purposes or others.

The topic of the master thesis was presented to me by the Department of Agricultural Economics of the faculty of Bio-Science Engineering of the Ghent University. I thank Prof. dr. ir. Verbeke for his supervision and support.

The subject of the thesis appealed to me because I am interested in the economic side of agriculture and the food industry. Getting to explore and investigate more about organic food and consumer behaviour was a great journey and gave me new insights. It helped me develop my research skills and data processing and analysis gave me the chance to increase my knowledge of SPSS.

I would like to thank Ir. Ellen Van Loo for her professional guidance, encouragement and great recommendations.

I also would like to thank my family and friends for supporting me through my whole study career, especially during the hard times. I am sure I would have given up a long time ago if it had not been for your support. A special thanks goes to those who made the time and effort to read my thesis and gave me useful comments.

Finally, I would like to thank my parents for making it possible for me to start and finish this chapter of my life. They spent years listening patiently to my endless talks about classes, projects and this master thesis and I am very grateful for their unconditional support.

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Abstract

An increasing amount of retailers are expanding their private label product assortment and are now incorporating organic products. In Belgium, all three of the major retailers (Colruyt, Delhaize and Carrefour) are now selling organic products under their own private labels.

Using data from a survey performed in Flanders, this study tests five hypotheses regarding consumers' attitude towards these private label organic products.

General attitudes towards private labels and towards organic food are associated with the attitude towards organic food from private labels.

In addition, consumers' attitudes towards food products are highly correlated with their trust in the products. In this case, consumers' trust in private labels and trust in the EU organic label were measured. They proved to be of significant importance for consumers' trust in private label organic products. On the other hand, attitudes also depend on consumers price perception of organic food. Those who perceive prices of organic food generally too high, have a more positive attitude towards organic food from private labels.

Finally, it was confirmed that consumers' attitudes are associated with their intentions to purchase organic products from private labels.

Samenvatting

Meer en meer supermarktketens breiden hun assortiment van huismerken uit door het introduceren van biologische producten. In België verkopen de drie grootste supermarktketens (Colruyt, Delhaize en Carrefour) nu ook biologische producten onder hun huismerken.

Er werd een enquête afgenomen in Vlaanderen (n=1041) en de data werden gebruikt om vijf hypothesen te testen omtrent de attitude van consument ten opzichte van biologische producten van huismerken.

Deze attitude is gerelateerd met zowel de consument's algemene attitude ten opzichte van huismerken, als met zijn algemene attitude ten opzichte van biologische voeding.

Het werd ook duidelijk in deze studie dat vertrouwen een heel grote rol speelt bij het vormen van een attitude ten opzichte van voeding. Zowel het vertrouwen van de consument in huismerken als het vertrouwen in het bio-label van de EU werd hier gemeten. Beiden zijn geassocieerd met het vertrouwen dat de consument heeft in biologische producten van huismerken. Ook de prijsperceptie omtrent biologische voeding van de consument staat in verband met zijn attitude ten opzichte van biologische voeding van het huismerk. Consumenten die biologische als te duur beschouwen, zijn positiever ingesteld ten opzichte van biologische voeding van huismerken.

Tot slot werd ook gevonden dat deze attitudes nauw gelinkt zijn aan de intenties om deze biologische producten van huismerken te kopen.

List of Abbreviations

CAP	Common Agricultural Policy
CSR	Corporate Social Responsibility
EU	European Union
EC	European Commission
FAO	Food and Agriculture Organization of the United Nations
PL	Private Label
PLMA	Private Label Manufacturer's Association
PLOP	Private Label Organic Product
SD	Standard Deviation
WTP	Willingness to pay

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1. Introduction

The organic food market has grown worldwide in a fast pace during the past two decades. In Europe, the average annual rate of growth was 6,7% in the EU-15 and 20,0% in the EU-12 during the period 2000-2008 (EU Commission, 2010).

An increasing amount of retailers are expanding their private label product assortment and are now incorporating organic products. In Belgium, all three of the major retailers (Colruyt, Delhaize and Carrefour) are now selling organic products under their own private labels. Private labels, also referred to as store brands allow retailers to distinguish themselves or differentiate from their competitors. By including organic food products in their private label product assortment, they are diversifying their portfolio. They hope to improve their image and expect that these organic food products with their corporate private label will provide them with the image of a premium retailer (Jonas & Roosen, 2005).

Numerous studies have examined organic food consumption and the determinants influencing attitudes and purchase behaviour of consumers regarding organic food (Aertsens et al., 2009; Magnusson et al., 2003; Michaelidou & Hassan, 2008; Shafie & Rennie, 2012). Some of these studies focused on differences between socio-demographic groups such as gender (Olivas & Bernabéu, 2012; Samborski & Van Bellegem, 2013). Other researched consumer behaviour in specific countries (Hamzaoui Essoussi & Zahaf, 2009; Lockie et al., 2002; Magistris & Gracia, 2008) or compared behaviour across different countries (Baker et al., 2004; Mutlu, 2007).

However, little organic food studies have incorporated the concept of private labels when studying consumer perceptions and attitudes towards organic products. To our knowledge, only two studies included the issue of private labels in their study about organic food products. Specifically, Perrini et al. (2010) and Pivato et al. (2008) focused on the impact of CSR (Corporate Social Responsibility) on trust in the organic products marketed by mainstream retailers under a private label in Italy. They only studied trust and did not take into account other variables such as price perception, label awareness and attitudes. Pivato et al. (2008) did not research the effect of trust on intentions or behaviour, however Perrini et al. (2010) investigated the effect of trust in private label organic products on consumers' willingness to pay (WTP) a premium price.

To address this hiatus in research on this emerging trend, this study will evaluate the consumers' attitude towards private label organic products in Flanders, the Dutch speaking region of Belgium. It will investigate trust, its effect on attitudes and on purchase intentions towards private label organic products.

2. Literature Review

2.1. Organic food

In the European Union (EU), foods can only be classified as "organic" if at least 95% of their agricultural ingredients are produced through organic farming. Within the EU, organic food production is part of the EU Agriculture and Food Quality Policy together with initiatives relating to geographical indications of origin and traditional specialities. The organic standards for production are laid down in the Council Regulation (EC) No 834/2007 of 28 June 2007. Organic farming has closed cycles with the use of the internal resources. Ideally, external resources should be limited to organic resources from other organic farms, natural or naturally obtained materials and low soluble mineral fertilizers. In exceptional cases, however, chemical synthetic resources may be permitted if suitable alternatives are lacking. These are only authorized and listed in positive lists in the Annex of the Commission Regulation after a thorough investigation by the Commission and the Member States. The use of genetically modified organisms (GMO) and of products manufactured from GMOs is still prohibited in organic production (Council Regulation No 834/2007).

2.1.1. The growing and changing organic market in Europe and Belgium

The organic food market has grown in a fast pace during the last 20 years and has shifted from a niche-market industry to a mainstream industry (Hamzaoui Essoussi & Zahaf, 2009). In the period 2000-2008 the average annual rate of growth was 6,7% in the EU-15 and 20,0% in the EU-12 (EU Commission, 2010). In the 27 current Member States, 5,6% of the total agricultural land is used for organic production, 4,0% in Belgium and 0,8% in the region of Flanders (Samborski & Van Bellegem, 2013).

The annual report of 2012 by the Flemish Department of Agriculture and Fisheries states an increase of land use for organic purposes in Flanders of 8% compared to 2011 (Samborski & Van Bellegem, 2013). There has been an increase in government support to the organic sector of 19%, compared to 2011. The Flemish government supports the sector through strategies focusing on producers, market development and research and development (Samborski & Van Bellegem, 2013).

The total expenditure on organic products by Belgian households was 417 million euro in 2012 (Samborski & Van Bellegem, 2013). This means again an increase of 7% after the

growth had slowed down in 2011, when only 3% of increase occurred. The total market share of organic products (food and non-food) in Belgium was 1,5% in 2012, in Flanders 1,9%. In 2012, 89% of the Belgian population bought at least one organic product on a yearly basis. Of these, 18% are regular organic buyers who are responsible for 78% of all the expenditures in the organic sector. On an average day, 29% of the Belgian population consumes at least one organic product. Further exploration shows that there are large differences in organic consumption between different food categories. Organic vegetables are the most important (65% of buyers) and are followed by organic fruit (43% of buyers), dairy (33% of buyers) and organic bread (25% of buyers) (VLAM, 2013).

Nearly 45% of organic products are distributed through supermarkets. Specialized stores for organic food gained importance compared to last year and are responsible for 31,5% of the share. The hard discount stores are not visible in the organic landscape and only account for 4% of the share, although they have a share of 17,5% for common products. Direct sales at farmers markets or at farm gate level accounts for 4% of the share as well (Samborski & Van Bellegem, 2013). There are no specific data available on the market share of organic products sold under private labels of retailers in Belgium.

Organic production has higher production costs than conventional production because it requires more labour and more capital (FAO, 2013). These higher costs are passed on to the consumer. On average, organic products in Belgium are 33% more expensive than conventional products (Samborski & Van Bellegem, 2013), though the range of price premiums for organic foods is quite large depending on the product category. Price differences are largest for roasted chicken, eggs, potatoes and cheese (over 50% more expensive) and lowest for tomatoes, bread and vegetable burgers (less than 25%) (Samborski & Van Bellegem, 2013).

2.1.2. Bringing clarity to the European organic market: the organic logo and labelling system

The EU introduced the first EU Regulation on organic farming in 1991, the Council Regulation (EEC) 2092/91. It gave the first recognition to the organic sector and set the legal framework (EU Commission, 2010). During the years that followed, the organic sector experienced an impressive growth in many member countries and the first Regulation was amended several times. The European Council of Agriculture Ministers decided in 2004 on the European

Action Plan for Organic Food and Farming, in which 21 actions were set to provide an overall strategic vision for organic farming's contribution to the common agricultural policy (CAP) (EU Commission, 2004).

Based on this Action Plan, a new Council Regulation for organic production and labelling of organic products was developed and applied on 1 January 2009. Changes include improved rules on production, on import of organic food and on labelling.

Since 1 July 2010 the use of the new EU Organic logo (Figure 1) is mandatory on all pre-packed organic food processed in the EU, and may be used on organic products from third countries. The place of production of the agricultural ingredients must also be indicated on the packaging. This organic labelling system was introduced with the goal to harmonize the EU organic sector, to increase consumer recognition and to increase consumer trust in organic certification (EG 271/2010).

In a Special Eurobarometer survey on Europeans' attitude towards food security and food quality, the EU Commission reports that two thirds (67%) of European consumers check if there is a quality label on their products, but it varies substantially between Member States. In Belgium only 61% checks sometimes or always for quality labels. The Eurobarometer also reports that only a quarter (24%) of Europeans are aware of the new EU Organic logo (EU Commission, 2012).

Figure 1 – EU Organic Logo



In Belgium, only 20% of consumers recognizes the EU Organic logo (EU Commission, 2012). There are two different logos on the organic market in Belgium and this might be the reason why the European logo is not commonly known yet. The Biogarantie® logo (Figure 2) is property of a private organization and has not changed since 1988. In a study of Flemish consumers, Van Loo et al., (2013) reported 31% and 54% of the respondents recognized the EU organic label and the Biogarantie® label, respectively. Janssen and Hamm (2012) found

the similar data in other European countries where consumers were more likely to recognize the organic labels of organizations compared to governmental labels.

Figure 2 – Biogarantie® label



Not only the awareness of the EU Organic Logo is of importance but also the trust in the label and the certification system. Janssen & Hamm (2012a) found that many wrong assumptions exist among consumers about the level of production standards and the inspection system at EU level, e.g. that standards would be lowered and a new logo would mean the introduction of a new inspection system. However, standards have not changed and neither has the certification system. This lack of awareness and knowledge (Janssen & Hamm, 2012b; Van Loo et al., 2013) causes a lack of trust and is a barrier for organic food purchases (Aertsens et al., 2009; Padel & Foster, 2005). Janssen & Hamm (2012a) therefore concluded that the launch of the new EU organic logo without any supportive communication measures might not be enough to achieve the objective of strengthening the organic sector. They suggest using communication campaigns explaining what the new logo stands for and what its benefits are. This could potentially lead to a decrease in consumer concerns and an increase in consumer trust in the logo (Janssen & Hamm, 2012a).

2.1.3. Consumers' motives and barriers for purchasing organic food

Numerous studies have focused on determinants that influence consumers' attitudes towards organic food and on the factors influencing their purchases. These determinants are divided into individual, egoistic motives and altruistic motives, also known as private and public motives (Magnusson et al., 2003; Pino et al., 2012). Individual motives include those factors that enhance the consumers own wellbeing, such as the belief that organic food is healthier, safer and more tasteful than conventional food. On the other hand, altruistic motives include environmental concerns and animal welfare concerns.

Research has focused on the effects of these different motives on attitudes and purchase behaviour but has provided mixed results, which proves that knowledge on the role of motives for organic food consumption is still incomplete.

A detailed study has been done by Aertsens et al. (2009), in which several determinants were discussed. This study uses the Theory of Planned Behaviour (Ajzen, 1991) as a framework, which argues that a consumer's intention to behave in a certain way is influenced by his attitude, subjective norm and behavioural control. It implies that the intention to behave in a certain way is supported by positive evaluation of the activity, by perceived pressure to perform such behaviour and by a subjective belief that there is an opportunity and that there are available resources for such behaviour (Ajzen, 1991; Zagata, 2012).

Attitude is an individual's belief about the desirability of certain behaviour and is influenced by both individual and altruistic motives (Ajzen, 1991). The factors influencing attitudes towards organic food will be discussed further on.

Subjective norm is defined as the consumers' perceived relevance and importance of opinions of significant others (Ajzen, 1991). Voon et al. (2011) measured the perceived social expectations of organic food consumption and found that subjective norms have a significant positive effect on WTP, which positively affects actual purchase.

Behavioural control is the consumer's perception of the degree to which they are able to perform given behaviour (Ajzen, 1991). Voon et al. (2011) used affordability as a subset of behavioural control and defined it as the ability to bear the cost without serious detriment of the capacity for action. This cost includes both monetary and convenience costs but for Malaysian consumers it was found not to be a significant factor, contrary to what the Theory of Planned Behaviour expects (Voon et al., 2011). Padel & Foster (2005) used focus groups and laddering interviews on UK consumers and found that a low food budget is the main barrier for buying organic products. This was related to the awareness of benefits of organic food: consumers who do not really know what organic means and which benefits they can expect, cannot justify paying a higher price. To target these non-consumers the industry should communicate clearly on the benefits of different categories of organic food and the reasons for the higher price compared to conventional food (Padel & Foster, 2005). In a Canadian study, the group of regular consumers proved not to be sensitive to the price and

considers the value of the benefits of consuming organic food outweighing the cost of buying them (Hamzaoui Essoussi & Zahaf, 2008).

Another subset of behavioural control is the availability of organic food. Consumers can shop for organic food through four types of distribution channels: open markets, directly from the farmer, specialized stores and supermarkets (Hamzaoui Essoussi & Zahaf, 2009). Supermarkets have rapidly secured the leading market share but there is still a lot of support among consumers for smaller retailers and alternative networks, such as buying direct from farmers through either farm gate sales or farmers' markets (Lockie et al., 2002).

Aertsens et al. (2009) concluded that intentions to purchase organic products in combination with perceived behavioural control are positively and significantly related to organic purchases. These intentions are in turn influenced by the attitude, personal and subjective norms and behavioural control (Dean, Raats, & Shepherd, 2012).

As shown in the conceptual framework, predictors of attitude include health concerns, environmental concerns and food safety concerns (Figure 6). The importance of different determinants has been widely studied but has given inconsistent results (Aertsens et al., 2009; Magnusson et al., 2003; Michaelidou & Hassan, 2008; Padel & Foster, 2005; Pino et al., 2012; Voon et al., 2011; Zagata, 2012).

For example, Michaelidou & Hassan (2008) observed that food safety concerns and ethical self-identity are the most important predictors of attitude towards organic food. While Michaelidou & Hassan (2008) reported health consciousness to be less important, earlier research (Hamzaoui Essoussi & Zahaf, 2008; Magnusson et al., 2003; Padel & Foster, 2005) discovered this to be the most important predictor.

Pino et al. (2012) investigated the importance of ethical self-identity and food-safety concerns, but made a distinction between regular and occasional consumers of organic food. This study on Italian consumers concluded that for regular consumers, ethical self-identity affects both attitude towards organic food and the purchase intention. For occasional consumers, the results showed that food-safety concerns significantly affect their attitude towards organic food and through the attitude affects purchase intentions (Pino et al., 2012). Shepherd et al. (2005) reported that among Swedish consumers the frequency of performing environmentally friendly behaviours, contributed to the prediction of the purchase of organic foods. Magnusson et al. (2003) described that respondents with a strong intention to purchase organic food gave higher importance ratings to health benefits,

environmental and animal welfare consequences than did those with weaker intentions. In addition, perceived health benefits were found to be more strongly related to attitudes and behaviour regarding organic food than were perceived environmental benefits. This implies that egoistic motives are better predictors of organic food attitudes than altruistic motives are (Magnusson et al., 2003). In a survey among Swedish consumers, Shepherd et al. (2005) confirms those results.

Organic food products are credence goods, which means consumers are not able to observe some of the benefits of consumption directly. Taste and freshness can be judged through experience, however healthiness, food-safety and other parameters cannot. Because of this inability to evaluate for themselves, consumers of organic food have to rely on product claims (Perrini et al., 2010). The consumers' trust can be won by product labelling, certification and advertising. Voon et al. (2011) showed that for the Malaysian consumers not only health and environmental concerns form attitude towards organic food, but trust in organic food claims is an important predictor as well.

The trust in organic food claims can be approached as consumers' trust in the organic labelling (Hamzaoui Essoussi & Zahaf, 2008; Janssen & Hamm, 2012b). Hamzaoui Essoussi & Zahaf (2008) studied Canadian consumers and found that consumers' trust towards the organic products is mainly expressed as their concerns about the labels. The Canadian consumers had high regards for the European labelling, certification processes and regulations controlling the organic food industry. A recent study on Turkish consumers revealed that consumers' attitudes regarding the organic logos has an effect on the WTP for organic products (Uysal et al., 2012). They also found that the role of certification logos in purchasing decisions tends to increase with the level of organic food consumption. In focus groups with consumers in the UK, Padel & Foster (2005) noticed a mistrust among regular consumers as to whether something that is labelled organic, actually is organic.

However, not only trust in the label and certification is relevant. Perrini et al. (2010) remarked that the incomplete consumer awareness of the labels implies that brand names or retailer names might also be of importance for the consumers' trust. Interviews and research on focus groups in the UK showed that trust was an important factor in deciding where to buy organic food, and that consumers have less trust in organic food from supermarkets and large corporations (Padel & Foster, 2005).

2.2. Private Labels

The term 'private labels' has many definitions but in this study refers to the retailer store brands. The Private Label Manufacturer's Association (PLMA) defines private label products as "all merchandise sold under a retailer's brand"(PLMA, 2012). That brand can be the retailer's own name or a name created and used exclusively by that retailer. In some cases a retailer may belong to a wholesale group that owns the brands that are available to only the members of the group.

Retailers choose to produce private labels to increase their market power by increasing customer loyalty. Data in the PLMA Yearbook (PLMA, 2012) show that private labels' market share climbed in nearly all of the 20 countries tracked by Nielsen for the Yearbook, including Belgium.

Retailer brands now account for 40% or more of the products sold in six countries: Switzerland (53%), Spain (49%), United Kingdom (47%), Portugal (43%), Germany (41%) and Belgium (40%) but are also becoming stronger in emerging retail markets such as Poland (28%), Czech Republic (27%) and Slovakia (31%) (PLMA, 2012).

2.2.1. Private label products

Mintel (2010) investigated for which food and drinks categories US consumers purchase the private label and found a difference between staple food and non-staple food. Staple foods such as bread, dairy products, pasta and rice are categories for which a majority of primary grocery shoppers state that they usually or sometimes buy private label products. These are categories in which consumers rarely perceive differences between private labels and national brands. For soda and cookies on the other hand, which are non-staple foods, consumers are less likely to buy private labels and give taste concerns as the primary reason for their reserve.

When asking US consumers about their purchase behaviour, they found that over 17% of primary grocery shoppers use more private label products for staple goods in the last year. This indicates that many Americans have made changes to their lifestyles to mitigate the impact of the recession (Mintel, 2010).

In a similar study on Irish consumers Mintel (2012) concluded that affluent consumers are a target market for a private label product if consumers perceive little difference with the

national brand. This perception amongst consumers will be the highest in food categories where brand loyalty is low and the price attribute is of paramount importance.

Through a survey by Carrefour in 2009, it was found that for Belgians, the most popular private label products are dairy products (milk, yogurt, butter), dry foods (canned foods, pasta, chips), cleaning products, frozen products, processed meat and cheese. Least popular are private labelled beers, wines, perfumes and sodas (De Morgen, 2009).

2.2.2. Factors influencing consumers' choice for private labels

Prices of private labels are generally lower than those of national brands. Large price differences between substitutes may signal to consumers that the private labels are of low quality. However, if the difference is too narrow, then consumers will always purchase national brands because these enjoy a "reputation premium" drawn from familiarity and longevity on the shelves (Volpe, 2011).

Previous research has defined several determinants which influence consumers' attitude towards private labels and purchase behaviour. Sinha & Batra (1999) investigated the effect of price-related determinants on private label purchase behaviour. They compared different food categories and found a significant effect of perceived risk on price-consciousness within categories: consumers are less price-conscious in categories where the perceived risk seemed high.

Consumers' perception of the price unfairness of national brands also causes them to become more price-conscious for a particular category. Most importantly, they concluded that price-consciousness is a highly significant predictor for the purchase of private label products (Sinha & Batra, 1999).

Research by Garretson et al. (2002) introduced two other determinants influencing attitudes towards private labels. The first is value consciousness, which is the consumers concern for paying low prices subject to some quality constraint. It is positively related to the consumers' attitude towards private labels, which confirms the results of an earlier study by Burton et al. (1998).

Second is smart shopper self-perception, which is an ego-related factor pertaining to consumers' need for intrinsic rewards from price-savings achieved through shopping. It measures to what extent consumers feel a sense of accomplishment, boost in self-esteem and pride in shopping know-how (Garretson et al., 2002). The study focused on consumers

who seek price-savings and what makes them choose either private label products or national brands with price promotions. Smart-shoppers are interested in saving money but how they go about saving this money is also important to them. Smart-shopper self-perception causes differentiation among the attitudes of consumers towards private label brands and national brand promotions. The results showed that smart shopper self-perception is more influential on attitudes towards national brand promotions. Finding these good deals may involve some search and smart shoppers may find the excitement of the hunt to be a reinforcement of their attitude towards promotions.

Another result of this study was the effect of consumers' price-quality association: for those consumers who perceive price as an important indicator of quality, the low prices of private labels will cause such products to be regarded as less qualitative and national brands on price promotion more attractive (Garretson et al., 2002).

Kiyimalioglu et al. (2011) investigated the effects of store loyalty, store image, risk awareness and price consciousness on the attitude towards private labels of consumers in Turkey. Contrary to other research (Batra & Sinha, 2000; Burton et al., 1998) the results of the analysis revealed no significant role for price consciousness, instead store loyalty was the most effective factor: consumers are more prone to purchase private labels when they feel very loyal to the store. Similar to the study of Sinha & Batra (1999) where they used the term perceived risk, Kiyimalioglu et al. (2011) concluded that risk awareness had an important negative effect.

Store image has a positive influence on private label attitudes: if consumers have positive feelings on the store's image they are more inclined to buy private label products from this store (Kiyimalioglu et al., 2011).

Burton et al. (1998) found that private label attitude was negatively related to brand loyalty. The recent gains made by private labels have often been linked to lower levels of brand loyalty (Burton et al., 1998). As brand loyalty decreases, consumers may switch to other national brands or to private label brands.

2.2.3. Private labels in Belgium

The Belgian retailer market shares are 27,7% for Colruyt Group, 22,5% for Delhaize Group and 22,6% for Carrefour Group, 15,8% Hard Discount (Aldi, Lidl), 4,9% Louis Delhaize convenience stores, 4,1% Makro and 2,3% others (Cora, Albert Heijn, Match) (Neerman,

2012). These retailers all have their own private labels, of which some examples are listed in Table 1. Note that Colruyt Group decided recently (after the data collection for this study) to replace a number of its private labels with a single private label, called Boni Selection. Their discount label Everyday will not change and they will try to keep Everyday products 30% cheaper than national brands and Boni Selection 15% cheaper compared to national brands (Dendooven, 2013).

Table 1 – Belgian retailers and examples of their private labels

Retailer	Private Labels
Colruyt	Boni (Graindor, Kelvin, Davinia, Galaxi), Everyday, Bio-time
Delhaize	Delhaize, Eco, Care, 365, Bio
Carrefour	Carrefour, Carrefour Baby, Carrefour Selection, Carrefour Home, Carrefour Stylesse
Aldi	Buttella, BioCura, Casa Morando, Goldhorn, Loft, Milsa, Palazzo
Lidl	Bellarom, Crownfield, Dulano, Freeway, Milbona
Makro	Aro, Rioba, Sigma, Fine Food , Horeca Select

2.3. Private labels in the organic market

The report by the European Commission (EC) (2011) on the impact of private labels on the food supply chain states that private labels can play many roles in the market, but not that of product innovation. However in interviews, retailers indicated that the food industry has not taken up consumer demand with respect to their social concerns, namely fair trade, organic production, environmental and animal welfare. Retailers can develop these new product categories because of their proximity to the consumers, their large product development and marketing departments (EU Commission, 2011).

Although organic products were originally mainly sold in specialized nature food stores, local farmers markets and by the farmers themselves, they expanded to be commercially significant since the 1970s. Organic products grew further into the mainstream position they currently have and major retailers began to sell organic products (Jonas & Roosen, 2005).

2.3.1. Mixed opinions about organic products sold by retailers

The entry of retailers in the organic food market received multiple reactions, both positive and negative. The retailers can add value to the market, diversify the consumer pool and make organic food more popular so more farmers are attracted to use organic farming methods (Perrini et al., 2010). Research on Canadian consumers in small communities showed that the low availability of organic food is a real barrier for these consumers (Hamzaoui Essoussi & Zahaf, 2008). In Flanders the barrier to find organic food has become a lot lower since both national organic brands and private label organic foods are common in supermarkets (Beristain, 2004; Carrefour Belgium, 2013; Colruytgroup, 2013).

On the other hand, sceptics fear that the mainstream retailer-led distribution will lower the standards and the quality of the organic products. This fear is due to the earlier explained fact that organic products are credence goods. Padel & Foster (2005) worry that lower organic food prices may dilute incentives for farmers to convert or stay in organic production. They are also concerned that these low prices risk jeopardizing the potential of the market to take proper care of environmental and ethical demands, thereby undermining the uniqueness of the product and one of its key selling points.

Perrini et al. (2010) researched the influence of the retailers' CSR on the trust of consumers in the organic products under private labels from that retailer. When consumers believe that their retailer cares for the protection of consumers and for the protection of the natural

environment, they are more likely to trust the organic products marketed by that retailer under its private label (Perrini et al., 2010). A study in focus groups with consumers in the UK by Padel & Foster (2005) reported that when asking for their least favourite place to buy organic food, only supermarkets were mentioned. They expressed a lack of trust in supermarkets and a concern of incompatibility with these outlets and their organic values. Nevertheless supermarkets are also the main point of purchase of organic food because regular consumers are willing to trade off their values for the convenience of shopping at a supermarket (Padel & Foster, 2005).

Trust is an important issue when it comes to organic food. Organic is a so-called credence product attribute, which means that consumers cannot personally evaluate the organic quality of a product. Instead, they have to rely on the associated information provided by means of a label or logo, as well as on the credibility of the source providing this information or certifying the organic status of a product. Consumers associate truly organic with home grown and feel they can only trust the quality claim if the product is almost passed over the garden fence (Padel & Foster, 2005). They have greater trust in small companies that focus on organic philosophies, rather than large companies with a different focus. The same trend can be observed for their trust in labelling, independent organizations were felt to be more trustworthy than a state controlled certification system (Padel & Foster, 2005).

After the original EC plan for a pan-European organic labelling system was delayed in 2008, the director of the Soil Association expressed they believed the introduction of a European organic logo had more to do with championing the single European market and encouraging trade than promoting the benefits of organic farming (Charles, 2008).

2.3.2. Belgian retailers and organic products

Most of Belgian retailers have included organic products in their private label assortment. Colruyt developed the private label 'Bio-time' (Figure 3) which offers a wide range of organic products among different food categories (Colruytgroup, 2013). The Colruyt Group saw the opportunity in the organic market and introduced organic supermarket Bio-Planet in 2001 where both organic products from national brands and Bio-time products are sold (Bio-Planet, 2013).

The supermarket Delhaize was the first to sell organic products in a supermarket in 1985 and when they launched organic food into their own product assortment they decided to display

the organic items on the same counter as conventional food. Because it was not clear to consumers what an organic product was, Delhaize developed a separate private label organic brand in 1997 (Figure 4) so it stands out from the different brands (Beristain, 2004). Carrefour supermarkets also have a private label organic assortment called Carrefour BIO (Figure 5) (Carrefour Belgium, 2013). The Hard Discount retailers Aldi and Lidl do not currently have an organic assortment within their private label lines in Belgium. Makro only launched organic products in their Fine Food assortment since 2010 but only focuses on organic fruits and vegetables (Makro, 2010).

Figure 3 – Organic Private Label Colruyt: Bio-time

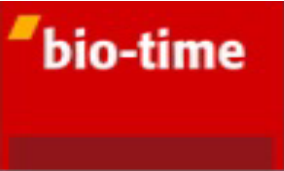


Figure 4 – Organic Private Label Delhaize: Delhaize Bio



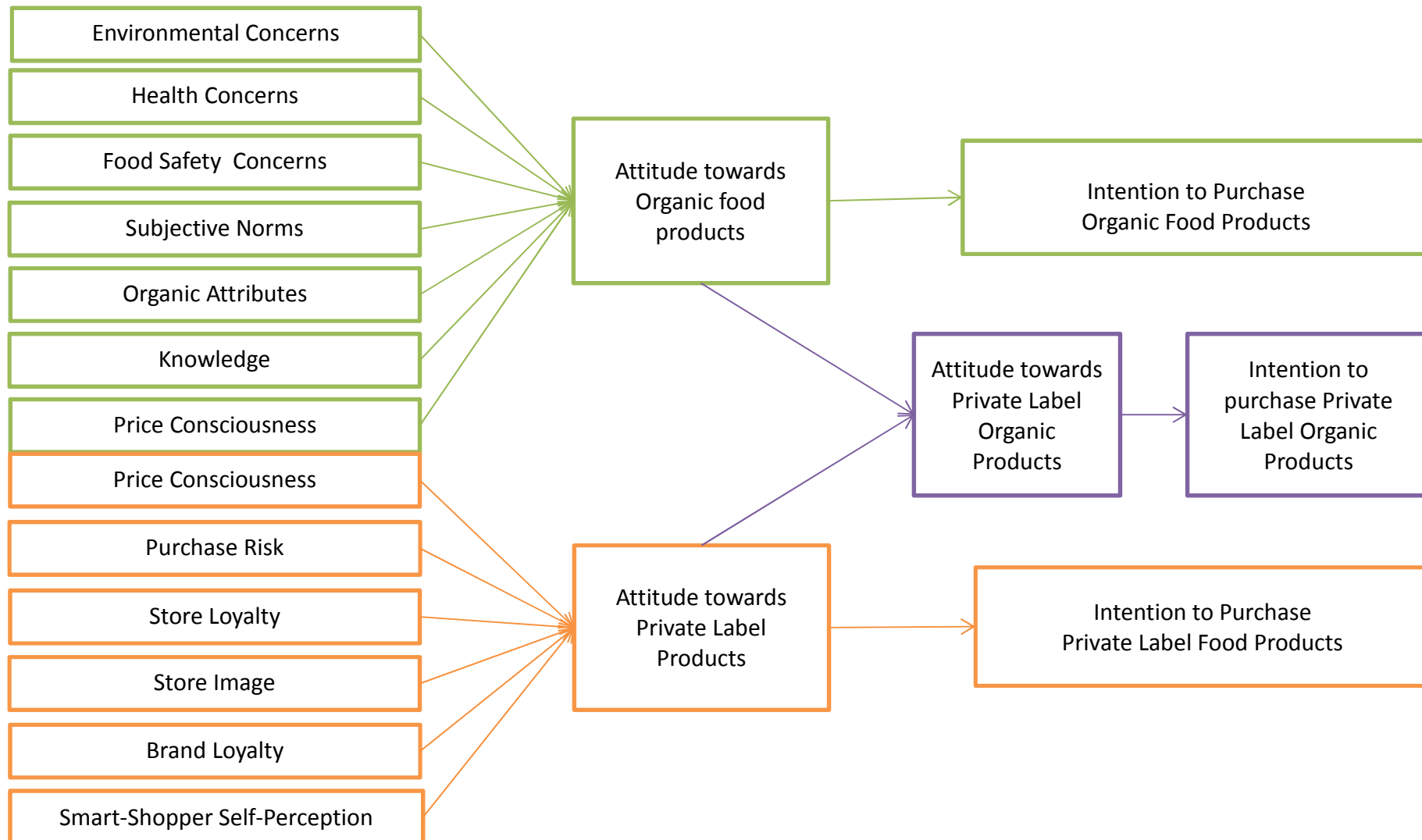
Figure 5 – Organic Private Label Carrefour: Carrefour Bio



2.4. Conceptual framework

Above literature review can be recapitulated into the conceptual framework, as presented in Figure 6.

Figure 6 – Conceptual Framework



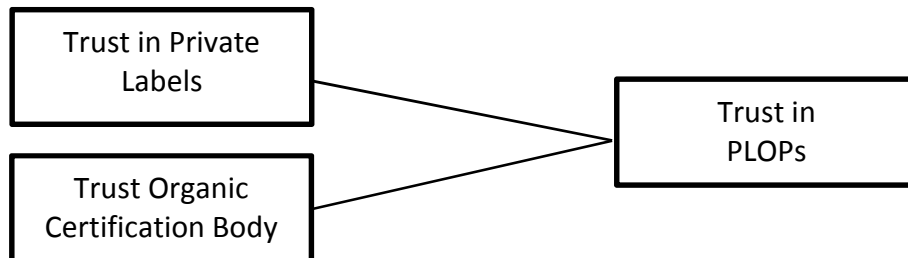
2.5. Development of Hypotheses

This study aims to explore the consumers' attitude towards private label organic products, and the factors that may influence this attitude. While several studies have focused on organic food and others on private labels there is a paucity of research focused on a combination of the two. However, an increasing amount of retailers are introducing or have introduced private labelled organic food products in their stores.

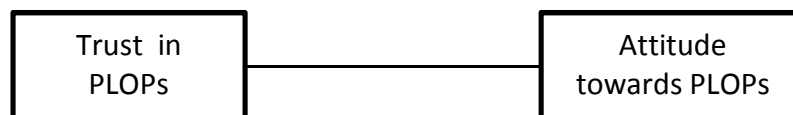
High prices are one of the main perceived barriers that keep certain consumers from buying organic products (Magnusson et al., 2003; Padel & Foster, 2005). Private label organic products are generally cheaper than national brands so they can offer a solution for those who think organic food is beyond their budget (EU Commission, 2011).

However, trust is also a feeling of high importance for a consumer who considers the organic products sold by the retailer. A consumer's trust includes not only his trust in the retailer and its private label products. It also includes the trust in the organic label on the packaging of organic products. For the Flemish consumers in our study this is the organic label of the EU, which is obligatory on all organic products that are sold in the EU since 1 July 2010.

Hypothesis 1: *Both higher trust in private labels and higher trust in the organic certification body are positively correlated with the consumers' trust in private label organic products (PLOPs).*



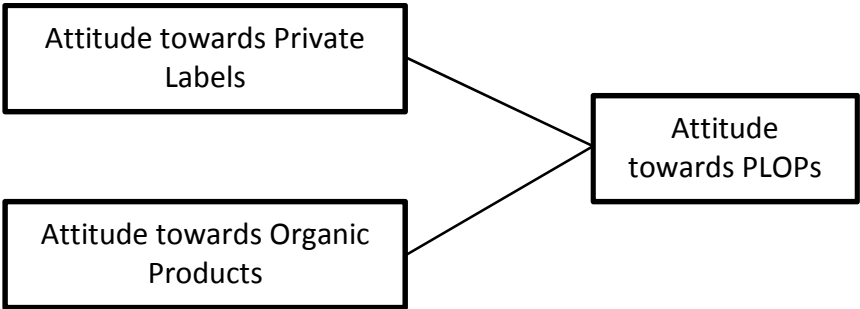
Hypothesis 2: *Higher consumers' trust in private label organic products is positively correlated with higher attitude towards private label organic products.*



A consumer's attitude towards organic products from private labels depends on how he feels about organic food in general (labelled as *Attitude towards Organic Products*).

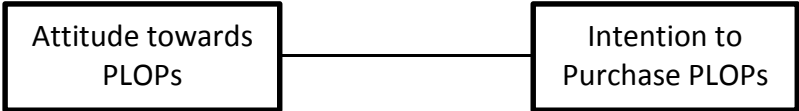
On the other hand, it is also important how the consumer perceives private labels (labelled as *Attitude towards Private Labels*), which can depend on previous experiences or beliefs. So both attitude towards private labels and attitude towards organic products are of importance for a consumer's judgment of private label organic products.

Hypothesis 3: *Both consumers' attitude towards private labels and attitude towards organic products are positively correlated with their attitude towards private label organic products.*



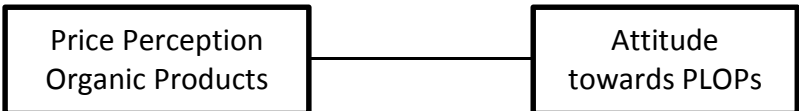
In line with basic consumer behaviour theory, consumers' attitudes and intention to behave a certain way are closely linked.

Hypothesis 4: *Consumers' attitude towards private label organic products is positively correlated with their intention to purchase private label organic products.*



Earlier studies (Díaz et al., 2012; Magnusson et al., 2003; Padel & Foster, 2005) illustrated that the main barrier for purchasing of organic food is the price. Owing to the lower price premium for organic private label products compared to organic national branded products, it is expected that the price perception regarding organic products is positively related to the attitude towards private label organic products.

Hypothesis 5: *Consumers who consider the price of organic products too high, have a more positive attitude towards PLOPs.*



Note: the connections in the frameworks do not imply causality

3. Materials and methods

3.1. Study design and constructs reliability tests

Quantitative descriptive data were collected through a cross-sectional consumer survey during a three-week period in March 2013, in the Flemish region of Belgium. Participants were selected from the proprietary consumer panel, managed by the market research company responsible for data collection. Such panels consist of individuals who have been recruited through off-line recruitment methods (e.g. random walk or street contact procedures) and who agreed to take part in future surveys. All contact and questionnaire administration procedures were electronic and anonymity was guaranteed. All items used in the questionnaire were based on previous studies and are shown in the Appendix.

The total sample consisted of 1041 respondents, of which 728 completed the survey. The questionnaire consisted of different parts related to private labels attitude, organic food attitude, consumer attitudes and socio-demographics.

3.1.1. Choice of supermarket

The respondents were asked at which supermarket they shop most often, and the following questions were focused on the supermarket of their choice. Only the three major retailers Colruyt, Delhaize en Carrefour were included. Discount markets like Aldi and Lidl were not taken into account because they do not have an organic assortment of their private label and they have a smaller market share. Makro does sell organic food under their private label Fine Food but only has a small market share and is mainly focused on enterprises rather than individuals. Respondents who do not buy at any of the three main retailers were directed to the end of the survey. This left a number of 671 respondents who answered all the questions.

To determine how consumers chose a particular supermarket they had to score the importance of 14 retailer-related factors on a 7-point-Likert Scale, ranging from 'very important' to 'not important at all': Look of the store, parking space, care for the environment, freshness of the products, organic assortment in the store, product availability, atmosphere, distance, working conditions, price of the products, quality of the products, diversity of the products, trust in the retailer and fair trade (OIVO, 2012).

Respondents rated statements about their retailer regarding store image, store loyalty and trust in this retailer. Cronbach's alphas and sources are shown in Table 2 and show there is sufficient consistency between the items.

Table 2 – Retailer related constructs

Construct	Number of items	Cronbach's alpha	Source
Store Image	12	0,901	<i>Beristain & Zorrilla (2011)</i>
Store Loyalty	4	0,852	<i>Dimitriades (2006)</i>
Trust in the Retailer	2	0,880	<i>Janssen & Hamm (2012)</i>

3.1.2. Attitudes and behaviour towards private labels

Respondents indicated how often they buy the private label for 15 different product categories: soda, milk, juices, water, tea, coffee, cereal, eggs, cheese, yoghurt, mayonnaise, olive oil, rice, pasta, nuts and chips. The goal was to get a general view of their shopping behaviour with regards to private labels. The options were 'Always', 'Often', 'Sometimes', 'Rarely' and 'Never'. A sixth option was 'does not apply' to choose if they never buy food in this category.

The respondents also rated statements about the private label products sold by their retailer (Table 3). Their private label usage, perceived quality, intention to purchase, risk awareness, trust and attitude towards private labels were measured. All these constructs were measured on a 7-point Likert scale ranging from 'totally disagree' to 'totally agree'. The goal was to define how respondents feel about private labels and why they do. High Cronbach's alphas show there is sufficient internal consistency (Table 3). Intention to purchase was measured asking the respondents to what extent they plan, expect and desire to purchase private labels within the next 7 days.

Table 3 – Private label related constructs

Construct	Number of items	Cronbach's alpha	Source
Private Label Usage	2	0,841	<i>Ailawadi et al. (2013)</i>
Perceived Quality Private Labels	3	0,895	<i>Beristain & Zorrilla (2011)</i>
Price Perception of Private Labels	2	0,681	<i>Beristain & Zorrilla (2011)</i>
Risk Awareness towards Private Labels	2	0,830	<i>Dick, Jain, & Richardson (1995)</i>
Trust in Private Label Products	2	0,941	<i>Based on Janssen & Hamm (2012b)</i>
Attitude towards Private Label Products	6	0,869	<i>Burton & Lichtenstein (1998)</i>
Purchase Intention Private Label Products	3	0,919	<i>Pieniak et al. (2007)</i>

3.1.3. Attitude and behaviour towards organic products

First, information was given on organic products and the EU organic label (Figure 7).

“The organic label of the EU indicates that a product meets the EU requirements for organic food. All organic food produced in the EU needs to have this label.”

Figure 7 – EU Organic Logo



Two items were used to test the awareness of the EU organic label and their trust in this label, based on Janssen & Hamm (2012). The items were measured on a 7-point Likert scale ranging from ‘totally disagree’ to ‘totally agree’.

To get a general view on which food categories are popular for organic consumers, the respondents indicated how often they buy the organic alternative for 11 food categories: Tea, coffee, cereal, olive oil, cheese, juice, yoghurt, eggs, milk, mayonnaise and nuts. The options were ‘Always’, ‘Often’, ‘Sometimes’, ‘Rarely’ and ‘Never’. A sixth option was ‘does not apply’ to choose if they never buy food in this category. Organic vegetables and meat were not included because they are until now not available under private labels, which is focus of this study.

The next part of the survey measured consumers’ price perception of organic products, attitude towards organic products and their intention to purchase organic products. All constructs’ Cronbach’s alphas and sources are shown in Table 4.

Table 4 – Organic products related constructs

Construct	Number of items	Cronbach’s alpha	Source
Price Perception Organic Products	4	0,780	Voon et al. (2011)
Attitude towards Organic Products	3	0,926	Stayman & Batra (1991)
Intention to Purchase Organic Products	3	0,963	Pieniak et al. (2007)
Awareness Organic Label EU	1	-	Janssen & Hamm (2012b)
Trust Organic Label EU	1	-	Janssen & Hamm (2012b)

3.1.4. Attitude and behaviour towards private label organic products

A short introduction on private label organic products with examples from the different retailers was presented to ensure that all respondents understand the terminology used, before continuing with questions about private label organic products. The questions measured the consumers' perceived quality of private label organic products, their trust in private label organic products, their attitude and intention to purchase organic products under private labels. The Cronbach's alphas show there is sufficient consistency between the items (Table 5).

Table 5 – Private label organic products related constructs

Construct	Number of items	Cronbach's alpha	Source
Perceived Quality Organic Products	3	0,885	<i>Beristain & Zorrilla (2011)</i>
Trust in Private Label Organic Products	2	0,938	<i>Janssen & Hamm (2012b)</i>
Attitude towards Private Label Organic Products	6	0,883	<i>Burton et al. (1998)</i>
Intention to Purchase Private Label Organic Products	3	0,964	<i>Pieniak et al.(2007)</i>

3.1.5. Consumer shopping attitudes

Finally, the respondents rated several statements regarding their general shopping behaviour. All constructs were measured on a 7-point Likert scale ranging from 'totally disagree' to 'totally agree'. Cronbach's alphas and sources are shown in Table 6.

Table 6 – Shopping behaviour related constructs

Construct	Number of items	Cronbach's alpha	Source
Price Consciousness	3	0,764	<i>Lichtenstein et al. (1993)</i>
Value Consciousness	5	0,767	<i>Lichtenstein et al. (1993)</i>
Price-Quality Perception	4	0,810	<i>Lichtenstein et al. (1993)</i>
Brand Loyalty	5	0,898	<i>Lichtenstein & Burton (1990)</i>
Risk Averseness	4	0,698	<i>Burton & Lichtenstein (1998)</i>
Smart Shopper Self-Perception	4	0,895	<i>Garretson et al. (2002)</i>

3.2. Statistical Analysis

The survey was pretested and refined before starting. The survey data were analysed in SPSS 19 (SPSSInc., Chicago, IL, USA). Constructs were formed as indicated after testing the reliability (Cronbach alpha). To test for independence in cross-tabular data (two categorical variables), chi-squared tests were performed. A t-test was applied to compare 2 means (categorical and interval scale variables) and ANOVA was performed to compare more than 2 means. Scheffé or Dunnett T3 post hoc were performed in cases where equal variances could or could not be assumed respectively. In all statistical tests a significance level of 0.05 was used to identify significant differences. Cluster analysis was done using Ward's method hierarchical analysis followed by a K-means analysis on the cluster centres.

4. Results and discussion

4.1. Socio-demographic characteristics of the sample

Participants were selected from the proprietary consumer panel, managed by the market research company responsible for data collection. The total sample consisted of 1041 respondents, of which 728 completed the survey. The distribution of the sample covers a wide range. Frequency distributions of the socio-demographic characteristics are reported in Table 7.

There is an overrepresentation of women in the sample (65,4%) and this might cause a bias, but is in line with the fact that women are in majority the main responsible person for food purchases within the household. The age of the respondents is well distributed over different age groups. Over 70% of the participants have studied further education after the age of 18.

Table 7 – Socio-demographic characteristics of the sample (N=728)

	%		%
<i>Gender</i>		<i>Household members ≥ 15 years</i>	
Male	34,6	1	15,2
Female	65,4	2	50,2
<i>Age</i>		3	14,8
<30	28,6	≥4	19,1
30-39	17,3	<i>Children < 15 years old</i>	
40-49	21,2	0	75,1
50-59	21,9	1	11,8
>60	11,0	≥2	13,0
<i>Education</i>		<i>Working status</i>	
Primary education	0,4	Full-time paid job	55,4
Secondary education	23,0	Part-time paid job	11,0
Higher education	48,0	Retired	10,9
University	28,6	Student	13,7
		Unemployed	2,7
		Non-paid work	1,8
		Other	4,5

4.2. Choice of the supermarket

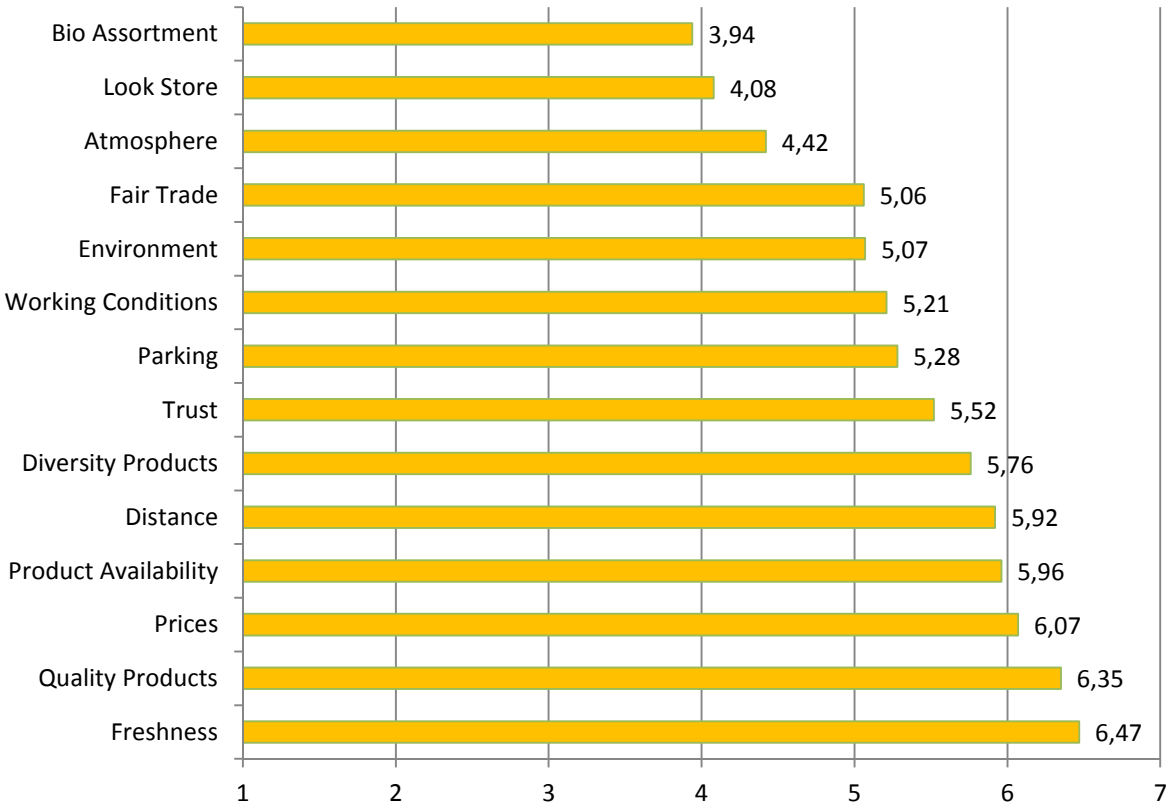
The share of the different supermarkets where the respondents shop the most follow the same trend as their market shares but with larger differences: Colruyt Group (44,5% of the sample), Delhaize Group (31,4%) and Carrefour Group (16,9%). Respondents that chose “none of the above” (7,3%) were directed to the end of the survey and were excluded from

the data. This means that in the final sample used for statistical analysis with a total of 671 respondents, shoppers at Colruyt Group represented 48% of the sample, Delhaize Group 33,8% and Carrefour Group 18,2%.

The factors influencing consumers’ choice for a certain retailer were measured and compared. These are the criteria the consumers take into account for evaluating and appreciating a certain supermarket (OIVO, 2012). The overall means are shown in Figure 8 where the different factors are ordered from least important to most important.

Freshness was identified as the most important factor and is closely followed by quality of products and prices. These results are in accordance with the conclusions of the Consumer Behavior Monitor (OIVO, 2012) where prices, quality of the products and freshness were also the three most important criteria for valuation of a retailer. The Consumer Behavior Monitor also looked which factors influence the final decision for retailer by using a top of mind method. They concluded that distance from home or work is the most important factor for making the final decision of supermarket.

Figure 8 – Factors influencing consumers’ choice for a retailer
(mean scores on 7-point scale ranging from 1= not at all important to 7= very important)



When analysing the same factors for the three retailers separately, the order of importance changes and some interesting differences between the retailers appear (Table 8).

A significant difference between the retailers was found for the factors *Freshness* (ANOVA, $p=0,026$), *Prices* ($p<0,001$), *Atmosphere* ($p<0,001$), *Trust* ($p<0,001$), *Quality Products* ($p=0,032$), *Organic assortment* ($p=0,019$) and *Parking* ($p<0,001$).

Table 8 – Factors influencing retailer choice: Differences among retailers

Variables	Colruyt N=322	Delhaize N=227	Carrefour N=122	F-value	p-value
Freshness	6,55 ^a	6,46 ^{ab}	6,30 ^b	3,676	0,026
Quality Products	6,42 ^a	6,37 ^{ab}	6,16 ^b	3,466	0,032
Prices	6,48 ^a	5,57 ^b	5,93 ^c	53,428	<0,001
Product Availability	5,96	5,99	5,88	0,488	0,614
Distance	5,99	5,86	5,84	1,124	0,326
Diversity Products	5,69	5,85	5,75	1,368	0,255
Trust	5,79 ^a	5,39 ^b	5,05 ^b	16,586	<0,001
Parking	5,55 ^a	5,13 ^b	4,84 ^b	8,702	<0,001
Working Conditions	5,31	5,19	4,97	2,849	0,059
Environment	5,09	5,14	4,89	1,223	0,295
Fair Trade	5,10	5,05	5,00	0,193	0,825
Atmosphere	3,88 ^a	5,05 ^b	4,66 ^b	47,265	<0,001
Look Store	3,39 ^a	4,87 ^b	4,40 ^c	71,529	<0,001
Organic Assortment	3,87 ^{ef}	4,21 ^e	3,66 ^f	3,979	0,019

a, b, c indicate significantly different means using Scheffe Post Hoc;
e, f, g indicate significantly different means using Dunnett T3 Post Hoc;

While the quality of products is significantly more important than prices for customers of Delhaize ($p<0,001$) and of Carrefour ($p=0,025$), for customers of Colruyt there is no difference in importance between prices and quality ($p=0,227$) when they evaluate their retailer. For customers of Colruyt prices are more important when choosing a retailer compared to other consumers, which coincides with Colruyt's main campaign 'always the lowest price'. Prices of the products at the retailer are less important for customers of Carrefour compared to customers of Colruyt and least important for those of Delhaize, compared to the other two retailers (Table 8).

On the other hand, it is clear that shoppers at Delhaize perceive the look of the store and the atmosphere in the store more important features compared to customers of Colruyt and Carrefour (Table 8).

Availability of organic products at the store (labelled as *Organic assortment*) is one of the least important factors but is significantly more important for customers of Delhaize stores than for those who shop at Carrefour. The level of trust the consumer has in their retailer is a more important factor in choosing a retailer for Colruyt consumers compared to Delhaize and Carrefour consumers.

Store Image, *Trust in the retailer* and *Store Loyalty* are significantly different across the shoppers of Colruyt, Carrefour and Delhaize. The difference between retailers follows the same trend for the three constructs (Table 9). Customers of Colruyt are most loyal towards their retailer, are most positive about the store's image and have highest trust in Colruyt. Next in line are Delhaize consumers and Carrefour clientele score the lowest for these retailer-related constructs (Table 9).

After performing a factor analysis, these three constructs are combined into one factor, *Attitude towards the retailer* (Cronbach's alpha=0,908). For the further course of the study this construct will be used as a retailer-related attitude. Customers of Colruyt have a more positive attitude towards their retailer than those of Delhaize and customers of Carrefour have a less positive attitude towards Carrefour than the others.

Table 9 – Retailer related constructs: differences among retailers

Variables	Colruyt N= 322	Delhaize N= 227	Carrefour N=122	F-value	p-value
Trust in retailer	6,04 ^a	5,59 ^b	5,12 ^c	28,45	< 0.001
Store Image	5,61 ^e	5,36 ^f	4,99 ^g	54,69	< 0.001
Store Loyalty	6,12 ^a	5,54 ^b	5,09 ^c	42,14	< 0.001
Attitude Retailer	5,92 ^a	5,50 ^b	5,07 ^c	49,82	< 0.001

a, b, c indicate significantly different means using Scheffe Post Hoc;
e, f, g indicate significantly different means using Dunnett T3 Post Hoc;

4.3. Consumer shopping attitudes

The results of the variables regarding consumers' personal shopping behaviour can give insight in consumers attitudes and can uncover if they affect attitudes towards organic products under private labels (Table 10).

Table 10 – Consumer shopping attitudes: Means and Standard Deviations
(mean scores on 7-point scale ranging from 1= totally disagree to 7= totally agree)

Variables	Mean	SD
Price Consciousness	4,28	1,44
Value Consciousness	5,40	1,04
Price-Quality Perception	3,85	1,29
Brand Loyalty	4,98	1,21
Risk Averseness	4,24	1,07
Smart Shopper Self-Perception	4,84	1,23

No significant differences were found between men and women for the first five variables in Table 10, nevertheless *Smart Shopper Self-Perception* is significantly ($p < 0,001$) higher for women than for men. Women get more joy from making a smart purchase. Ailawadi et al. (2001) as well, did not find differences between gender for price consciousness, quality consciousness (similar to value consciousness), brand loyalty and variety seeking behaviour.

The mean values were compared between the shoppers at different retailers and significant differences were found for *Price Consciousness*, *Value consciousness* and *Smart Shopper Self-Perception*.

The results shown in Table 11 report a significant lower *Price Consciousness* for respondents who shop at Delhaize ($p_{\text{Del-Col}}=0,004$, $p_{\text{Del-Car}}=0,042$). These consumers pay less attention to prices and will put less effort into finding lower prices. Shoppers of Delhaize are also less concerned about the 'value for money' they get when buying a product. They score *Value Consciousness* significantly lower than Colruyt consumers ($p < 0,001$) and Carrefour consumers ($p=0,032$).

Smart Shopper Self-Perception is significantly higher for Colruyt compared to Delhaize shoppers ($p=0,008$). The sense of fulfilment that the shopper experiences when making a smart purchase or getting a good deal is less prominent for Delhaize customers in comparison with Colruyt customers.

Table 11 – Consumer shopping attitudes: Differences among retailers

Variables	Colruyt N=322	Delhaize N=227	Carrefour N=122	F-value	p-value
Price Consciousness	4,42 ^a	4,01 ^b	4,42 ^a	6,166	0,002
Value Consciousness	5,55 ^e	5,15 ^f	5,46 ^e	10,275	<0,001
Price- Quality Perception	3,79	3,91	3,91	0,646	0,525
Brand Loyalty	4,96	5,02	4,97	0,211	0,810
Risk Averseness	4,27	4,20	4,19	0,417	0,659
Smart Shopper Self -Perception	4,95 ^e	4,62 ^f	4,92 ^{ef}	5,109	0,006

a, b, c indicate significantly different means using Scheffe Post Hoc (p<0,05);
e, f, g indicate significantly different means using Dunnett T3 Post Hoc (p<0,05);

There are not many differences between the different age categories (Table 12). *Price Consciousness* is significantly higher for the youngest group, compared to those between 30 and 59 ($p_{30-39}=0,014$; $p_{40-49}<0,001$; $p_{50-59}<0,001$). People under 30 are more conscious about looking for cheap products and put more effort in searching the lowest price, compared to middle-aged consumers (30-59). There is however no difference between the youngest (<30) and the oldest group (>60).

Price-Quality Perception is significantly different between the group of 40-49'ers and the youngest group, who are also most price-conscious. Respondents in their forties perceive the association between price and quality of a product stronger than the youngest group does ($p=0,039$).

Although there is a significant difference between age groups regarding *Risk Averseness* ($p=0,021$), post hoc analysis could not identify where they lay (Table 12). Ailawadi et al. (2001) did not identify these differences between age and price-consciousness, brand loyalty and quality consciousness (similar to *Value Consciousness*).

Table 12 – Consumer shopping attitudes: Differences between age groups

Variables	<30 N=192	30-39 N=116	40-49 N=142	50-59 N=147	>60 N=74	F-value	p-value
Price Consciousness	4,70 ^e	4,19 ^f	4,06 ^f	4,01 ^f	4,32 ^{ef}	6,60	<0,001
Value Consciousness	5,42	5,48	5,34	5,35	5,44	0,43	0,791
Price-Quality Perception	3,66 ^e	3,77 ^{ef}	4,07 ^f	4,01 ^{ef}	3,75 ^{ef}	2,87	0,023
Brand Loyalty	4,99	4,74	4,99	5,13	5,04	1,82	0,124
Risk Averseness	4,10	4,16	4,19	4,43	4,44	2,90	0,021
Smart Shopper Self-Perception	4,95	4,85	4,75	4,68	4,99	1,42	0,226

a, b, c, d indicate significantly different means using Scheffe Post Hoc (p<0,05);
e, f, g, h indicate significantly different means using Dunnett T3 Post Hoc (p<0,05);

Whether the respondents were working or currently not working (retired, students, unemployed, housemen and housewife) had an effect on *Price Consciousness*, *Price-Quality Perception* and *Smart Shopper Self-Perception* (Table 13). Those who are working are less price conscious compared to those who are not ($p < 0,001$) probably due to the fact that they have a steady income and less worries about their budget.

The working respondents also perceive the relation between price and quality a lot higher than those who do not currently have a job ($p = 0,003$). They are more likely to buy a product of a higher price because they assume it will be of a higher quality. Consumers without employment feel a stronger sense of fulfilment when finding a good deal or doing a smart purchase, compared to working consumers ($p = 0,033$).

Table 13 – Consumer shopping attitudes: Differences between working status

Variables	Employed N=446	Unemployed N=225	F-value	p-value
Price Consciousness	4,13	4,57	14,07	<0,001
Value Consciousness	5,36	5,49	2,51	0,113
Price-Quality Perception	3,96	3,65	8,76	0,003
Brand Loyalty	4,97	5,00	0,10	0,754
Risk Averseness	4,21	4,28	0,58	0,449
Smart Shopper Self-Perception	4,76	4,98	4,54	0,033

Respondents' level of education does not have any significant effect on their shopping attitudes ($p > 0,05$), except for brand loyalty ($p = 0,041$). Respondents without further education are more loyal to brands compared to those who had a further education.

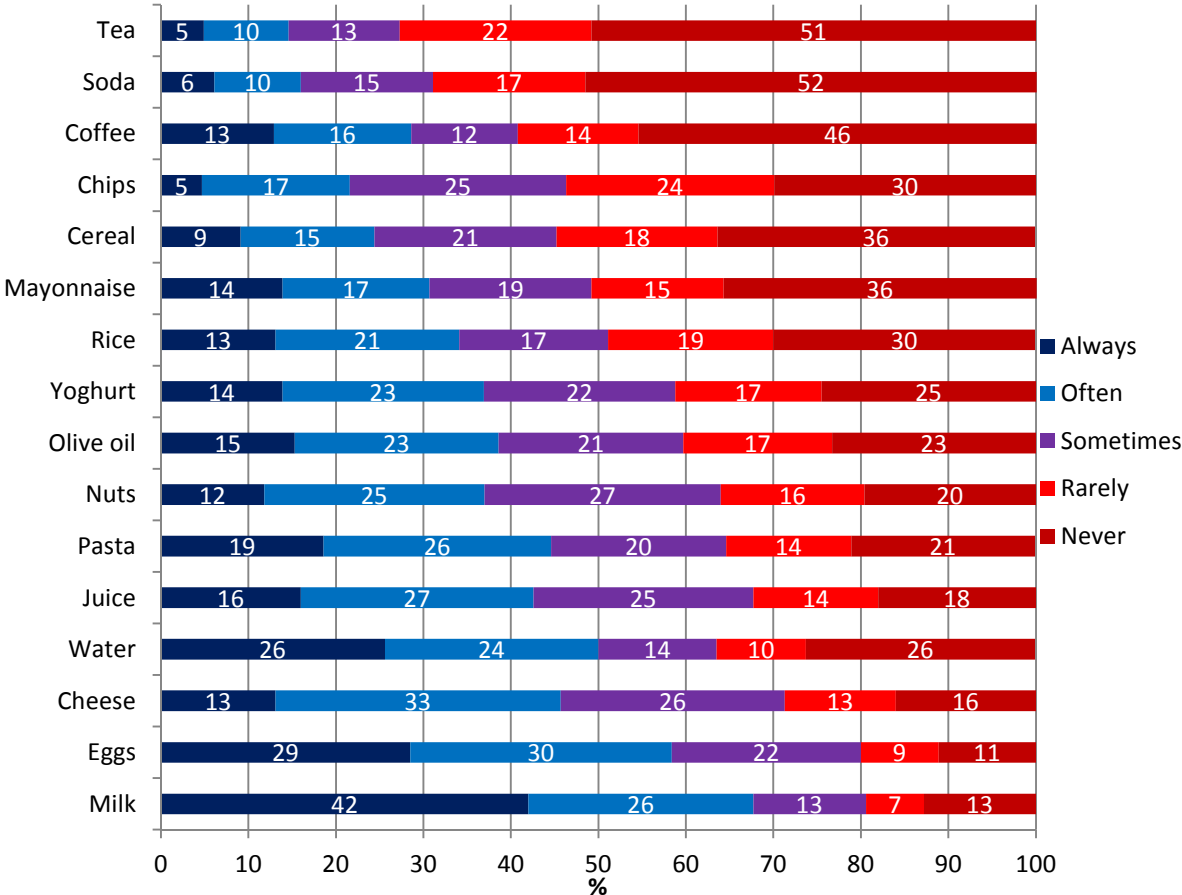
4.4. Private Labels

4.4.1. Food Categories bought as private label

Private label purchase frequencies differ a lot among different categories (Figure 9). From the list used in the survey, the most popular products to purchase from a private label are milk, eggs and cheese with over 50% of respondents often or always buying private labels for these food products. On the other hand, the least popular products of private labels are mayonnaise, cereal, chips, coffee, soda and tea. More than 50% of the respondents say they rarely or never buy these from a private label. This might be due to several reasons such as the availability of private labels in those categories or a high brand loyalty for some product categories, for example for soda national brands (Mintel, 2012).

This corresponds with results found in Mintel (2012) where they concluded that staple food categories such as milk and pasta are bought most often in part because consumers do not feel that more expensive nationally branded products are of superior quality.

Figure 9 – Reported purchase of private labels for food product categories (% , n=671)



Mintel (2012) also suggests that retailers developing private label assortments should consider focusing on these staple foods as they are purchased by a majority of shoppers. In the study done by Mintel (2012), soda and chips scored lowest as well. They conclude that consumers are more likely to avoid private label options when the product category they are considering is one which may be considered “non-essential”, as there is a belief that national brands have superior flavour.

On the other hand, a survey by Carrefour in 2009 found that for Belgians, the most popular private label products are dairy products (milk, yogurt, butter), dry foods (canned foods, pasta, chips), cleaning products, frozen products, processed meat and cheese. Least popular are beers, wines, perfumes and sodas (De Morgen, 2009). The results in this sample correspond for the most part with these results, nevertheless chips were found to be one of the least popular products under private labels among the sample of this study, with 30% of respondents saying they never buy chips from private labels.

4.4.2. Attitudes towards private labels (PL)

Respondents’ attitudes towards private labels are overall positive (mean values, Table 14). The perception of the quality of private labels is generally high and the prices are perceived positively and fair. When buying private label products, respondents generally do not perceive a high risk of buying a product of lesser quality. This coincides with the trust they have in private label products which is on average high. The usage of private labels has a high mean value which means the respondents in this survey are most likely accustomed to private label products and at least sometimes buy products from their retailer.

Table 14 – Private Label (PL) related constructs: Means, standard deviations and correlations (mean scores on 7-point scale ranging from 1= totally disagree to 7= totally agree)

Variables	Mean	SD	Trust PL	Usage PL	Perc Quality PL	Attitude PL	Price Perc PL	Risk Aware PL
Trust in PL	5,42	1,21	-	-	-	-	-	-
Usage of PL	4,67	1,65	0,623**	-	-	-	-	-
Perceived Quality PL	5,10	1,20	0,867**	0,748**	-	-	-	-
Attitude towards PL	4,54	1,12	0,547**	0,776**	0,675**	-	-	-
Price Perception of PL	5,34	1,05	0,424**	0,412**	0,441**	0,527**	-	-
Risk Awareness of PL	2,42	1,39	-0,488**	-0,465**	-0,531**	-0,460**	-0,253**	-
Intention to Purchase PL	5,28	1,75	0,438**	0,638**	0,511**	0,580**	0,348**	-0,417**

Note: ** significant at the 0,01 significance level

There are no significant effects of gender nor education on the constructs regarding private labels. However when comparing age groups, significant differences are found (Table 15). The attitudes of the youngest group under 30 and the oldest group over 60 are both higher than of the groups 40-49 and 50-59, although not significantly different from the group 30'ers (<30 vs. 40-49: $p=0,047$; >60 vs. 40-49: $p=0,041$; <30 vs. 50-59: $p=0,016$; >60 vs. 50-59: $p=0,018$). This could be due to the fact that they have a lower budget because they might still be students or be retired. The differences for different working status will be discussed later on.

With regards to the *Usage of Private Labels* the youngest (<30) also say they use a significantly higher amount of private labels than those in their forties ($p=0,025$) and their fifties ($p=0,003$). This coincides with results that were discussed in 4.3, which showed that the younger group was more price-conscious than these older groups. *Price consciousness* and *Usage of Private Labels* are significantly correlated as well ($r=0,291$).

Although there are significant differences between age groups for *Trust in Private Labels*, *Perceived Quality Private Labels* and *Intention to Purchase Private Labels*, Post Hoc analysis could not identify where they were situated.

Burton et al. (1998) found no significant relations between attitudes towards private labels and gender nor age, however found higher attitudes for educated respondents compared to respondents without further education, where this study did not.

Table 15 – Private Label (PL) related constructs: Differences among age groups

Age groups	<30 N= 192	30-39 N=116	40-49 N=142	50-59 N=147	>60 N=74	F-value	p-value
Trust PL	5,54	5,39	5,30	5,27	5,70	2,51	0,041
Usage PL	4,99 ^e	4,71 ^{ef}	4,45 ^f	4,32 ^f	4,84 ^{ef}	4,38	0,002
Perceived Quality PL	5,30	5,07	4,96	4,96	5,32	3,39	0,009
Attitude PL	4,74 ^a	4,49 ^{ab}	4,36 ^b	4,32 ^b	4,87 ^a	5,66	<0,001
Price Perception PL	5,54 ^a	5,37 ^{ab}	5,09 ^b	5,23 ^{ab}	5,47 ^{ab}	4,51	0,001
Risk Awareness PL	2,39 ^{ef}	2,38 ^{ef}	2,63 ^e	2,48 ^{ef}	2,03 ^f	2,47	0,044
Intention PL	5,47	5,51	5,14	4,95	5,38	2,70	0,030

a, b, c indicate significantly different means using Scheffe Post Hoc;
e, f, g indicate significantly different means using Dunnett T3 Post Hoc;

Respondents who are working tend to have a less positive attitude towards private labels ($p=0,003$) than persons who are not working (retired, student, unemployed).

When looking into the different retailers where the respondents shop significant differences were found for *Trust in Private Labels*, *Perceived Quality of Private Labels* and *Price Perception of Private Labels* (Table 16). The choice of retailer had no significant effect on the other private label related constructs ($p > 0,05$).

Colruyt consumers perceive the quality of private label products of their retailer higher than Carrefour consumers ($p = 0,015$). Furthermore, Colruyt consumers are more positive about prices of private labels than consumers of Delhaize ($p = 0,008$).

Table 16 – Private Label (PL) related constructs versus retailer choice

Variables	Colruyt N=322	Delhaize N=227	Carrefour N=122	F-value	p-value
Trust PL	5,49	5,45	5,18	3,04	0,049
Perceived Quality PL	5,20 ^a	5,12 ^{ab}	4,83 ^b	4,27	0,014
Price Perception PL	5,48 ^a	5,20 ^b	5,22 ^{ab}	5,95	0,003

a, b, c indicate significantly different means using Scheffe Post Hoc;

4.4.3. Correlation analysis

The constructs regarding private labels are all significantly ($p < 0,01$) correlated with each other (Table 14).

Trust in Private Labels is strongly correlated with the *Perceived Quality of Private Labels* ($r = 0,867$) which means these constructs are influencing each other. Consumers with confidence in private labels will believe that the quality is good enough for their needs or when consumers think the quality is good, their confidence in private label products will increase.

Trust in Private Labels and *Attitude towards Private Labels* are both highly correlated with the respondents' current *Usage of Private Labels* ($r = 0,623$, $r = 0,776$) which implies that those who regularly buy private label products will also have higher trust in them. *Risk Awareness regarding Private Labels* is negatively correlated with *Trust* ($r = -0,488$), *Attitude* ($r = -0,460$) and *Intention to Purchase Private Labels* ($r = -0,417$) because it reflects the consumers' fear that these products won't give them what they expect from the product.

Risk Awareness is highly correlated with the perceived quality as well ($r = -0,531$). Showing reluctant consumers the level of quality of private label products might reduce their fears and concerns and might increase their attitude.

The *Attitude towards Private Labels* is positively correlated ($r=0,580$) with the consumers' *Intention to Purchase Private Labels*. Intention is also dependent on other factors which were not measured in this study, for example social norms.

Comparing respondents' private label attitudes and their consumer shopping attitudes shows that *Price-Consciousness*, *Value-Consciousness* and *Price-Quality Perception* are significantly correlated with almost all private-label related constructs (Table 17). The positive relation between *Attitude towards Private Labels* and *Price-Consciousness* is described in earlier research as well (Batra & Sinha, 2000; Burton et al., 1998), however Kiyimalioglu et al. (2011) could not find a significant correlation.

Confirming results from Burton et al. (1998), there is a significant negative correlation between attitudes towards private labels and brand loyalty, although it is rather weak (Table 17).

The importance of consumers' perception on price-quality associations was reported by Garretson et al. (2002) and is confirmed here. The correlation is strongest with consumers' *Risk Awareness of Private Labels*. Those consumers who believe lower prices are associated with lower quality are more likely to fear that private label products will not offer them what they expect.

Although Kiyimalioglu et al. (2011) observed a negative effect of risk averseness, no significant correlations with any of the private label related constructs were found here. *Smart shopper Self-Perception* is positively related to *Attitude towards Private Labels* as well, confirming the results of Garretson et al. (2002).

Table 17 – Correlations between private label attitudes and consumer shopping attitudes

	Price Consc	Value Consc	Price-Quality Perc	Brand Loyalty	Risk Averseness	Smart Shopper Self-Perception
Trust in PL	0,109**	0,142**	-0,127**	0,035	0,060	0,134**
Perceived Quality PL	0,173**	0,154**	-0,162**	-0,017	0,014	0,131**
Attitude towards PL	0,326**	0,238**	-0,191**	-0,079*	-0,025	0,262**
Price Perception PL	0,152**	0,225**	-0,036	0,041	0,043	0,286**
PL Usage	0,291**	0,236**	-0,233**	-0,170**	-0,026	0,144**
Risk Awareness PL	-0,040	-0,044	0,329**	0,133**	-0,061	0,037
Intention to Purchase PL	0,202**	0,221**	-0,198**	-0,134**	-0,006	0,154**

Note: ** significant at the 0,01 significance level

* significant at the 0,05 significance level

4.4.4. Regression analysis

Model 1: Trust in Private Labels

A stepwise regression analysis was performed to get further information on the relations between these constructs. The dependent variable was *Trust in Private Labels*. The other private label related constructs *Price Perception PL*, *Perceived Quality of PL* and *Risk Awareness regarding PL* were used as independent predictors. The retailer-related construct *Attitude towards the retailer* (explained in 4.2) was also added to the independent variables. The final model that was obtained consisted of predictors *Perceived Quality PL* and the retailer related construct *Attitude towards the Retailer* (Table 18). *Price Perception PL* and *Risk Awareness PL* did not contribute to the power of the model so they were not entered. The high adjusted R² value expresses that these predictors can account for 75,6 per cent of the variation. *Perceived Quality of Private Labels* is a very influential predictor of *Trust in Private Labels*. Increasing consumers' trust in private labels can be done by ensuring them that private labels are of substantial quality and can offer a good alternative to national brands. Volpe (2011) reports an improvement in quality of private labels during the last decade and an increase in total product offerings. Volpe (2011) states that when the price difference between substitutes is too high, it may signal consumers that the private label is of low quality. To communicate a comparable quality of private labels, retailers are suggested to use nearly perpetual private label price promotion. Under this strategy, private labels are given a clearly visible shelf price that is relatively close to the price of respective national brand substitutes, communicating they are of comparable quality. However, the promotional price provides a wider price difference, increasing the probability that the consumer will purchase the private label.

Table 18 – Stepwise linear regression: explanatory variables for trust in private labels

Variables entered	Correlation	Estimation	Standardized beta	t-value	p-value
(Constant)		0,505		3,189	0,001
Perceived Quality PL	0,867	0,857	0,847	42,567	<0,001
Attitude towards Retailer	0,314	0,096	0,071	3,572	<0,001

Notes: variables not entered in the model: Risk Awareness PL, Price Perception PL

Model goodness-of-fit: R²= 75,6 per cent; n=670

Model 2: Attitude towards Private Labels

In a second stepwise regression analysis *Price Perception of Private Labels* and *Risk Awareness of Private Labels* are together with the *Trust in Private Labels* used to predict the dependent variable *Attitude towards Private Labels* (Table 19). The adjusted R² value (R² =0,444) indicates that there are other factors influencing the consumers' attitude towards private labels of the retailer, however this model can explain 44,4% of the variation in *Attitude towards Private Labels*.

Price Perception is the most important predictor for consumers' attitude towards private labels. This confirms that the lower prices of private labels are still the main drivers of attitudes towards these products. Sinha & Batra (1999) as well found an important role for price-related constructs regarding private labels.

In addition, *Trust in Private Labels* is of importance for predicting consumers' attitudes towards store brands. *Risk Awareness* is negatively correlated with the attitude towards private labels and has a negative influence in the formula, which support previous research (Kiyimalioglu et al., 2011; Sinha & Batra, 1999)

Table 19 – Stepwise linear regression: explanatory variables for attitude towards private labels

Variables entered	Correlation	Estimation	Standardized beta	t-value	p-value
(Constant)		1,571		6,501	0,000
Trust PL	0,547	0,267	0,287	8,118	0,000
Price Perception PL	0,527	0,371	0,346	10,874	0,000
Risk Awareness PL	-0,460	-0,188	-0,232	-7,031	0,000

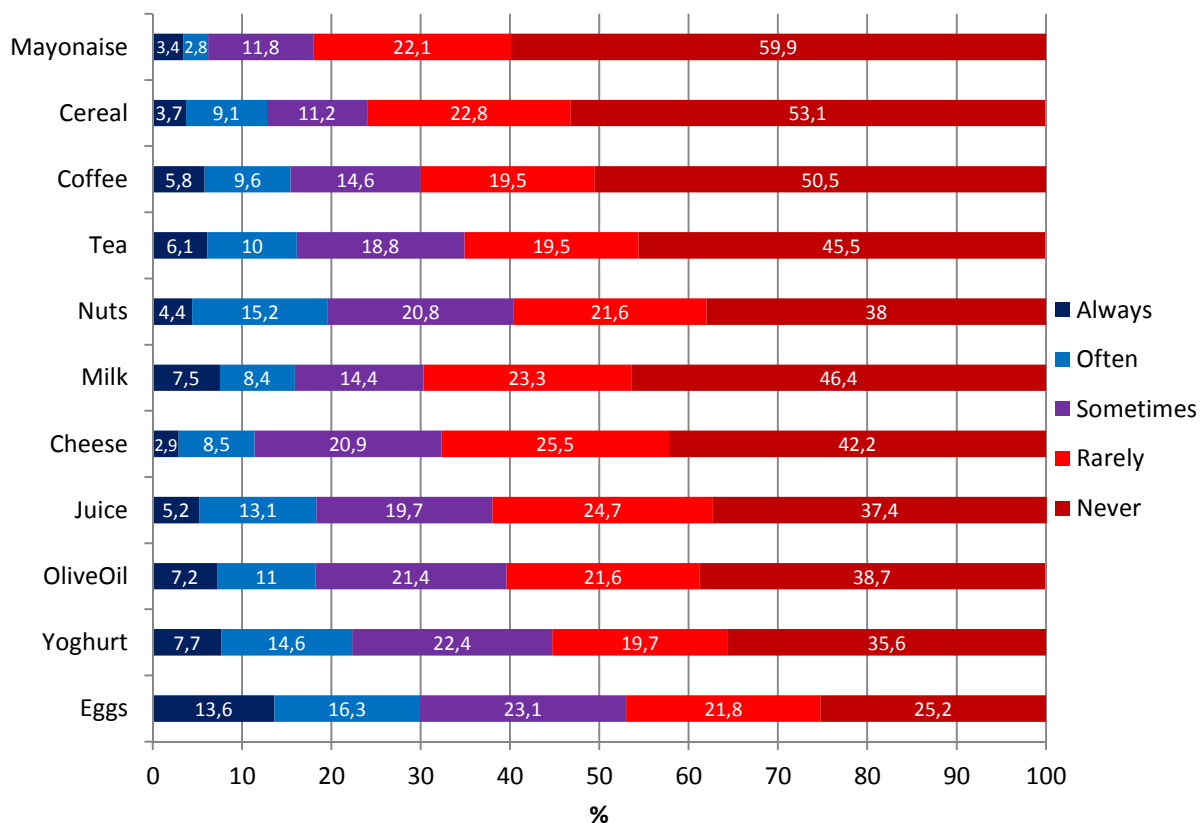
Notes: Model goodness-of-fit: R²= 44,4 per cent; n=670

4.5. Organic food

4.5.1. Organic food categories

First of all the respondents' likelihood of buying different organic food categories was studied. The results are presented in Figure 10 where they are ordered from least frequently to most frequently bought in the organic version. Most popular food category are organic eggs with 30% of respondents saying they often or always purchase the organic alternative and only 25% never buys organic eggs. Yoghurts (23% buys private label often or always) and olive oils (18,2%) are popular as well, however over 35% of respondents say they never buy these organic products. Least popular organic products are mayonnaise, cereals and coffee, for which over 50% of the sample states they never buy the organic alternative.

Figure 10 – Reported purchase of organic product for food product categories (% ,n=671)



Other research by (VLAM, 2013) on Belgian consumers in 2012 reported organic vegetables to be the most popular organic food category (65% of buyers), followed by organic fruit (43% of buyers), dairy (33% of buyers) and organic bread (25% of buyers). This study did not take vegetables into account because they are not often sold under private labels.

In 2012 the largest increase in expenditures was noticed for cereal products, butter, meat substitutes and prepared meals. On the other hand, sales of organic flower, soy drinks and fresh meat, are decreasing (VLAM, 2013).

4.5.2. Awareness and trust of the EU organic logo

Of the sample, 63% of respondents stated to be aware of the EU organic label (Table 20). This is in contrast with earlier studies (Aertsens et al., 2011; Janssen & Hamm, 2012a; Pivato et al., 2008) where a low knowledge of the organic certification was found. In a Special Eurobarometer survey of 2012 only 24% of EU respondents indicated recognizing the EU organic logo and in Belgium only 20% did (EU Commission, 2012).

Van Loo et al. (2013) reported only 31% of respondents recognizing the EU organic logo in a study with for Flemish consumers in 2012. This survey was performed a year later so this might imply that consumers are getting more used to the EU organic logo and they find it getting easier to recognize it. Janssen & Hamm (2012b) reported a difference between European countries according to which labels existed before the EU organic logo. In Italy for example, the former EU logo was widely used and there were no other governmental or important private organic logos (Janssen & Hamm, 2012a). This is in contrast with the Belgian situation where consumers are still more familiar with the Biogarantie® logo compared to the EU organic logo (Van Loo et al., 2013).

Pivato et al. (2008) concluded that only 12,5% of the Italian consumers described the EU organic label correctly, although the Eurobarometer survey 2012 reported 24% of Italians recognize the EU organic label (EU Commission, 2012). The way label recognition is measured has an influence on the results. It should be noted that this study only asked if the respondents know the label but did not test their objective knowledge of the label.

Nevertheless, the higher level of awareness in this sample can be a good sign towards the future. Overall recognition of the label can increase trust in the label, which can increase organic purchases (Karahan Uysal et al., 2012). A strong significant correlation between respondents' awareness of the EU organic logo and their trust in it exists in this sample as well ($r=0,286$).

More than half of the respondents (51%) trust the EU organic label and the other half is undecided or indicates they do not trust the EU organic label. Janssen & Hamm (2012a)

described similar trends among consumers in Denmark, Germany and the UK but found a higher level of trust (60%) in Italy and Czech Republic.

The EU organic logo is mandatory since July 2010 and this survey was taken two and a half years later. Developing awareness, familiarity and building trust can take several years. To further increase recognition and build trust, additional campaigns to inform consumers are necessary. Díaz, Pleite, Paz, & García (2012) also concluded that actions aimed at promoting both organic products characteristics and their recognition may positively influence their WTP the necessary premium for these quality foodstuffs.

Comparing the socio-demographic characteristics, men are significantly less familiar with the EU organic label than women ($p=0,044$) and have lower trust in it ($p=0,022$). While 67% of women indicate they recognize the label, only 57% of men do the same and the others are indecisive or are unfamiliar with the EU organic label.

Age and which retailer consumers shop at made no significant difference for their awareness and trust of the EU organic logo. Whether respondents were employed or not had no effect but whether they had enjoyed further education after the age of 18 made a significant difference ($p=0,002$) in their awareness of the label. Of consumers with a higher education ($N=514$), 66% are familiar with the EU organic logo and only 55% of those without further education ($N=157$).

This trend coincides with the results in the Eurobarometer survey of 2012, where they found only 16% of the less educated recognized the EU Organic Label, while 31% of the higher educated recognized it (EU Commission, 2012).

No significant differences were discovered between socio-demographic groups regarding their trust in the EU organic logo (Table 20).

Table 20 – Awareness and trust in the EU organic logo: Mean values
(mean scores on 7-point scale ranging from 1= totally disagree to 7= totally agree)

Variables	Total	Gender		Education	
		Men N=232	Women N=439	Further N=514	No further N=157
Awareness EU Organic Label	4,96	4,73*	5,08*	5,10**	4,50**
Trust EU Organic Label	4,64	4,46*	4,73*	4,67	4,54

Note: ** significant at the 0,01 significance level;
* significant at the 0,05 significance level

4.5.3. Attitude towards organic food

Because many studies already addressed the factors that shape consumers' attitude towards organic products, not all of these will not be discussed in detail in this study. Nevertheless, analysing the mean values and correlations of *Price Perception of Organic Products*, *Attitude towards Organic Food* and *Intention to Purchase Organic* can offer general insights on organic food attitudes and perceptions.

Respondents' *Price Perception of Organic Food* is generally negative (Table 21). They perceive prices for organic food as too high for their budget. Their perception on prices of organic products is negatively correlated ($p < 0,01$) with their intention to purchase organic food. Although correlations are weak this might imply that price is a barrier that exists between attitude and purchase behaviour regarding organic food.

Díaz et al. (2012) studied WTP for organic tomatoes in Spain and also concluded that price is the transcendent variable affecting any consumer's purchasing decision of organic products. Likewise, Padel & Foster (2005) discovered low food budget to be the main barrier for buying organic products.

Table 21 – Organic food related constructs: Means, standard deviations and correlations (mean scores on 7-point scale ranging from 1= totally disagree to 7= totally agree)

Variables	Mean	SD	CPO	IPO
Price Perception Organic (CPO)	4,71	1,37	-	-
Intention Purchase Organic (IPO)	3,38	2,07	-0,195**	-
Attitude towards Organic (AO)	4,96	1,27	-0,054	0,611**

Note: ** significant at the 0,01 significance level

As expected there is a significant positive correlation between *Attitude towards Organic Products* and *Intention to Purchase Organic Products* as was found in other studies (Aertsens et al., 2009; de Magistris & Gracia, 2008). Those consumers' with a more positive attitude towards organic food are more likely to have a stronger intention to purchase organic food in the near future. This means consumers intentions can be affected by changing their attitudes and attitudes can be used to predict intentions of purchases.

While attitudes towards organic food are high, intentions are still mediocre. This reflects reality market shares of organic products of only 1,5% in Belgium in 2011 (Samborski & Van Bellegem, 2013).

Although women perceive the price of organic food higher than men, they have a more positive attitude towards organic food than men (Table 22). Nevertheless there is no significant difference between their intention to purchase organic food (Table 22). Previous research on Spanish consumers discovered that the main reason for organic food consumption for women is eating a healthy diet while for men it is a social function and to a lesser degree, comes from respect for the environment (Olivas & Bernabéu, 2012).

Table 22 – Organic food related constructs: Differences gender

Variables	Men N=232	Women N=439	F-value	p-value
Price Perception Organic	4,46	4,85	11,98	0,001
Intention to Purchase Organic	3,30	3,42	0,57	0,449
Attitude towards Organic	4,75	5,07	9,60	0,002

Shoppers at Delhaize have a higher intention to buy organic food than those of Colruyt or Carrefour, even though there is no significant difference in attitude nor price perception (Table 23).

Table 23 – Organic food related constructs: Differences according to choice of retailer

Variables	Colruyt N=322	Delhaize N=227	Carrefour N=122	F-value	p-value
Price Perception Organic	4,80	4,54	4,81	2,67	0,070
Intention to Purchase Organic	3,27 ^a	3,77 ^b	2,94 ^a	7,49	0,001
Attitude towards Organic	4,94	5,06	4,84	1,36	0,257

a, b, c indicate significantly different means using Scheffe Post Hoc;

Only the youngest age group (<30) have a significant lower intention to purchase organic food in comparison to the group of forties (p=0,029) (Table 24). They also perceive the price of organic food higher than the group of 40-49 (p=0,02) and the oldest group (p=0,021), which may explain their lower intention to buy it. This may be due to the fact that 47% of those under 30 are still students and thus have a lower budget to spend.

Table 24 – Organic food related constructs: Differences among age groups

Variables	<30 N=192	30-39 N=116	40-49 N=142	50-59 N=147	>60 N=74	F-value	p-value
Price Perception Organic	4,96 ^e	4,88 ^{ef}	4,48 ^f	4,69 ^{ef}	4,32 ^f	4,58	0,001
Intention Purchase Organic	2,95 ^a	3,55 ^{ab}	3,69 ^b	3,56 ^{ab}	3,27 ^{ab}	3,49	0,008
Attitude towards Organic	4,85	5,04	5,10	4,95	4,88	0,96	0,431

a, b, c indicate significantly different means using Scheffe Post Hoc;

e, f, g indicate significantly different means using Dunnett T3 Post Hoc;

Employment had no significant effect on any of the organic food related constructs but education did. Respondents without further education perceive the price of organic food higher ($p=0,029$), have a less positive attitude towards organic food ($p=0,004$) and a lower intention to buy it ($p<0,001$) compared to those who enjoyed further education (Table 25).

Table 25 – Organic food related constructs: Differences between levels of education

Variables	No further education N=157	Education after age of 18 N=514	F-value	p-value
Price Perception Organic	4,92	4,65	4,76	0,029
Intention to Purchase Organic	2,83	3,55	14,77	<0,001
Attitude towards Organic	4,71	5,04	8,22	0,004

4.6. Organic food under private labels

4.6.1. Attitudes towards private label organic products (PLOP)

The mean scores for *Trust in Private Label Organic Products*, *Attitude towards Private Label Organic Products* and *Perceived Quality of Private Label Organic Products* are overall positive (>4) (Table 26). Nevertheless, the respondents did not have a strong intention to purchase organic products from store brands. All correlations between these constructs are significant and will be discussed later (Table 26).

Table 26 – PLOP related constructs: Means, standard deviations and correlations (mean scores on 7-point scale ranging from 1= totally disagree to 7= totally agree)

Variables	Mean	SD	Trust PLOP	Attitude PLOP	PQ PLOP
Trust PLOP	5,00	1,20	-	-	-
Attitude PLOP	4,49	1,13	0,721**	-	-
Perceived Quality PLOP (PQ PLOP)	4,74	1,10	0,871**	0,800**	-
Intention to Purchase PLOP	3,27	1,94	0,455**	0,582**	0,538**

Note: ** significant at the 0,01 significance level

Gender has a significant effect on both *Attitude towards Private Label Organic Products (PLOP)* and *Intention to Purchase PLOPs* (Table 27). Women have a significant more positive attitude towards organic products from retailer brands than men, and women have a higher intention to purchase PLOPs in the near future compared to men.

Table 27 – PLOP related constructs: Differences gender

Variables	Men N=232	Women N=439	F-value	p-value
Trust PLOP	4,90	5,06	2,89	0,089
Attitude PLOP	4,31	4,59	9,71	0,002
Perceived Quality PLOP	4,67	4,77	1,30	0,255
Intention to Purchase PLOP	3,06	3,38	3,97	0,047

There are no significant differences between age groups for any of the PLOP-related constructs ($p_{Att}=0,476$, $p_{trust}=0,421$, $p_{qual}=0,390$, $p_{int}=0,117$). Neither does employment status affect the consumers' views on PLOPs ($p_{Att}=0,632$, $p_{trust}=0,863$, $p_{qual}=0,389$, $p_{int}=0,392$).

The respondents choice for a retailer does not significantly affect their *Attitude towards PLOPs* ($p=0,330$) but there are significant differences for *Trust in PLOPs*, *Perceived Quality of PLOPs* and *Intention to Purchase PLOPs* (Table 28). Respondents that shop at Carrefour have

lower trust in organic products under private labels and have a less positive perception of their quality, compared to shoppers of Colruyt and Delhaize. On the other hand, shoppers at Delhaize have a significant higher intention to purchase PLOPs than customers of Colruyt ($p=0,024$) and Carrefour ($p=0,012$).

Table 28 – PLOP related constructs: Differences according to choice of retailer

Variables	Colruyt N=322	Delhaize N=227	Carrefour N=122	F-value	p-value
Trust PLOP	5,11 ^e	5,07 ^e	4,59 ^f	9,044	<0,001
Attitude towards PLOP	4,54	4,51	4,36	1,11	0,330
Perceived Quality PLOP	4,84 ^e	4,78 ^e	4,39 ^f	7,922	<0,001
Intention to Purchase PLOP	3,15 ^e	3,60 ^f	2,98 ^e	5,351	0,005

e, f, g indicate significantly different means using Dunnett T3 Post Hoc;

Attitude, Intention and *Perceived Quality of PLOPs* are also significantly different for different levels of education (Table 29). Consumers with a higher education level are more positive about organic products under private labels and have a higher intention to purchase these products compared to respondents without further education (Table 29).

Table 29 – PLOP related constructs: Differences between level of education

Variables	No further Education N=157	Education after 18 N=514	F-value	p-value
Trust PLOP	4,86	5,05	3,00	0,084
Attitude towards PLOP	4,29	4,56	6,77	0,009
Perceived Quality PLOP	4,58	4,78	4,15	0,042
Intention to Purchase PLOP	2,80	3,41	12,05	0,001

4.6.2. Correlation analysis

All variables related to the private label organic products are significantly correlated to one another (Table 26). The strong significant correlation between *Trust in Private Label Organic Products* and *Attitude towards Private Label Organic Products* ($r=0,721$) confirms the second hypothesis. Respondents' trust is also significantly correlated with *Intention to purchase Private Label Organic Products* ($r=0,455$). Respondents with higher trust in the organic products from the store brands will also have a more positive attitude towards them and have a higher intention to purchase them.

Consumers' trust is an important factor in shaping consumers' attitudes towards organic products because it is a credence good. When a consumer does not trust that the product will have the characteristics they expect from an organic product, he or she will be less likely to buy it.

The strong positive correlation between *Trust in PLOP* and *Perceived Quality of PLOP* indicates that consumers who perceive the quality of organic products from store brands as a good quality also have a high trust in those products. This correlation coincides with the high correlation between *Trust in Private Labels* and *Perceived Quality of Private Labels*. The nearly perpetual private label price promotion suggested by Volpe (2011) can be used for private label organic products to enhance consumers' perception of quality.

Attitude towards organic products from private labels are significantly correlated with the consumers' intention to purchase these products. This confirms the fourth hypothesis. However, correlations do not imply causality so it is not possible to conclude which one is affecting the other.

The main focus of this study is to find what influences consumers' attitudes and purchase intentions towards private label organic products.

To find which variables are of importance the correlations are first analysed and are reported in Table 30. The different variables can be divided into four groups: the private label related variables, the organic products related variables, the private label organic products related variables and the consumer shopping attitudes.

Significant correlations with the *Attitude towards Private Label Organic Products* exist between the *Attitude towards Private Labels* ($r=0,331$) and the *Attitude towards Organic Products* ($r=0,534$), which makes it possible to accept Hypothesis 3. Both consumers' general views on private labels and on organic foods are related to how they will perceive organic products from store brands.

The significant positive correlation between *Price Perception Organic Products* and *Attitude towards PLOPs* confirms the fifth hypothesis. Although consumers' who perceive costs of organic too high have a significantly lower intention to purchase organic products (Table 21), they will be more positively minded towards PLOPs.

Table 30 – Correlations with Attitude towards Private Label Organic Products (PLOP)

Variables	Attitude PLOP
<i>PLOP-related variables</i>	
Trust PLOP	0,721**
Attitude PLOP	-
Intention PLOP	0,582**
<i>Private Label related variables</i>	
Trust PL	0,258**
Attitude PL	0,331**
Attitude towards Retailer	0,170**
<i>Organic Products related variables</i>	
Trust Organic Label	0,382**
Price Perception Organic	0,101**
Attitude Organic	0,534**
<i>Consumer Shopping Attitudes</i>	
Price Consciousness	0,056
Value Consciousness	0,181**
Risk Averseness	-0,022
Price-Quality Association	0,004
Brand Loyalty	-0,144**
Smart Shopper Self-Perception	0,240**

Note: ** significant at the 0,01 significance level

When looking at personal shopping attitudes, *Value Consciousness*, *Smart Shopper Self-Perception* and *Brand Loyalty* are significantly correlated with *Attitude towards PLOPs*, although with weak Pearson correlation coefficients ($r < 0,250$). This signifies that consumers who give a lot of importance to ‘value for their money’ and are looking for the best values for the lowest prices will be more favourable towards private label organic products.

Those with a high score on *Smart Shopper Self-Perception* are those consumers that get a feeling of fulfilment when finding cheaper products or getting a good deal out of a purchase. Smart shoppers will also be more positive towards organic products from store brands. This is probably because organic products are perceived as trendy and high quality products and store brands are seen as cheaper so they can buy a trendy and good product for a lower price.

Brand Loyalty is negatively related with the attitude. Those consumers who do not like changing product brands once they are used to one and do not like trying new things will also have a less positive attitude towards private label organic products.

4.6.3. Regression analysis

Further investigation of the relationships was done through a stepwise regression analysis with *Attitude towards Private Labels Organic Products* as the dependent variable. A model with a relatively high R^2 was found where all the predictors were used except for *Value Consciousness* (Table 31). Over 60% of variation within *Attitude towards Private Label Organic Products* can be explained by this model.

Table 31 – Stepwise linear regression: explanatory variables for Attitude towards PLOP

Variables entered	Correlation	Estimation	Standardized beta	t-value	p-value
(Constant)		-0,206		-0,938	0,349
Trust PLOP	0,721	0,492	0,520	18,011	<0,001
Attitude towards Organic	0,534	0,249	0,279	9,762	<0,001
Attitude towards PL	0,331	0,205	0,203	7,784	<0,001
Smart Shopper Self-Perception	0,240	0,093	0,101	4,051	<0,001
Brand Loyalty	-0,144	-0,075	-0,080	-3,289	0,001

Notes: Model goodness-of-fit: $R^2= 62,4$ per cent; n=670

The beta-coefficients confirm once more that trust has the strongest relationship with the *Attitude towards PLOPs*. This implies that consumers who are looking for organic products base their purchase decision on the fact that a product is organic but also on the brand selling it. When they consider private labels for their organic purchases, they want to be sure that the product will give them the quality they expect and demand. This is linked with their general view on private labels and their deal proneness or smart shopper self-perception. Brand Loyalty has a negative relation with attitude because those who do not like changing brands are not likely to try new products.

4.6.4. Trust in PLOPs

In Table 32 the correlations between *Trust in Private Labels*, *Trust in the Organic Label* and *Trust in PLOPs* are shown and it is clear that both consumers' *Trust in Private Labels* and *Trust in the Organic Label* are positively correlated on a significant level with *Trust in Private Label Organic Products*. This implies that the consumers with a high trust in private labels, will be more likely to trust the organic products under private labels. It also means that

respondents who trust that the organic label guarantees them that products are really organically produced will be more likely to trust organic products from store brands.

Table 32 – Correlation coefficients between different trust-related constructs

Variables	Trust PLOP	Trust PL
Trust PLOP	-	-
Trust PL	0,314**	-
Trust EU Organic Label	0,477**	0,065

Note: ** significant at the 0,01 significance level

Table 33 – Stepwise linear regression: explanatory variables for Trust in PLOP

Variables entered	Correlation	Estimation	Standardized beta	t-value	p-value
(Constant)	-	1,763	-	8,477	<0,001
Trust PL	0,314	0,370	0,458	14,21	<0,001
Trust EU Organic Label	0,477	0,281	0,284	8,816	<0,001

Notes: Model goodness-of-fit: $R^2 = 30,6$ per cent; $n=670$

To further analyse these relations a stepwise regression analysis was performed (Table 33). The R^2 value ($R^2=0,306$) suggests that there are other predictors that influence the *Trust in Private Label Organic Products*. *Trust in Private Label Organic Products* is both dependent on consumers' trust in private labels and their trust in the organic label of the EU. The regression analysis reveals us that the consumers trust in private labels is has a higher weight than trust in the organic label.

4.6.5. Cluster analysis

Segmentation based on Attitudes towards Private Labels and towards Organic Food

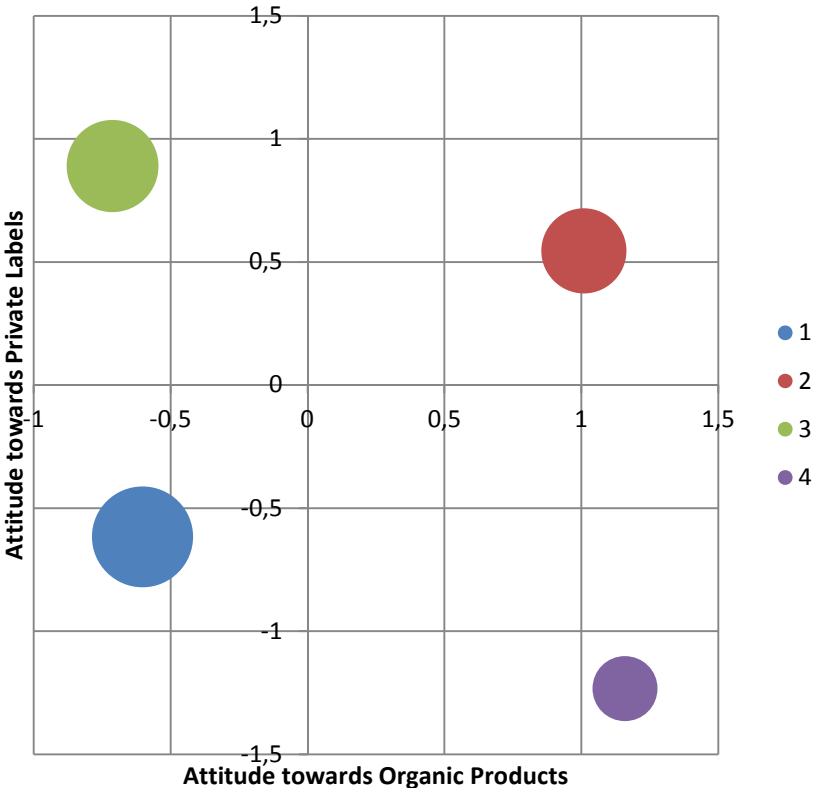
To find how attitude towards private labels and attitudes towards organic food shape consumers view on organic food from private labels a cluster analysis was performed (Table 34). The standardized cluster centres are graphically displayed in Figure 11, where the size of the bells represents number of respondents.

Table 34 – Cluster centres and number of respondents

Cluster number	Number of respondents	Attitude towards Organic Food	Attitude towards Private Labels
1	227	4,20 ^e	3,85 ^a
2	161	6,24 ^f	5,15 ^b
3	189	4,06 ^e	5,54 ^c
4	94	6,43 ^f	3,15 ^d

a, b, c, d indicate significantly different means using Scheffe Post Hoc;
 e, f, g indicate significantly different means using Dunnett T3 Post Hoc;

Figure 11 – Standardized cluster centres



The first cluster accounts for 34% of the sample and consists of respondents with the least positive attitude towards both private labels and organic food. The second cluster (24% of the sample) includes those with the most positive attitude towards both private labels and organic food. Respondents in the third cluster (28%) feel positive about private labels, but are not really fans of organic food. Finally the fourth cluster holds 14% of the sample and consists of those who are in favour of organic food but feel negative about private labels.

Table 35 – Socio-demographic profile of the clusters

	Cluster 1 N=227	Cluster 2 N=161	Cluster 3 N=189	Cluster 4 N=94	Total Sample	Pearson (χ^2)	df	p- value
Gender						9,756	3	0,021
Man	40,1%	25,5%	37,0%	31,9%	34,60%			
Woman	59,9%	74,5%	63,0%	68,1%	65,40%			
Age groups						29,264	12	0,004
<30	26,4%	27,3%	37,0%	19,1%	28,6%			
30-39	15,4%	19,9%	15,3%	21,3%	17,3%			
40-49	21,1%	21,7%	17,5%	27,7%	21,2%			
50-59	24,2%	16,1%	20,1%	29,8%	21,9%			
>60	12,8%	14,9%	10,1%	2,1%	11,0%			
Work						13,185	3	0,004
Employed	66,1%	60,2%	64,6%	81,9%	66,5%			
Not Employed	33,9%	39,8%	35,4%	18,1%	33,5%			
Education Level						12,183	3	0,007
No further education	27,3%	18,6%	28,0%	12,8%	23,4%			
Education after 18	72,7%	81,4%	72,0%	87,2%	76,6%			

To characterize the different clusters their socio-demographic characteristics were compared through cross tabulations and chi-square tests (Table 35).

There is a significant association between gender and clusters. Men in cluster 2 have a significant standard residual ($z=-2,0$) that contributes to the overall chi-square. This means that the association between gender and cluster is mainly driven by the difference in cluster 2. Cluster 2 has a higher share of women (75%) than men (25%) compared to the other samples.

The association between clusters and age is also significant. The youngest group of respondents under 30 is mostly represented in cluster 3 and there is a underrepresentation of older respondents in cluster 4. These younger people in cluster 3 are positive towards private labels but have a significant lower attitude towards organic food compared to clusters 2 and 4.

The working situation of respondents is associated to the cluster they are situated in as well. Unemployed respondents are less represented in cluster 4.

The education level is significantly associated with the clusters. Respondents without further education are underrepresented in cluster 4, where respondents are in favour of organic products but do not have a positive attitude towards private labels. Both cluster 2 and 4, which are both in favour of organic food, have a higher share of the higher educated respondents compared to the other segments.

Choice for a particular supermarket is not significantly associated with the different clusters (Table 36). Nevertheless, comparing the consumers' *Attitude towards the retailer* shows us that people in cluster 2 are significantly more positive about their retailer than those of cluster 1 ($p=0,016$).

Table 36 – Choice of the retailer: Differences between clusters

	Cluster 1 N=227	Cluster 2 N=161	Cluster 3 N=189	Cluster 4 N=94	Total Sample	Pearson (χ^2)	df	p-value
Choice of Retailer						4,653	6	0,589
Colruyt	46,7%	52,2%	49,2%	41,5%	48,0%			
Delhaize	33,5%	32,3%	31,7%	41,5%	33,8%			
Carrefour	19,8%	15,5%	19,0%	17,0%	18,2%			

Table 37 – Consumer shopping attitudes: Differences between clusters

Variables	Cluster 1	Cluster 2	Cluster 3	Cluster 4	F-value	p-value
Price Consciousness	4,08 ^e	4,41 ^e	4,77 ^f	3,56 ^g	18,42	< 0,001
Value Consciousness	5,14 ^e	5,70 ^f	5,60 ^f	5,12 ^e	14,66	< 0,001
Price-Quality Perception	3,90 ^e	3,81 ^{ef}	3,54 ^f	4,44 ^g	10,96	< 0,001
Brand Loyalty	5,09 ^a	4,60 ^b	5,12 ^a	5,09 ^a	7,44	< 0,001
Risk Averseness	4,22	4,12	4,36	4,22	1,55	0,201
Smart Shopper Self-Perception	4,54 ^e	5,18 ^f	5,04 ^f	4,55 ^e	12,50	< 0,001

a, b, c indicate significantly different means using Scheffe Post Hoc;

e, f, g indicate significantly different means using Dunnett T3 Post Hoc;

Examining consumer shopping attitudes uncovers some interesting differences (Table 37). Respondents in cluster 4 are less price conscious than other consumers and those in cluster 3 are more price conscious than the others. Cluster 1 and cluster 4 are less concerned about getting value for their money compared to those in cluster 2 and 3. Cluster 4 also perceive the association between the price and quality of products stronger compared to the other clusters. On the other hand, respondents in cluster 2 are less loyal to particular brands than others. Regarding *Smart Shopper Self-Perception*, cluster 1 and 4 feel less fulfilment of smart

purchases than cluster 2 and 3. There were no significant differences between the different clusters regarding their *Risk Averseness*.

To summarize, cluster 1 are those consumers who are not looking for cheaper deals and are not looking for the best quality for the price they pay. The ratio between men and women leans more to the men side than the total sample.

Cluster 2 on the other hand, includes very involved consumers who pay attention to what they are buying. Organic food is appealing to them. They feel positive about their retailer and they have a positive attitude towards the private labels. When shopping they want to get value for their money and they get a sense of accomplishment when they make a smart purchase. Consumers in cluster 2 are less brand loyal than others and will be more likely to try new brands. Cluster 2 also consists of a high percentage of women (75%).

Cluster 3 contains those who are indifferent about organic food. Private Labels on the other hand really appeal to them. They are price conscious, like getting value for their money and enjoy getting a good deal. Most of the respondents under 30 are situated in this group.

In Cluster 4, a smaller group of respondents are classified who are devoted adherents of organic food. However, they think price and quality are highly associated and they are not used to look for the cheapest price or look to get the best value for the least amount of money. That is probably the reason why these consumers have a low attitude towards products under private labels. This group consists of consumers who enjoyed higher education. Elder people (>60 years old) are less likely to be in this group.

Table 38 – Attitude and intention towards PLOPs: Differences between clusters

Variables	Cluster 1	Cluster 2	Cluster 3	Cluster 4	F-value	p-value
Attitude towards PLOP	3,78 ^e	5,42 ^f	4,45 ^g	4,71 ^g	96,039	< 0,001
Intention to Purchase PLOP	2,58 ^e	4,36 ^f	2,51 ^e	4,60 ^f	65,264	< 0,001

a, b, c indicate significantly different means using Scheffe Post Hoc;
e, f, g indicate significantly different means using Dunnett T3 Post Hoc;

Table 38 shows that the four clusters have a significant different *Attitude towards Private Label Organic Products* ($p < 0,001$) and *Intention to purchase Private Label Organic Products* ($p < 0,001$).

Cluster 1 has a significant lower *Attitude towards Private Label Organic Products* than the other clusters, which makes sense because this cluster has the lowest attitude towards both organic products and private label products. The opposite is true for cluster 2, which has the

highest positive attitude towards both private labels and organic food and also a significant higher *Attitude towards Private Label Organic Products* than the other clusters. The intention to purchase organic food under private labels is significantly lower for cluster 1 and 3 compared to those in cluster 2 and 4.

Cluster 1, that is indifferent to organic food and private labels has a lower attitude towards organic products from private labels and a lower intention to purchase them (Table 38). Cluster 2, looking for organic food but also preferring low prices have a positive attitude towards organic products from private labels and higher intention to purchase them than consumers from cluster 1 or 3.

Although cluster 3 has a more positive *Attitude towards Private Label Organic Products* than those in cluster 1, their intention is not significantly higher. This might be because they are still looking for even cheaper prices and do not perceive organic as an important attribute.

Cluster 4 is less positive towards organic products from private labels than those in cluster 2, probably because of their negative *Attitude towards Private Labels* in general. Nevertheless, they do not have a significant different intention to purchase these products.

Organic fanatics often buy in specialized stores or at farmers' level (Samborski & Van Bellegem, 2013). This might imply that they do not prefer buying private labels but for the sake of convenience will buy them when shopping at the supermarket. Padel & Foster (2005) reported that supermarkets serve a purely functional purpose and unlike local, specialist shops, do not tap into or fulfil any deep desires or aspirations for the consumers. However, regular consumers of organic food are willing to sacrifice their values to the convenience of the one-stop shop at a supermarket.

From a managerial point of view, retailers might be able to convince cluster 4 by showing them that the organic features they are looking for are equally present in organic products from private labels as in national brands' organic products. Increasing their knowledge and trust in the EU organic label can help achieving this. On the other hand, cluster 1 is positive towards private labels but has not much interest in organic food. Retailers have the possibility to promote these products and show their private label customers the organic alternatives.

Segmentation based on Attitude towards Organic Food and Intention to purchase

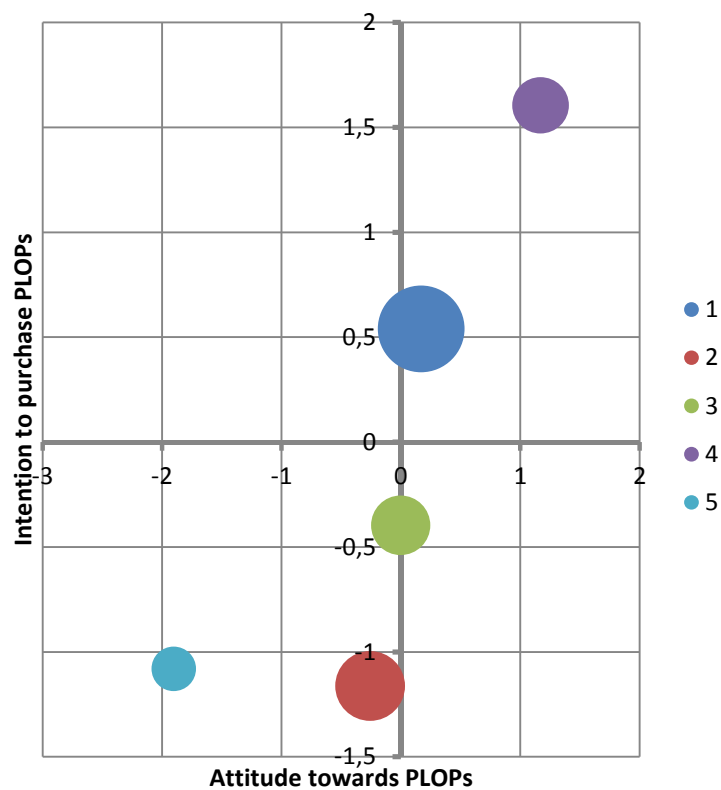
A second cluster analysis was performed based on attitudes and intentions towards PLOPs. Because of the strong correlation between attitude and intention regarding PLOPs ($r=0,582$) respondents with low attitude are expected to also have low intention and vice versa. Five clusters were found and analysed (Table 39). To graphically display the difference between the clusters, the centres were standardized (Figure 12).

Table 39 – Cluster centres and number of respondents

Cluster Number	Number of respondents	Attitude towards PLOPs	Intention to Purchase PLOPs
1	239	4,69 ^a	4,32 ^a
2	155	4,20 ^b	1,01 ^b
3	112	4,49 ^{ab}	2,50 ^c
4	102	5,82 ^c	6,39 ^d
5	63	2,34 ^d	1,17 ^b

a, b, c, d indicate significantly different means using Scheffe Post Hoc;

Figure 12 – Standardized cluster centres



The first cluster consists of 36% of the sample and represents those customers with an *Attitude towards PLOPs* which is only slightly higher than the average and an *Intention to purchase PLOPs* higher than average (Table 39). Their intention is consistent with their attitude.

The second largest cluster consists of 23% of the sample with a slightly lower than average *Attitude towards PLOPs* but with almost no intention to purchase these products (Table 39). Further on the factors that influence the gap between attitude and intention for cluster 2 will be investigated to determine why their intentions are inconsistent with their attitude.

Cluster 3 (17% of the sample) has an average *Attitude towards PLOPs*, which is not different from cluster 1 and 2. However, cluster 3 has a higher *Intention to purchase PLOPs* compared to cluster 2, and a lower intention than cluster 1 (Table 39). These consumers intention is not consistent with their attitude, which means they perceive barriers when considering purchases.

Cluster 4 (15% of the sample) is a group with a very positive *Attitude towards PLOPs* and a high *Intention to Purchase PLOPs* (Table 39). This group of consumers will not need any more convincing of the benefits of organic products under private labels from retailers.

Cluster 5 is a rather small group (9% of the sample) with those respondents with a negative *Attitude towards PLOPs* and also almost no intention for purchase.

Table 40 – Socio-demographic profile of the clusters

	Cluster 1 N=239	Cluster 2 N=155	Cluster 3 N=112	Cluster 4 N=102	Cluster 5 N=63	Total Sample	Pearson (χ^2)	df	p-value
Gender							7,059	4	0,133
Man	34,7%	38,1%	31,3%	26,5%	44,4%	65,4%			
Woman	65,3%	61,9%	68,8%	73,5%	55,6%	34,6%			
Age groups							23,511	16	0,101
<30	25,9%	34,8%	39,3%	18,6%	20,6%	28,6%			
30-39	16,7%	15,5%	17,9%	21,6%	15,9%	17,3%			
40-49	22,2%	18,1%	17,0%	27,5%	22,2%	21,2%			
50-59	24,7%	21,3%	17,9%	17,6%	27,0%	21,9%			
>60	10,5%	10,3%	8,0%	14,7%	14,3%	11,0%			
Work							1,394	4	0,845
Employed	68,2%	65,8%	64,3%	68,6%	61,9%	66,5%			
Not Employed	31,8%	34,2%	35,7%	31,4%	38,1%	33,5%			
Education Level							15,533	4	0,004
No further education	22,6%	27,7%	22,3%	11,8%	36,5%	23,4%			
Education >18	77,4%	72,3%	77,7%	88,2%	63,5%	76,6%			

No significant socio-demographic differences are discovered with respect to gender, age and working situation when comparing the five clusters (Table 40). Only education is significantly different among the five clusters, with a high level of educated respondents in cluster 4, of the very positive consumers and a very low level of higher educated people in cluster 5, where those with a negative attitude and low intention are situated.

This coincides with the results reported in Table 29, where a higher level of education also implied a more positive attitude towards PLOPs and a higher intention for purchase.

To explore other differences between cluster, the clusters members' attitudes towards private labels, organic products and their general shopping attitudes are compared (Table 41).

Respondents in cluster 4 have the most positive attitude towards organic products, followed by cluster 1 and cluster 3 who have a similar attitude. Cluster 2 has an even less positive attitude and respondents in cluster 5 have a negative attitude towards organic food. Cluster 2 and 5 also have a significant lower intention to purchase organic foods compared to cluster 1, 3 and 4. Although cluster 1 and 3 have similar attitudes towards organic food, members of cluster 1 have higher purchase intentions than those of clusters 3.

It is clear that those of cluster 4 are the regular consumers of organic food, with both a positive attitude and a high intention to purchase organic food. Although they show completely different attitudes towards PLOPs, cluster 5 and cluster 4 perceive the price of organic food significantly lower than respondents from cluster 3 and 2.

Regarding private labels, cluster 5 has the least positive attitude and the lowest intention to purchase private labels, although intention is not significantly different from cluster 3 ($p=0,125$). Members of cluster 2 are significantly more positive towards private labels, compared to cluster 1 ($p=0,014$).

Differences in *Attitudes towards PLOPs* and in *Intention to purchase PLOPs*, may be explained by differences in *Trust in PLOPs*. Indeed, consumers in cluster 4 have the highest *Trust in PLOPs* and those in cluster 5 have the lowest *Trust in PLOPs*. Respondents in cluster 2 also have less trust in PLOPs compared to cluster 1 ($p<0,001$).

Consumers situated in cluster 2 are more price conscious than those of cluster 1 ($p=0,001$) and cluster 2 and cluster 5 are more brand loyal than cluster 4, 3 and 1. There is a significant difference between clusters for *Risk Averseness* and *Smart-Shopper Self Perception* but Post-hoc analysis could not identify where the differences lay.

Table 41 – Consumer shopping attitudes: differences between clusters

Variables	Cluster 1 N=239	Cluster 2 N=155	Cluster 3 N=112	Cluster 4 N=102	Cluster 5 N=63	F-value	p-value
Attitude towards PL	4,45 ^e	4,83 ^f	4,59 ^{ef}	4,63 ^{ef}	3,92 ^b	8,23	<0,001
Intention to Purchase PL	5,23 ^a	5,47 ^a	5,20 ^{ab}	5,69 ^a	4,47 ^b	5,50	<0,001
Attitude towards Organic	5,18 ^a	4,27 ^b	4,95 ^a	6,26 ^c	3,75 ^d	79,97	<0,001
Intention Organic	4,19 ^a	1,39 ^b	2,76 ^c	6,28 ^d	1,62 ^b	313,43	<0,001
Price Perception Organic	4,67 ^{ab}	5,06 ^a	4,95 ^a	4,33 ^b	4,22 ^b	7,77	<0,001
Trust PLOP	5,16 ^a	4,64 ^b	5,02 ^{ab}	6,10 ^c	3,52 ^d	71,04	<0,001
Attitude towards PLOP	4,69 ^a	4,20 ^b	4,49 ^{ab}	5,82 ^c	2,34 ^d	224,29	<0,001
Intention Purchase PLOP	4,32 ^a	1,01 ^b	2,50 ^c	6,39 ^d	1,17 ^b	2858,02	<0,001
Price Consciousness	4,05 ^a	4,62 ^b	4,41 ^{ab}	4,12 ^{ab}	4,35 ^{ab}	4,32	<0,002
Value Consciousness	5,30	5,57	5,37	5,50	5,28	2,14	0,075
Price-Quality Perception	3,90	3,71	3,70	4,13	3,85	2,13	0,076
Brand Loyalty	4,86 ^a	5,29 ^b	4,82 ^a	4,72 ^a	5,40 ^b	6,98	<0,001
Risk Averseness	4,18	4,43	4,30	4,04	4,16	2,41	0,048
Smart Shopper Self-Perc.	4,73	5,02	4,78	5,02	4,60	2,53	0,040

a, b, c, d indicate significantly different means using Scheffe Post Hoc;
e, f, g, h indicate significantly different means using Dunnett T3 Post Hoc;

To summarize, cluster 1 consists of respondents with positive *Attitude towards PLOPs* and with a low *Price Consciousness*. They also have higher *Trust in PLOPs* compared to cluster 2 and 5 and a strong *Intention to Purchase PLOPs*, but not as high as cluster 4.

Cluster 2 includes those respondents with a very low intention to purchase organic food from private labels. They are rather brand loyal and price conscious people with a positive attitude towards private labels. They are less positive towards organic food compared to other clusters and perceive the price high. Their price perception of organic food, their price consciousness and brand loyalty might cause them to be reluctant to buy private label organic products.

Cluster 3 is not different from cluster 1 regarding attitudes and intentions towards private labels, attitudes and price perception towards organic products, price consciousness and brand loyalty. Nevertheless, consumers of cluster 3 have a lower intention to purchase organic food and organic food from private labels compared to cluster 1.

Cluster 4 are regular organic buyers with a very positive attitude towards organic food and a high intention to purchase it organic. The major difference with clusters 2 and 3 is that cluster 4 perceives the price of organic products lower than the others. They also have a significant higher trust in PLOPs than other respondents.

Cluster 5 is a group of respondents that is brand loyal, and has low trust in PLOP.

5. Conclusions

This study attempted to gain more insight into consumers' attitudes towards organic products sold under private labels by retailers in Flanders. Only few studies have addressed this topic and to our knowledge, none of them have focused on the current situation in this region.

A survey was conducted among Flemish consumers which measured their attitudes towards private labels, attitudes towards organic food, general shopping attitudes and socio-demographic characteristics. These were compared with respondents' attitude towards private label organic products and their intentions to purchase these products.

Hypothesis 3 confirmed that consumers' attitudes towards organic products from private labels are associated with their general attitude towards organic food. Those consumer segments with lower intention to purchase organic food have a less positive attitude towards private label organic food compared to other segments.

General attitude towards private labels is an important predictor of attitude towards private label organic products as well. Among consumer segments with high regards for organic food, those with a positive attitude towards private labels are more in favor of organic products from store brands compared to those with a negative attitude towards private labels.

Several studies indicated that prices of organic products are the main barrier for purchase intentions (Díaz et al., 2012; Padel & Foster, 2005). Consumers' price perception of organic products is negatively correlated with their purchase intention of organic food. However, it is positively correlated with their attitude towards private label organic products, confirming the fifth hypothesis. Those who perceive the prices of organic food too high or beyond their budget are more likely to have a positive attitude towards organic food from private labels. This implies that for consumers who refrain themselves from buying organic food because of the higher price compared to conventional food, the private label organic alternative can be of interest. From a managerial point of view, focusing on these lower prices for organic products can positively affect consumers' views.

As earlier research indicated (Hamzaoui Essoussi & Zahaf, 2008; Janssen & Hamm, 2012b; Perrini et al., 2010; Voon et al., 2011), trust is an important feature when it comes to organic

food attitudes and purchase intentions. Hypothesis 2 confirms that trust in private label organic products is the most important predictor of attitudes towards these products. Organic products are credence goods and their added value, being produced organically, cannot be observed or checked by consumers themselves (Perrini et al., 2010). They have to rely on product claims and certification labels.

The EU logo is mandatory on all organic products since July 2010 and certifies that 95% of the agricultural ingredients of a labeled product is produced through organic methods. Over 60% of respondents recognizes the EU organic label, a higher number compared to results from other research (EU Commission, 2012; Janssen & Hamm, 2012b; Pivato et al., 2008; Van Loo et al., 2013). Awareness of the EU organic label is positively related to the consumers' trust in it. Half of the respondents say they trust the EU organic label, the other half is undecided or has low trust. Those consumers with high trust in the EU certification have higher trust in private label organic products because they have confidence that the organic features are monitored correctly by the EU.

A number of consumers perceive private labels of lesser quality compared to national brands because of their lower prices (Volpe, 2011). Perceived quality of private labels was found to be strongly related to consumers' trust in private labels. Additionally, trust in private labels is the most important predictor of consumers' trust in organic products from private labels. To summarize, trust in organic products marketed by retailers under their private labels is related to trust in the EU organic label and more importantly, to trust in private labels, supporting the first hypothesis.

While trust is the most important predictor of attitude towards private label organic products, there is also a positive effect of smart shopper self-perception. Consumers who get a sense of fulfillment when making a smart purchase perceive themselves as a smart shopper. On the other hand, brand loyalty has a negative effect on attitude towards organic products from store brands.

Improving consumers' attitudes towards private label organic products can increase their intentions to purchase them. Testing the fourth hypothesis confirmed that attitude and intentions towards private label organic products are positively related. To improve these attitudes, retailers should focus both on the lower prices they offer compared to national brands, and on the quality of their products. Informing customers about the EU organic label

will strengthen their trust in the EU organic label, and will improve their trust in organic products from private labels. Consumers who have gained trust in the features of private label organic products are more likely to buy them. Retailers can focus on the products which are already popular as organic products or focus on making the least popular more common.

From the point of view of national brands, it would be advisable to focus on the quality of their products and to find what they can additionally offer to distinguish themselves from private labels.

This study was conducted in Belgium with Flemish consumers, therefore it would be advisable in the future to carry out similar research in other regions. Investigating how attitudes change over time and if awareness and trust in the EU organic label increases can also offer interesting results. Using structural equation modelling can also expand results regarding private label organic products. Choice experiments can offer more knowledge on how much consumers are willing to pay for certain attributes.

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Appendix

Survey

Q1. Which retailer do you visit the most often?

Note: Carrefour includes Carrefour hypermarkets, Carrefour Market, CarrefourExpress, GB
Delhaize includes Delhaize supermarkt, AD Delhaize, City Delhaize, Proxy Delhaize, Shop&Go Delhaize.

Colruyt	o
Delhaize	o
Carrefour	o
I do not go to any of these stores	o

Q2. How important do you perceive following factors when choosing a retailer?

	Totally Disagree		Neutral		Totally Agree		Based On
Look of the store	o	o	o	o	o	o	OIVO(2012)
Prices	o	o	o	o	o	o	OIVO(2012)
Freshness	o	o	o	o	o	o	OIVO(2012)
Working Conditions	o	o	o	o	o	o	OIVO(2012)
Distance	o	o	o	o	o	o	OIVO(2012)
Atmosphere	o	o	o	o	o	o	OIVO(2012)
Trust in the retailer	o	o	o	o	o	o	OIVO(2012)
Product availability	o	o	o	o	o	o	OIVO(2012)
Fair Trade	o	o	o	o	o	o	OIVO(2012)
Quality of the products	o	o	o	o	o	o	OIVO(2012)
Organic Assortment	o	o	o	o	o	o	OIVO(2012)
Care for the Environment	o	o	o	o	o	o	OIVO(2012)
Parking	o	o	o	o	o	o	OIVO(2012)
Diversity Products	o	o	o	o	o	o	OIVO(2012)

Q3. Please indicate to what extent you agree with following statements about the retailer

With Retailer = Colruyt, Delhaize, Carrefour, dependent on answer Q1

	Totally Agree		Neutral		Totally Agree		Based On
Store image							
Retailer has an attractive shopping experience	o	o	o	o	o	o	Kiy malioglu et al., 2011
Retailer is a pleasant place to shop	o	o	o	o	o	o	Kiy malioglu et al., 2011
Retailer has a good store image	o	o	o	o	o	o	Kiy malioglu et al., 2011
Retailer has a good overall service	o	o	o	o	o	o	Kiy malioglu et al., 2011
Retailer carries high quality products	o	o	o	o	o	o	Kiy malioglu et al., 2011
It is convenient to do my shopping in this hypermarket	o	o	o	o	o	o	Beristain 2011
Retailer offers good prices	o	o	o	o	o	o	Beristain 2011
Retailer offers a wide variety of products	o	o	o	o	o	o	Beristain 2011
Retailer is a company that is concerned about the environment	o	o	o	o	o	o	Beristain 2011
Retailer makes a commitment to society (donations, social campaigns, etc)	o	o	o	o	o	o	Beristain 2011
Retailer behaves ethically/honestly	o	o	o	o	o	o	Beristain 2011

<i>Retailer is concerned about the health and welfare of consumers</i>	0	0	0	0	0	0	0	Beristain 2011
Store Loyalty								
I say positive things about <i>retailer</i> to others	0	0	0	0	0	0	0	Kiykalioglu et al., 2011
I consider <i>retailer</i> as my first choice for buying what I need	0	0	0	0	0	0	0	Kiykalioglu et al., 2011
I will continue shopping at <i>retailer</i> in the future	0	0	0	0	0	0	0	Kiykalioglu et al., 2011
I would recommend <i>retailer</i>	0	0	0	0	0	0	0	Kiykalioglu et al., 2011
Trust in retailer								
<i>Retailer</i> is trustworthy	0	0	0	0	0	0	0	Janssen and Hamm, 2012
I have confidence in <i>retailer</i>	0	0	0	0	0	0	0	Janssen and Hamm, 2012

Q4. When buying following food categories, how often do you buy the private label?

Based on (Mintel, 2010)

	Always	Often	Sometimes	Rarely	Never	I never buy this product
Soda	0	0	0	0	0	0
Milk	0	0	0	0	0	0
Juice	0	0	0	0	0	0
Water	0	0	0	0	0	0
Tea	0	0	0	0	0	0
Coffee	0	0	0	0	0	0
Cereal	0	0	0	0	0	0
Eggs	0	0	0	0	0	0
Cheese	0	0	0	0	0	0
Yoghurt	0	0	0	0	0	0
Mayonaise	0	0	0	0	0	0
Olive Oil	0	0	0	0	0	0
Rice	0	0	0	0	0	0
Pasta	0	0	0	0	0	0
Nuts	0	0	0	0	0	0
Chips	0	0	0	0	0	0

Q5. Please indicate to what extent you agree with following statements regarding private labels

	Totally disagree		Neutral		Totally agree		
Trust in private label products							Janssen and Hamm, 2012
I trust food products from the private label of <i>retailer</i>	0	0	0	0	0	0	
I have confidence in the food products from the private label of <i>retailer</i>	0	0	0	0	0	0	
Private label usage							Ailawadi, et al., 2001
I look for private labels when I go shopping	0	0	0	0	0	0	
My shopping cart contains several private labels products when I go shopping	0	0	0	0	0	0	
General Private label attitude							Construct explained in Burton et al., 1998
Considering value for money, I prefer private labels over national brands	0	0	0	0	0	0	Also used in Garretson et al. 2002; Kiykalioglu, 2011

For most product categories, the best buy is usually the private label brand	0	0	0	0	0	0	0	Also used in Garretson et al. 2002; Kiyimalioglu, 2011
I love it when private label brands are available for the product categories I purchase	0	0	0	0	0	0	0	Also used in Garretson et al. 2002; Kiyimalioglu, 2011;
When I buy a private label product, I always feel that I am getting a good deal	0	0	0	0	0	0	0	Also used in Garretson et al. 2002; Kiyimalioglu, 2011
Buying private labels products makes me feel good	0	0	0	0	0	0	0	Also used in Garretson et al. 2002; Kiyimalioglu, 2011;
Private labels are generally of good quality	0	0	0	0	0	0	0	Also used in Garretson et al. 2002;
Price perception PL								Beristain 2011
The price of the private label products is affordable for most consumers	0	0	0	0	0	0	0	
I think the price paid for private label products is appropriate	0	0	0	0	0	0	0	
Risk awareness PL								Kiyimalioglu, 2011
The purchase of private label products is risky because the quality of store brands is inferior	0	0	0	0	0	0	0	
Since private labels are of poor quality, buying them is a waste of money	0	0	0	0	0	0	0	
Perceived Quality								Based on Beristain 2011
Store brands of <i>retailer</i> are of high quality	0	0	0	0	0	0	0	
Store brands of <i>retailer</i> are trustworthy	0	0	0	0	0	0	0	
Store brands of <i>retailer</i> give me the result I am looking for	0	0	0	0	0	0	0	

Q6. Please indicate to what extent you expect, plan and desire to purchase private label food products in the next 7 days, including today
(Pieniak et al., 2007)

	Very unlikely						Very likely
I expect to purchase a private label food product during the next 7 days	0	0	0	0	0	0	0
I plan to purchase a private label food product during the next 7 days	0	0	0	0	0	0	0
I desire to purchase a private label food product during the next 7 days	0	0	0	0	0	0	0

Q7. When buying following food categories, how often do you buy the organic product?

	Always	Often	Sometimes	Rarely	Never	I never buy this product
Mayonnaise	0	0	0	0	0	0
Cereal	0	0	0	0	0	0
Coffee	0	0	0	0	0	0
Tea	0	0	0	0	0	0
Nuts	0	0	0	0	0	0
Milk	0	0	0	0	0	0
Cheese	0	0	0	0	0	0
Juice	0	0	0	0	0	0
Olive Oil	0	0	0	0	0	0
Yogurt	0	0	0	0	0	0
Eggs	0	0	0	0	0	0

Q8. Please indicate which word describes best how you feel about eating organic food products compared to conventional food products

(Pieniak et al., 2010)

	1	2	3	4	5	6	7	
Bad	0	0	0	0	0	0	0	Good
Unpleasant	0	0	0	0	0	0	0	Pleasant
Negative	0	0	0	0	0	0	0	Positive

Q9. Please indicate to what extent you agree with following statements regarding organic food

	Totally disagree	Neutral	Totally agree	
Organic food is too expensive	0	0	0	Voon, 2011
I would buy more organic food if it was less expensive	0	0	0	
Only consumers with higher income can purchase organic food	0	0	0	Voon, 2011
The price of organic food is beyond my budget	0	0	0	Voon, 2011

Q10. Please indicate to what extent you expect, plan and desire to purchase organic food products in the next 7 days, including today

(Pieniak et al., 2007)

	Very unlikely	Very likely
I expect to purchase an organic food product during the next 7 days	0	0
I plan to purchase an organic food product during the next 7 days	0	0
I desire to purchase an organic food product during the next 7 days	0	0

Q11. Please answer following questions regarding the EU Organic Label

(Janssen & Hamm, 2012)

	Totally disagree	Neutral	Totally agree
I know this label	0	0	0
I completely trust this label	0	0	0

Q12. Please indicate to what extent you agree with following statements regarding organic food from the private label of your retailer

(Janssen and Hamm, 2012)

	Totally disagree	Neutral	Totally agree
I trust organic products from the private label of <i>retailer</i>	0	0	0

I have confidence in organic products from the private label of <i>retailer</i>	0	0	0	0	0	0	0
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Q13. Please indicate to what extent you agree with following statements regarding organic food from the private label of your retailer

	Totally disagree		Neutral		Totally agree		
Attitude towards Private Label Organic Products		based on Burton & Lichtenstein, 1998					
Buying private label organic products makes me feel good	0	0	0	0	0	0	
I love it when private label brands are available when I buy organic food	0	0	0	0	0	0	
In general, private label organic products are of good quality	0	0	0	0	0	0	
For most product categories, the best buy is usually the organic product from a private label brand	0	0	0	0	0	0	
Considering value for money, I prefer private labels over national brands when purchasing organic food	0	0	0	0	0	0	
When I buy a private label organic product, I always feel that I am getting a good deal	0	0	0	0	0	0	
Perceived Quality PLOP		based on Beristain, 2011					
Private Label Organic products from retailer are of high quality	0	0	0	0	0	0	
Private Label Organic products from retailer are trustworthy	0	0	0	0	0	0	
Private Label Organic products from retailer give me the results I am looking for	0	0	0	0	0	0	

Q14. Please indicate to what extent you expect, plan and desire to purchase organic food products in the next 7 days, including today (Pieniak et al., 2007)

	Very unlikely				Very likely
I expect to purchase a private label organic food product during the next 7 days	0	0	0	0	0
I plan to purchase a private label organic food product during the next 7 days	0	0	0	0	0
I desire to purchase a private label organic food product during the next 7 days	0	0	0	0	0

Q15. Please indicate to what extent you agree with following statements regarding your shopping behaviour

	Totally disagree		Neutral		Totally agree
Price consciousness		Constructs explained in (Lichtenstein et al. 1993)			
The money saved by finding low prices is usually not	0	0	0	0	0
Used in Burton et al., 1998;					

worth the time and effort								Kiyimalioglu, 2011
I would shop at more than one store to find low prices	0	0	0	0	0	0	0	Used in Burton et al., 1998; Kiyimalioglu, 2011)
The time it takes to find low prices makes it usually not worth the effort	0	0	0	0	0	0	0	Used in Burton et al., 1998; Kiyimalioglu, 2011)
Value consciousness								Constructs explained in (Lichtenstein et al. 1990)
When purchasing a product, I always try to maximize the quality I get for the money I spend	0	0	0	0	0	0	0	Used in Burton et al., 1998; Garretson, 2002; Lichtenstein et al. 1993; Used in Burton et al., 1998; Garretson, 2002;
I always check prices at the store to be sure I get the best value for the money I spend	0	0	0	0	0	0	0	Lichtenstein et al. 1993) Used in Burton et al., 1998; Garretson, 2002;
When shopping, I compare the prices of different brands to be sure I get the best value for the money	0	0	0	0	0	0	0	Lichtenstein et al. 1993; Used in Burton et al., 1998; Garretson, 2002;
When I buy products, I like to be sure that I am getting my money's worth	0	0	0	0	0	0	0	Lichtenstein et al. 1993) Used in Burton et al., 1998; Garretson, 2002;
When I shop, I usually compare the 'price per kg' information	0	0	0	0	0	0	0	Lichtenstein et al. 1993; Used in Burton et al., 1998; Garretson, 2002;
Price-quality perception								Constructs explained in (Lichtenstein et al. 1993)
Generally speaking, the higher the price of a product, the higher the quality	0	0	0	0	0	0	0	Used in Burton et al. 1998, Garretson et al., 2002
The old saying: 'you get what you pay for' is generally true	0	0	0	0	0	0	0	Used in Burton et al. 1998, Garretson et al., 2002
The price of a product is a good indicator of its quality	0	0	0	0	0	0	0	Used in Burton et al. 1998, Garretson et al., 2002
You always have to pay a bit more for the best	0	0	0	0	0	0	0	Used in Burton et al. 1998, Garretson et al., 2002
Brand loyalty								
Once I have made a choice on which brand to purchase, I am likely to continue to purchase it without considering others	0	0	0	0	0	0	0	Burton et al., 1998; Garretson et al., 2002
Even though certain products are available in a number of different brands, I always tend to buy the same brand	0	0	0	0	0	0	0	Burton et al., 1998; Garretson et al., 2002
I usually buy the brands I always buy	0	0	0	0	0	0	0	Burton et al., 1998; Garretson et al., 2002
When I like a certain brand, chances are low that I will change	0	0	0	0	0	0	0	Burton et al., 1998; Garretson et al., 2002
Once I am used to a brand, I don't like changing	0	0	0	0	0	0	0	Burton et al., 1998; Garretson et al., 2002;
Risk averseness								
I don't like to take risks	0	0	0	0	0	0	0	Burton et al., 1998
Comparing myself to others, I like adventure	0	0	0	0	0	0	0	Burton et al., 1998
I don't feel the need to take unnecessary risks	0	0	0	0	0	0	0	Burton et al., 1998
Comparing myself to others, I like a bet	0	0	0	0	0	0	0	Burton et al., 1998
Smart shopper self-perception								
When I am shopping, I enjoy making smart purchases	0	0	0	0	0	0	0	Burton et al., 1998; Garretson, 2002;
When I make a smart purchase, I feel like a winner	0	0	0	0	0	0	0	Burton et al., 1998; Garretson, 2002;
Making smart purchases makes me feel good about myself	0	0	0	0	0	0	0	Burton et al., 1998; Garretson, 2002;
I get a feeling of joy when I make a smart purchase	0	0	0	0	0	0	0	Burton et al., 1998; Garretson, 2002;