FACULTEIT ECONOMIE EN BEDRIJFSKUNDE

THE IMPACT OF THE V-LABEL ON CONSUMERS' PERCEPTIONS AND INTENTIONS: A COMPARISON BETWEEN PRIVATE BRANDS AND NATIONAL BRANDS

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Summary

This study investigates whether the addition of the V-label on product packaging would increase or decrease consumers' purchase intentions. Furthermore, we wanted to investigate whether this effect would be different when comparing national brands to private brands.

First, a thorough literature review was conducted in which the existing knowledge on this topic was explored. This literature review taught us that vegan labeling can have a significant impact on consumers' intentions and perceptions. More specifically, adding a vegan label to a product's packaging can alter consumers' perceived healthiness, sustainability and taste as well as their purchase intentions and even willingness to pay. Additionally, we explored the existing literature concerning private and national brands. This revealed that consumers' attitudes and perceptions towards private brands are generally more negative when comparing them to national brands. However, since the quality gap between private and national brands is decreasing, these differences are a lot smaller than they used to be.

After the literature review, the hypotheses were formulated which all resolved around one central research question: "Is the effect of the V-labels on consumers' perceptions and intentions stronger for private brands (vs. national brands)?"
To test our formulated hypotheses, a 2x2 mixed design survey was set up. In this survey, respondents were shown two products: chips and cereal, which matched a certain condition. More specifically, the products that were shown were either national brands or private brands. Furthermore, the shown packaging either carried the V-label or no label at all.

We concluded that the effect of the V-label on purchase intentions was not significant. However, we did find out that product familiarity has a significant impact on consumers' purchase intentions.
The mediation analyses proved that perceived taste was a significant mediator for the V-label purchase intention relationship while perceived healthiness and sustainability were not.
Finally, we could conclude that there was no significant difference in the impact of the V-label on purchase intentions when comparing private brands to national brands.

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1: Introduction

In today's world, meat-reduced diets are gaining popularity at a rapid pace (Rosenfeld & Burrow, 2018, Radnitz et al., 2015). However, this trend is facing challenges since there is still a high uncertainty amongst consumers when it comes to the ingredients and production process of the products they consume (McCluskey et al., 2003). This, in combination with the lack of legislation concerning vegan labeling in the EU (European Commission, 2011), motivated independent organizations to create their own labels. One of these organizations was the European Vegetarian Union who created their so called "V-label" in 1996 (V-label, 2022). This V-label offers consumers a quick and reliable way to evaluate the ingredients and production process of the products they buy (V-label, 2022).

While the V-label offers a valuable source of information, it is hard to predict how consumers will react when coming across this label in the supermarket. Therefore, it is important to study consumers' attitudes and behaviors towards these kinds of labels. Additionally, since consumers tend to have different attitudes when it comes to private brands compared to national brands it is also important to make a distinction between the two (Richardson et al., 1994).
This understanding is crucial since it can help manufacturers to make optimal use of the V-label while guiding consumers to make more sustainable food choices.

This study investigates whether the addition of the V-label on product packaging would increase or decrease consumers' purchase intentions. Furthermore, we will investigate whether this effect would be different when comparing national brands to private brands.

2: Literature Review

2.1 Vegan and vegetarian labeling

2.1.1 A trend towards vegetarianism and veganism

Lately, a dietary shift can be observed in many countries all over the world with meat reduced diets being more popular than ever. In a study in the UK, 3.25 percent of participants reported to be following a vegetarian or vegan diet (The Vegan Society, 2016). Another study claimed this percentage to be as high as 5.4 percent in Germany (Paslakis et al., 2020). According to several other studies, these numbers are expected to grow even more over the years (Rosenfeld & Burrow, 2018, Radnitz et al., 2015).
Appleby & Key (2016) define vegetarians as "people who do not eat any meat, poultry or fish". Likewise, vegans can be defined as they who "refrain from eating any animal products, including meat, fish, dairy, eggs, and other animal-derived foods" (Yurkow et al., 2017).
The motivations for choosing these specific diets can differ vastly. North et al. (2021) investigated these dietary motivations for the Australian population and concluded that animal welfare was the most significant common motivator for vegans and vegetarians. Other motivators were health and environment. The latter can be identified as the main driving force behind these rising numbers. This was emphasized by Kortetmäki et al. (2020). They stated in their research paper that the high emissions of animal-based food are an important addition to the prior incentives for switching to a vegan or vegetarian diet.
On the other hand, there are several factors that still withhold people from adopting a vegan or vegetarian diet. Fehér et al. (2020) for instance, claimed in their research paper that the main inhibitory factors are the enjoyment of eating meat, health considerations, convenience et cetera. Another interesting study to mention is one conducted by Vural et al. (2023). In their research, they labeled the same burger as being either "plant-based", "conventional" or "cultured". They concluded that meat eaters perceived the burger labeled as being 'plant-based' to be less satisfying due to lower expected taste, pleasantness and fillingness.

As meat reduced diets are gaining popularity, the demand for meat substitutes is growing as well. Zhao et al. (2023) recently examined the market of plant-based meat alternatives (PBMA's). They concluded that, in comparison to the meat market, the sales of these alternatives are still quite low. However, the market of PBMA's is showing a significant growth over the years. According to an extensive report by the GFI-Europe (2023), the sales of PBMA's across Europe reached 5,8 billion euros in 2022, an increase of 6% in comparison to 2021 and 20% in comparison to 2020. A similar

pattern can be observed in other countries. In the United States, for instance, demand for PBMA's reportedly quadrupled from 2017 to 2020 (Zhao et al., 2023).
The production of these PBMA's is a complex and intricate process. In their research paper, Ahmad et al. (2022) aimed to uncover this process. They concluded that, in order to attain a meat-like texture and flavor, an extensive number of different additives is used in the production of PBMA's. This, however, raises many questions regarding nutrition, food safety, sustainability et cetera, as ingredient lists are becoming less understandable to the general consumer. Additionally, consumers' uncertainty is intensified even more due to the lack of regulation regarding the term "vegan" or "vegetarian". According to the European Vegetarian Union (2019) the EU does not provide a clear, legally binding definition for these previously mentioned terms. In 2018 a European citizens' Initiative was set up with the purpose of obliging vegan and vegetarian food labeling. Consumers stated that vegans and vegetarians were struggling to identify suitable food-items, having to examine ingredient lists with a hyper-awareness. Despite their efforts, there was not enough support to back up the initiative leading to a cancellation of the proposal. Hence, a legal European framework concerning this matter still does not exist to this day (European Union, 2018).
This caused manufacturers to create their own labels in an attempt to inform their customers. Yet, these labels and criteria differed from company to company causing even more confusion for consumers. Therefore, the need for a recognizable, standardized label remained.

2.1.2 The introduction of vegan and vegetarian labels

Consumers are increasingly more concerned about the quality of products they consume, which is why the demand for trust and information rises. As a result, manufacturers try to meet this demand by providing clear information on product packaging in the form of labels (McCluskey & Loureiro, 2003).
In the previous section, the lack of legislation concerning vegan and vegetarian product information in the European Union was covered. However, it is important to point out that apart from that, the EU does provide a legal framework concerning other product information. The so called "Food Information to Consumers regulation" (FIC) entered into application in 2014. This FIC-regulation imposes several labelling requirements for manufacturers in the EU including for example nutrition and allergen information (European Commission, 2011). However, since this legislation does not cover vegan or vegetarian product information, independent organizations started to create their own standardized labels to inform consumers.

In the EU the two most common labels for vegan and vegetarian products are the “V-label” (V-label, 2022) and the “Vegan trademark” (The Vegan Society, n.d.). Also outside of the EU there are a great number of labels. For instance, the most common label in the USA: “Certified Vegan” (Vegan Action, n.d.) or the Australian label: “Vegan Australia Certified” (Vegan Australia, n.d.).

In 1996, the V-label was established in Switzerland. Since then, it grew to be one of the best-known labels of its kind in the food-sector. V-label describes itself as: “an internationally recognized, registered seal for labeling vegan and vegetarian products and services” (V-label, 2022). The label offers an easy and recognizable way for consumers to quickly evaluate plant-based products. V-label provides a clear definition of the terms “vegetarian” and “vegan”. Therefore, manufacturers wishing to certify their vegetarian or vegan products with the V-label, are required to meet an extensive list of requirements embedded into these definitions. European Vegetarian Union (2019) claims that certification comes with three main advantages. Firstly, they address the fact that the amount of people following or considering to follow a vegan or vegetarian diet is growing around the globe. This allows manufacturers to cover a whole new growing market. Another advantage is the opportunity to improve visibility. As mentioned earlier, the V-label offers a recognizable and reliable way for consumers to quickly evaluate a product’s specifications. This is strongly correlated with the last advantage: bringing trust to the consumer by taking away uncertainties about the ingredients and production process. However, an important remark to make is the fact that the European Vegetarian Union does not mention any of the potential disadvantages of using a vegan or vegetarian label. It is therefore essential to look further into the existing literature concerning the impact of these types of labels.

2.1.3 The impact of vegan and vegetarian labels on consumers’ perceptions

Vegan and vegetarian labels like the V-label can have a significant impact on consumers’ behaviors, perceptions, and purchase intentions. While the main purpose of the V-label is informing the consumer, there is no guarantee for manufacturers that this information will have the desirable effect. The following paragraphs will touch upon the different ways in which consumers can be influenced by these labels according to the existing literature.

2.1.*3.1 Perceived healthiness*

Health and nutrition are becoming increasingly more important to consumers. A recent consumer research program across 15 countries has concluded that consumers show a growing interest in the impact of their food intake on their health. Furthermore, these same consumers have reported a

change in their purchasing and consumption behavior with less alcohol and meat, and more fruits and vegetables (Deloitte Belgium, 2023).

Several studies have already proven that labels can have a significant impact on how healthy products are perceived. Products bearing a “gluten free” label for instance are generally perceived to be healthier (Prada et al., 2019). Furthermore, Besson et al. (2020) found that a vegetarian labeled burger is perceived to be lower in calories compared to a vegetarian burger that is not labeled as such. This is an example of the “health halo effect”, which occurs when a positive characteristic of a food product is overgeneralized to another, often unrelated, food characteristic (Chandon et al., 2007). In line with this, Vural et al. (2023) pointed out that consumers perceived plant-based labeled burgers to be significantly healthier when compared to unlabeld burgers. Even labels that have nothing to do with the ingredients or nutritional value of products can impact the perceived healthiness of a product. For instance, chocolate with a “Fairtrade” label is perceived to be healthier than its unlabeled counterpart (Schuldt et al., 2012). Another example was observed by Sörqvist et al. (2015). In their study, consumers perceived water with an ‘eco-label’ to be healthier even though there is no conclusive scientific evidence to support this (Dangour et al., 2010).

These effects can obviously differ depending on the type of product carrying the label. In their recent study, researching the impact of vegan labels, Stremmel et al. (2022) made an interesting distinction between “expected vegan products” and “unexpected vegan products”. They defined expected vegan products as those that are not purposely mimicking animal products and are simply vegan by default or “randomly vegan”. Unexpected vegan products, on the other hand, are products that do in fact mimic animal products, this category includes for example meat or cheese substitutes.

The conclusion of their research was that the impact of vegan labels was only significant for the unexpected vegan products. We can therefore expect that consumers will not necessarily perceive a product to be significantly healthier if these consumers already assumed that the product was vegan by default.

2.1.3.2 Perceived sustainability

The food industry has a huge impact on the environment with the meat industry being a major driver for the enhanced greenhouse effect (Springmann et al., 2016). A dietary shift could be a potential solution to this problem since greenhouse gas emissions from a vegan diet for example are about 35-50 percent lower than those of omnivore diets (Fresán et al., 2019). Today, consumers are becoming increasingly more aware of these issues causing them to change their diets en masse. A recent survey has shown that about 40 percent of European consumers have changed their eating habits due to environmental concerns (BEUC, 2020). Another study in the USA reported that between half and two thirds of the respondents would be willing to pay a price premium for more sustainable options (Case,

2023). Finally, a study by Rattenbury & Ruby (2023) concluded that consumers are becoming increasingly more aware of the environmental impact of meat consumption, however respondents also believed this impact to be very small.
We can expect that, since consumers are more aware of the sustainability of vegan diets, they will evaluate products carrying vegan labels to be more sustainable as well.
The previously mentioned study by Stremmel et al. (2022) showed similar results when it came to perceived sustainability. A vegan label significantly improved the perceived sustainability for "unexpected vegan products" but not for "expected vegan products". Yet, the existing literature is still quite limited when it comes to the effect of vegan and vegetarian labels.

2.1.3.3 Expected taste

According to previous research, some labels could negatively impact the taste expectation of consumers. This expected taste often correlates with the healthiness perception (Garaus & Lalicic, 2021). For instance, products with claims of sugar reduction were perceived healthier by consumers but they also perceived the product to be less tasty (Prada et al., 2021). This means that some consumers see health related labels as warning signs and expect a trade-off between healthiness and tastiness. In fact, these labels do not solely impact the expected taste but also the actual taste experience of consumers. Liem et al. (2012) observed this phenomenon in their research. They concluded that health related labels like "healthy choice" caused consumers to report soup tasting worse than unlabeled soup even though the ingredients were exactly the same.
However, some studies have reported opposite results. For instance, French consumers expect healthy foods to taste better than unhealthy foods (Werle et al. ,2013). Nevertheless, it is still appropriate to expect that vegan or vegetarian labels specifically will have a negative impact on the expected taste. This can be explained by looking further into the specific reasons why many consumers are reluctant to shift their diets towards a vegan or vegetarian one. Rosenfeld & Tomiyama (2020) explored in their research the main barriers to vegetarian diets. The results showed that the expected deterioration of taste is one of the main barriers standing between consumers and the adoption of a vegetarian diet.

2.1.3.4 Selected portion size

There have been a handful of studies that investigated the impact of labels on the selected portion size. A recent study conducted by Finlay et al. (2023) investigated the effect of calorie labeling on the selected portion size. Half of the respondents in this study were confronted with a menu with calorie labels, the other half got a menu without such labels. The researchers created a virtual delivery app and respondents were asked to complete their own hypothetical food and beverage order. They

concluded that calorie labeling did not have a significant effect on the selected portion size. These findings are in line with other similar research. Benson et al. (2018) identified no significant impact of different nutrition and health claims on the portion sizes selected by consumers. The results of a study conducted by Tønnesen et al. (2022) confirmed these results once more. With the main conclusion being that the differences in portion size ratings by consumers were negligible and inconsistent when adding certain health claims on food.

The impact of vegan and vegetarian labels specifically has hardly been investigated with most of the studies in this field focusing on nutrition and health claims like "reduced salt", "high protein", "fat free" et cetera. Still, we can expect the results to be similar for vegan and vegetarian labels since they are often perceived to be healthier thus acting like health and nutrition related labels.

2.1.3.5 Purchase intention

There are several definitions of the term "purchase intention". Zeithaml (1988) for instance, defined this as "the desire of customers to make the actual purchase in products or services based on internal and external factors". These factors influencing purchase intention have been identified and studied in a vast number of research papers.

First, it is important to point out the fact that purchase intention is closely linked to consumers' attitudes towards the specific product. This can be explained by the Theory of Planned Behavior (Ajzen, 1991). According to this theory, consumers who have a certain attitude towards something will be more inclined to act upon that attitude and perform behavior supporting it. Researchers have therefore linked this theory to purchase intention and concluded that a positive attitude towards a product will also increase consumers' intentions to buy that product (Walsh & Mitchell, 2010).

When it comes to vegan and vegetarian labeling, research regarding purchase intention is still quite limited. However, there are some relevant studies worth mentioning. Stremmel et al. (2022), for instance, questioned consumers' preferences for a series of jarred food products. They concluded that vegan labeling had a significant positive effect on consumers' purchase intentions.

Berke & Larson (2023), on the other hand, reported contrary results. When removing vegan and vegetarian labels from a restaurant menu, the vegan and vegetarian options were significantly more likely to be chosen.

Finally, it is important to point out that purchase intention is not the same as purchase behavior. While purchase intention is an accurate predictor of actual behavior it is not a guarantee an intention will actually lead to a purchase (Montaño et al., 2008). This phenomenon, also referred to as the 'intention-behavior gap', has been observed in a great amount of previous research. For instance, Armintage et al. (2001) stated in their research paper that intention only explains 18 to 23 percent of

the variance in behavior. Yet, purchase intention is still a popular concept in the food industry to predict the success and future sales of products (Nielsen, 2014).

2.1.3.6 Willingness to pay

In addition, several studies even proved that consumers are willing to pay a price premium for products labeled as 'vegan'. Marangon et al. (2016) for instance, concluded in their research that 8 percent of respondents were willing to pay a price premium for vegan labeled breadsticks in comparison to unlabeled ones. Similar results were observed by Van der Stricht et al. (2023). Their conclusion was that consumers were, on average, willing to pay 0,89 euros more for pasta with microalgae proteins with a vegan label as opposed to its unlabeled counterpart.

We can conclude that the effects of adding vegan labels are way more complex than one might initially expect. For instance, it is likely that a vegan or vegetarian label will positively impact consumers' perceived healthiness and perceived sustainability (Besson et al., 2020 ; Vural et al., 2023 ; Stremmel et al., 2022). On the contrary, the expected taste is likely to decline when adding a vegan or vegetarian label (Liem et al., 2012 ; Prada et al., 2021). Therefore, it is difficult to predict what the ultimate impact on purchase intentions will be.
It goes without saying that the impact of a label on these variables also depends highly on the type of product this label is placed on. Therefore, in this paper, a distinction will be made between private and national brands. This distinction is highly relevant since consumers' preferences and perceptions tend to differ vastly between these two product categories.

2.2. Private vs national brands

In the previous paragraphs we have discussed the V-label and the impact of these types of labels on consumers. Since this study will research whether the impact of the V-label on consumers' perceptions and intentions differs between private and national brands, it is important to also discuss the existing literature concerning the latter.

2.2.1 Definitions

The difference between national and private brands is quite simple to explain.
National brands are developed by manufacturers (Bao et al., 2011). These brands are well accepted by consumers and are usually associated with high quality, innovation and unique experiences (Dimitrieska et al., 2017). Some examples in today's food industry are 'Coca Cola', 'Lay's', 'Knorr' et cetera.
Private brands (i.e. store brands), on the other hand, are brands developed by retailers. They are mainly known for their competitive positioning since these brands tend to be lower priced but still reasonable quality alternatives as opposed to national brands (Goldsmith et al., 2010). Some popular Belgian examples include Colruyt's 'Boni' and Delhaize's '365-essential'.
Retailers can benefit significantly from adding their own private brands to their product range. A first important advantage is the fact that, despite a lower selling price, retailers can take very high margins on their private brand products. This is mainly due to retailers being able to cut high costs. For instance, retailers pay far less on R&D and do not pay the high slotting fees national brands usually need to pay (Richardson et al., 1997). A second advantage is the fact that private brands allow retailers to increase their bargaining power relative to national brand manufacturers (Baltas et al., 1997). Finally, since private brands permit retailers to position themselves in a unique way, they therefore allow them to differentiate themselves from other retailers and subsequently increase store loyalty (Richardson et al., 1997). While these advantages are threatening to national brand manufacturers, the introduction of private brands is not exclusively bad for them. Wedel et al. (2004) for instance, stated that private brands allow national brand manufacturers to skim loyal and price insensitive consumers from the market allowing them to increase prices and thus margins.

A last important remark to make is the fact that these private brands can differ vastly depending on the strategy and goals the retailer wants to pursue with their brand. Therefore, it is essential to briefly discuss the different types of private brands. Generally, private brands (PB's) can be divided into three categories: standard PB's, budget PB's and premium PB's (Keller et al., 2022). First, standard PB's strive to imitate national brands with the main goal being to offer a similar quality as national brands but for a lower price (Martos-Partal et al., 2015). Next, budget PB's are all about reducing costs to offer the lowest price to consumers. As a result, this strategy is usually accompanied by quality compromises (Geyskens et al., 2010). Finally, in contrast with budget PB's, there are the premium PB's. These are known for their considerably higher quality, innovation and differentiation but with an elevated price (Keller et al., 2022).

All three come with their own advantages and disadvantages. While standard PB's are leading the way when it comes to sales volume, Premium PB's offer higher dollar margins causing an increasing number of retailers to add this type of private brand to their portfolio (Ter Braak et al. 2013).

2.2.2 The evolution of private brands

Because of their inferior quality, private brands weren't an immediate hit when introduced. However, with political conflicts and economic crises entailing poverty in the 20th century, consumers became more price sensitive and showed a growing interest in private brands. Ever since, private brands remained an indispensable concept in the retail environment (Long, 2022).
Today, private brands are more popular than ever. NielsenIQ conducted a survey in 17 European countries and reported that the private brand markets in 16 out of these 17 countries are still growing (PLMA, 2023). This same survey reported the private brand retail market share to be the highest in Switzerland with 51.8 percent. In general, private brands' value share of fast-moving consumer goods amounted to 36 percent in Europe in 2022 (Ozbun, 2024). In comparison, private brands are less popular in the United States where the retail market share of private brands was claimed to be 17.7 percent in 2021 (Ozbun, 2024). These numbers indicate that private brand market shares can vary significantly across countries. For instance, while private label market shares are generally quite high in developed economies, they still tend to be low in emerging economies where the average market share is about 3 percent (Pasirayi & Richards, 2023).

Over the years, private brands have evolved constantly with retailers implementing different strategies tailored to the changing consumer demand.
They first appeared in the 19th century in the clothing industry (Long, 2022). Soon, other retailers started to create their own private brands to gain a strategic advantage or financial gain over their rivals (Cuneo et al., 2015). In the beginning years, these brands used to be very low quality, 'generic' brands that were considerably cheaper than national brands. Despite this bad image, private brand development kept growing. A study from the United States even claimed that in 1965 private brands already accounted for 20 percent of the annual sales of supermarkets (Smith, 1965).
With time, retailers started investing more in quality and package design to attract even more consumers (Dimitrieska et al., 2017). This resulted in consumers perceiving private brands as being acceptable alternatives to national brands though, not yet desirable or destination brands. For a while, national brands were still leading the way with their status, market power and innovative, imaginary products (Gielens et al., 2021). This motivated retailers to add more premium-oriented private labels to also attract quality-sensitive consumers while simultaneously increasing store image (Martos-Partal et al., 2015). Today, a whole new strategy is being implemented by an ever-increasing number of

retailers: the smart private brand strategy. A strategy that steps away from a merely price-quality perspective and implements technology and data analysis to differentiate and meet specific consumer demands (Gielens et al., 2021).
We can conclude that private brands are not what they used to be. While some private brands still aim at low prices while compensating with lower quality, others are now improving quality while still being more reasonably priced than national brands.

2.2.3 Consumers' attitude and behavior towards private or national brands

2.2.3.1 Quality perception

A vast amount of research has already been conducted, proving that consumers perceive private brands to have a lower quality (Richardson et al., 1994 and Rosen, 1984).
However, as already mentioned in the previous paragraph, the quality gap between private and national brands has been decreasing the latest years. This has caused consumers to change their perceptions. Private brands are now perceived as being legitimate alternatives as opposed to national brands both in terms of quality and differentiation (Keller et al., 2016). Therefore, we cannot just assume that private brands will necessarily be perceived to have an inferior quality.
Many researchers are now attempting to map out the most important predictors for the product quality perceived by consumers. Bao et al. (2010) for instance, concluded in their research paper that store image and product signatureness enhance perceived quality. Quality variation within the product category, on the other hand had the opposite effect. The latter can be explained by the fact that little quality variation within one product category gives consumers a reliable cue about the quality of a new brand entering this category. Similar results were reported by DelVecchio (2001) who mapped out the most significant product category characteristics that influenced consumers' quality perception. In line with other research, quality variation turned out to have a significant impact together with the category's complexity, price level and average interpurchase time.
While the quality perception of private brands has changed dramatically over time, the quality perception of national brands has remained rather persistent. A great number of studies have proved that consumers generally perceive national brands to be of greater quality as opposed to private brands. In comparison to private brands these perceptions haven't changed as much over the years. For instance, a study by Richardson et al. (1994) showed that consumers' quality perception of private brands would be significantly higher when they were repacked and presented as national brands. When Rossi et al. (2015) conducted comparable research more than 20 years later, similar results could be observed. In this study consumers sampled two products: hazelnut spread and champagne. Results showed that when consumers were informed of the brand, they perceived national brands to

have a higher quality than private brands. However, in accordance with other research, when performing a blind taste test, no differences were observed.

2.2.3.2 Purchase intention

Overall, researchers agree that purchase intentions for national brands are generally higher in comparison to private brands. The earlier mentioned study by Rossi et al. (2015) for instance, proved that consumers showed a higher purchase intention when they were aware that they were trying a national brand in comparison to a private brand. They concluded that consumers still use brands as an important cue to define their purchase intentions.

Another similar study conducted by Sarkar et al. (2015) proved that when private brands are packaged similarly as national brands, the purchase intention will also improve significantly.

These findings can predominantly be explained by the moderating role of 'perceived quality. This moderation effect has been observed in a vast number of previous research. Richardson et al. (1994) for instance, observed that perceived quality was a more significant predictor of purchase intention for private brands in comparison to the actual value of a product. Bao et al. (2011) also supported these findings; they stated in their research paper that "quality perception is a critical determinant of market demand for private brands". In other words: consumers generally perceive national brands to have a higher quality as opposed to private brands and will therefore show higher purchase intentions for these national brands.

However, since consumers' attitudes towards private brands are becoming more positive, we can expect consumers' purchase intentions towards these private brands to increase as well. This relationship can be explained by the previously mentioned Theory of Planned Behavior (Ajzen, 1991). In simple terms, this theory claims that people strive to consistency between attitude and behavior. Therefore, a positive attitude towards private brands will motivate consumers to act upon that attitude thus increasing purchase intention (Walsh & Mitchell, 2010).

Finally, an interesting study by Zielke & Dobbelstein (2007) also revealed social risk of the product category to be an important moderator of this relationship. They stated that the positive effect of attitude on purchase intention will be less significant for products that are often consumed together with other people. For instance, even though consumers have positive attitudes towards a certain private brand sparkling wine, they will likely not act upon that attitude and still choose the national brand.

2.3. The effect of labels on consumers: private vs national brands

Previous research has already pointed out that certain labels can have a wide array of effects on consumers' intentions and attitudes. Therefore, after a profound analysis of the existing literature in the first section, we can expect the V-label to have an effect on consumers' perceived healthiness, sustainability and taste as well as their purchase intentions. In the second section, the difference between private and national brands was covered as well as consumers' intentions and attitudes concerning both types of brands. According to the existing literature, we can expect the purchase intention of national brands to be higher in comparison to private brands due to the moderating effect of perceived quality.
The goal of this study is to find out whether the V-label has the same effect when placed on private brand products as opposed to national brand products. Therefore, in the final section of this literature review, it is important to look further into the existing literature covering this specific relationship.

To date, no research investigated whether the effect of the V-label would differ when placed on a private brand product in comparison to a national brand one. However, the impact of other labels has been compared across national brands and private brands. Bauer et al. (2013) pointed out that when consumers were confronted with private brand cereal without an organic label, the brand was perceived to be less healthy, less hedonic, less environmentally friendly and less safe compared to national brands. However, when an organic label was added, these differences were virtually negligible. Bauer et al. (2013) also provided a possible explanation for these results. They stated that in the organic market segment, the brand itself is less important in the purchase decision process. They concluded therefore that private brands can benefit more from organic labeling as opposed to national brands since negative consumer perceptions regarding the private brand faded when adding an organic label. Similar results could be expected when adding vegan or vegetarian labels. When adding the V-label to a private brand, consumers' negative perceptions towards private brands will likely decrease. Therefore, labels could be a helpful aid for private brand manufacturers to gain consumers' trust and to become more competitive against national brands.
In their research, De Temmerman et al. (2021) investigated the effect of the "Nutri-score" on consumers' perceived healthiness and purchase intentions. While they found purchase intentions to be significantly higher for national brands, they concluded that the effect of the "Nutri-score" did not differ when comparing private brands to national brands.
However, other research pointed out that these effects can also differ depending on the type of product that the label is placed on. Van Loo et al. (2021) pointed out that the preference for private or national brands and for organic or non-organic products depends highly on the product category. For eggs, 25 percent of the consumers were willing to pay a price premium for organic labeled eggs but not for

national brand eggs. For juice, 30 percent of the consumers were willing to pay a price premium for organic labeled juice as well as national brand juice. Therefore, we can expext that the V-label could potentially elevate purchase intentions for private brands in a certain product category but not in another category.
Finally, a study by Schena et al. (2023) focused on eco-labels. The conclusion of this paper was that consumer behavior is “eco-label oriented”, meaning that consumers will prefer the product with an eco-label regardless of the fact that it’s a private or national brand. However, on the contrary, De Pelsmacker et al. (2005) found that, even when adding a “Fair-Trade” label to packages, consumers still care a lot about the specific brand and less about the Fair-Trade label.

It is clear that there is no consensus in the literature on the impact of health claims and labels on consumers’ intentions and perceptions of private brands versus national brands. One study found a stronger effect of an organic label for private brands than for national brands (Bauer et al., 2013), while other studies found no differences in the effect of the Nutri-score, Eco-label or Fair-Trade label on private brands versus national brands (De Temmerman et al., 2021 ; Schena et al., 2023 ; Pelsmacker et al., 2005). Due to these inconsistent results and lack of research concerning the V-label specifically, the results of our research would be a valuable addition to the existing literature. We expect that the effect of the V-label will be stronger for private brands as compared to national brands.

3: Research questions and hypotheses

While the main goal of a vegan label on food packaging is usually providing information for consumers, a vast amount of research has identified several other effects that labels can have on consumers' intentions and perceptions. Therefore, it is relevant to investigate whether previous findings are in line with the findings for the V-label specifically. With the existing literature in mind, a first research question can be formulated.

Research Question 1:
Does the V-label impact consumers' intentions and perceptions?

Previous research has pointed out that consumer's intentions and perceptions towards a product can change when a V-label is added to its packaging. Several studies concluded that labeling a product as being vegan or vegetarian increases a product's perceived healthiness and sustainability (Besson et al., 2020 ; Vural et al., 2023 ; Stremmel et al., 2022). In this research we will find out whether this perceived healthiness and perceived sustainability are mediators for the V-label – purchase intention relationship.
On the other hand, adding a vegan or vegetarian label can also have negative side effects. More specifically, consumers' expected taste is likely to deteriorate when a vegan label is added (Prada et al., 2021). In accordance with the perceived healthiness and sustainability, we will investigate whether the expected taste is also a mediator for the V-label – purchase intention relationship.
With this information in mind, two main rival hypotheses can be formulated as well as three mediation hypotheses.

H1a: The presence (vs. absence) of a V-label increases consumers' purchase intentions.
H1b: The presence (vs. absence) of a V-label decreases consumers' purchase intentions.

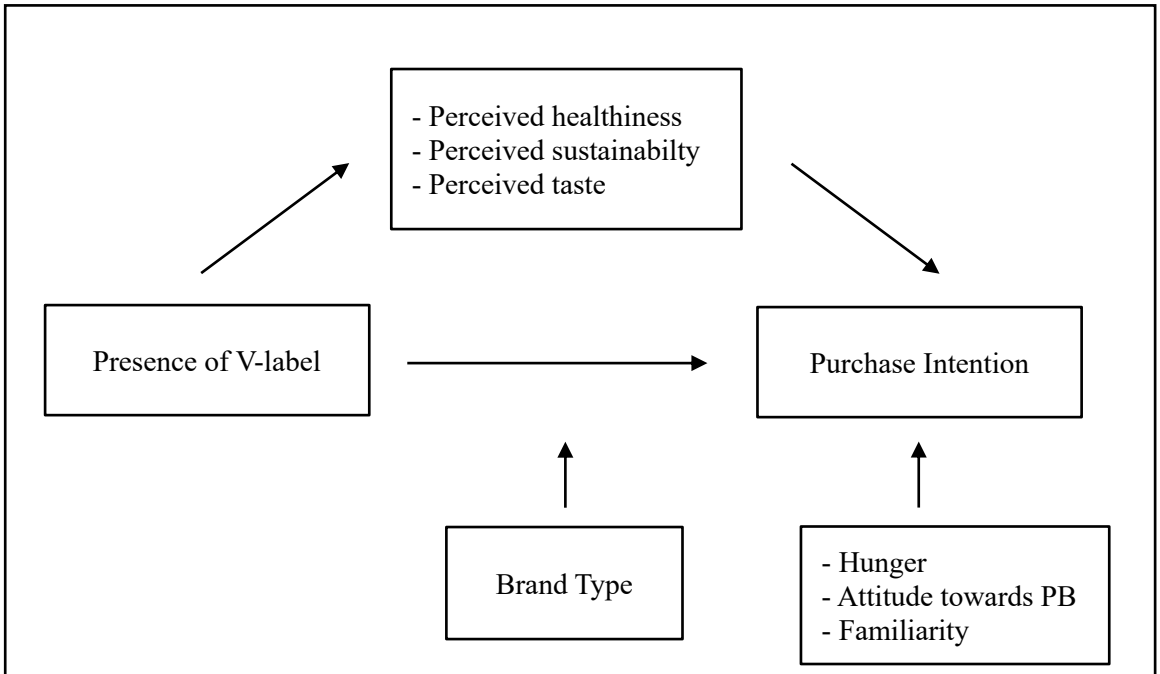
H2a: The presence (vs. absence) of the V-label has a positive effect on consumers' perceived healthiness of the products, which increases purchase intentions.
H2b: The presence (vs. absence) of the V-label has a positive effect on consumers' perceived sustainability of the products, which increases purchase intentions.
H2c: The presence (vs. absence) of the V-label has a negative effect on consumers' perceived taste of the products, which decreases their purchase intentions.

Since the effect of labels also depends highly on the type of product that this label is placed on, the decision was made to make a distinction between private and national brands. More specifically, we will investigate whether the brand type (private or national brand) is a significant moderator for the V-label - purchase intention relationship. Thereby, it is also important to find out whether this moderating effect differs between private and national brands. A second research question can be formulated.

Research Question 2:
Is the effect of the V-label on consumers' perceptions and intentions stronger for private brands (vs. national brands)?

The literature review has pointed out that there is no consensus whether the effect of a label on consumers perceptions and intentions differs between private and national brands. While, in one study, an organic label proved to have a greater effect on private as opposed to national brands (Bauer et al., 2013), other researchers did not seem to support these findings. For instance, when adding a 'Fairtrade' or 'Nutriscore' label, research pointed out that there was no significant difference in consumers' perceptions and intentions between private and national brands (De Pelsmaker et al., 2005 ; de Temmerman et al., 2021). However, consumers' perceptions towards private brands tend to be more negative as opposed to national brands. Bauer et al. (2013), for instance, stated that consumers perceive private brands to be less healthy, less hedonic, less environmentally friendly and less safe when compared to national brands. Therefore, we can expect that the addition of a V-label to private-brand's packaging will reduce these negative perceptions and increase purchase intentions more dramatically than for national brands. With this in mind, a last mediation hypothesis can be formulated.

> H3a: The presence (vs. absence) of the V-label increases purchase intentions, more strongly for private brands (vs. national brands).
> H3b: The presence (vs. absence) of the V-label decreases purchase intentions, more strongly for private brands (vs. national brands).



Independent variable:	Presence V-label
Dependent variable:	Purchase Intention
Mediators:	Perceived Healthiness Perceived Sustainability Perceived Taste
Moderator:	Brand Type (PB or NB)
Control variables:	Feeling of hunger Attitude towards private brands Familiarity

Figure 1: Schematic representation of the research

The decision was made to include three covariates in the research: hunger (i.e. appetite), attitude towards private brands and familiarity with the product.

The reason why appetite was included as a covariate is because of its possible significant influence on purchase intentions and attitudes towards food items. An excessive amount of previous research has already confirmed this effect. Briz et al. (2015) for instance, concluded that the feeling of hunger had a significant effect on consumers' purchase intentions regarding sandwiches. Furthermore, Lozano et al. (1999) used a take-home questionnaire to prove that consumers rated food items more positively when hungry.

The reason why product familiarity was included as a covariate can be explained by previous research proving the significant effect that familiarity can have on purchase intentions. Laroche et al. (1996) for instance, concluded in their research paper that familiarity influenced consumers' confidence in the brand and therefore increase purchase intentions. A more recent study by Dewi et al. (2020) confirmed these results, stating that the familiarity of consumers with products had a significant positive effect on purchase intentions.

The last covariate is 'attitude towards private brands'. It is important to question this covariate since a positive attitude towards private brands is likely to result in a higher purchase intention towards private brands. As mentioned earlier in this paper, we can link this to the theory of planned behavior. According to this theory, consumers who have a certain attitude towards something will be more inclined to act upon that attitude and perform behavior supporting it (Ajzen, 1991). Therefore, a positive attitude towards private brands will likely stimulate consumers to also act upon that attitude and become more inclined to buy private brands.

4: Methodology

4.1 Design & Procedure

The goal of this research is to find out whether the addition of the V-label to food packaging has a significant effect on consumers' intentions and perceptions. Moreover, we will investigate whether this effect differs between private and national brands.

In order to answer these questions, an online experiment was set up using the online platform "Qualtrics". This study entailed a 2 (V-label present or V-label absent) by 2 (private or national brand) mixed design, in which both the V-label and the brand were manipulated between subjects. Respondents were randomly assigned to one of the four between-subject conditions (Table 1). Every respondent was exposed to two products (i.e., breakfast cereals and potato crisps) in each condition, which is the within-subjects factor in this study.
The allocation to a certain condition was randomly decided as well as the order of the within-subject factor. Some respondents were first exposed to potato chips while others were first exposed to cereal. This way the potential order effects are minimized.

	Private brand	**National brand**
V-label present	Condition 1 Private brand + V-label	Condition 2 National brand + V-label
V-label not present	Condition 3 Private brand + No V-label	Condition 4 National brand + No V-label

Table 1: Four conditions of the 2x2 mixed design

4.2 Sample

Before exclusion, a total of 282 responses were collected. The survey was distributed between March 7th until May 3rd by sharing an anonymous link via the social media channels Facebook and Instagram. Friends and family were also encouraged to further share the survey within their personal networks.
In total, 80 respondents needed to be excluded because the collected data was either unreliable or incomplete. More info concerning this exclusion can be found under paragraph 5: "data preparation". This finally resulted in a dataset of 202 respondents which was from now on used for further analyses.

The table below describes the sample per condition. As mentioned earlier, a mixed design was used with the between subjects factor being the condition and the within subject factor being the product type: chips and cereal.
The exact output of the performed analyses concerning the sample can be found in Appendix 2.

	Chips	Cereal
Condition 1 **No V-label + National Brand**	N = 56 ♂ = 19 ♀ = 37	
Condition 2 **No V-label + Private Brand**	N = 49 ♂ = 17 ♀ = 32	
Condition 3 **V-label + National Brand**	N = 46 ♂ = 10 ♀ = 36	
Condition 4 **V-label + Private Brand**	N = 51 ♂ = 13 ♀ = 38	
TOTAL	N = 202 ♂ = 59 ♀ = 143	

Table 2: Description of the sample per condition

As illustrated in table 2, 59 of the respondents identified as male while 143 identified as female resulting in a total dataset of 202 respondents. The mean age of the respondents was 32,57 years old with a standard deviation of 15,46. The youngest respondent was 13 years old while the oldest was 87 years old.

Finally, we should briefly discuss the respondents' reported diet. Of the 202 respondents, 177 claimed to follow an omnivorous diet which accounted for 87,6 percent of the sample. The remainder of the respondents were either flexitarian, vegetarian or pescatarian. A more detailed description is given in table 3 below.

Diet	Frequency	Percentage
Omnivorous	N = 177	87.60 %
Flexitarian	N = 14	6.90 %
Vegetarian	N = 10	5.00 %
Pescatarian	N = 1	0.50 %

Table 3: Frequencies of the reported diets

4.3 Stimuli

As mentioned before, respondents were exposed to two different stimuli. These stimuli were the images of two food packages, in this case: potato chips and breakfast cereal. Every respondent was exposed to potato chips and cereal packaging, both meeting the same condition. The order and condition of the stimuli were randomly decided for each respondent.
Below an overview is given of each one of the possible stimuli.

	V-LABEL	NO V-LABEL
PRIVATE BRAND	CONDITION 1 PRIVATE BRAND + V-LABEL 	CONDITON 2 PRIVATE BRAND + NO V-LABEL 
NATIONAL BRAND	CONDITION 3 NATIONAL BRAND + V-LABEL 	CONDITION 4 NATIONAL BRAND + NO V-LABEL 

Table 4: Overview of the stimuli

The choice of potato chips and cereal lies on the fact that these are, first of all, quite well-known products amongst all consumer demographics. This recognizability should allow consumers to form a more accurate estimation of their consumption regarding these products. Another reason is the fact that chips and cereal are usually consumed on its own. Since these products are not likely to be part of

the preparation of another dish, contextual factors are reduced to a minimum. Finally, a last important factor to discuss is the disparity of both products. The nutritional value, for instance, differs dramatically between chips and cereal. Furthermore, these products are often consumed on different times of the day. While cereal is usually consumed in the morning, chips are generally more popular as a snack in between meals. By choosing two different products to measure consumers' attitudes towards products carrying a V-label, our results are more generalizable.

For potato chips, the brand "Lay's" was chosen for the national brand and the brand "Boni" was chosen for the private brand.
For cereal, the brand "Kellogg's" was chosen for the national brand while "Boni" was chosen again for the private brand.
"Lay's" and "Kellogg's" are both very well-known national brands, both based in the United States. "Boni" is the private brand of "Colruyt Group", one of the largest supermarket-chains in Belgium.

Since private brands and national brands are going to be compared next to each other, it was also important to minimize other unwanted effects. Therefore, the food packaging needed to be as similar as possible. To achieve this, products were deliberately chosen to have similar packaging when comparing the packaging of private-and national brands. For instance, the main color on the packaging is always very similar. More specifically, the packaging of the chips is in both cases mainly blue and black while the packaging of cereal is for the most part yellow. This is important since previous research has concluded that color can have a significant effect on consumers' intentions and perceptions (Seher et al., 2012). Van Rompay et al. (2016), for instance, found in their research that the color combination of green and blue had a significant effect on the perceived healthiness of the food item. Therefore, when choosing packaging with similar colors, the effect of color is eliminated resulting in more accurate outcomes.
Besides the similar color, the private brand and national brand packaging also show other major similarities. For example, a realistic image is shown on the packaging of the chips as well as the cereal. Furthermore, on the cereal packaging a bee is displayed on both the private-as national brand packaging.
Finally, the decision was made to erase all labels and info that could have an unwanted impact on the respondents. The erased labels included: net weight, Nutri-score and Eco label.

4.4 Measurements

In this section, the questions of the survey are discussed as well as the measures and scales that were used to assess the variables. A full copy of the survey can be found in Appendix 1.

First, after an opening message, respondents were asked to give their informed consent.

Secondly, it was important to get an idea of the feeling of hunger of the respondent. This was measured by asking the question "How hungry are you right now?" which the respondent had to evaluate using a 7-point Likert-scale (1 = not hungry at all, 7 = very hungry) (Rossi et al., 2015). This question was asked at the beginning of the experiment since the manipulation might influence consumers' appetite.

Thereafter, respondents were exposed to a first stimulus: an image of a certain food packaging meeting one of the four conditions.
The respondents were asked to study the picture attentively and to answer the three questions below.

Once the respondent was confronted with the stimulus, the dependent variable, participants' purchase intentions, were measured by means of an existing scale (Baker and Churchill, 1977). This scale consisted of five statements: "I would like to try this product", "I would like to buy this product when seeing it in the supermarket", "I would actively look for this product in the supermarket to buy it", "I would recommend this product to others" and "I would be eager to buy this product". The respondents were asked to indicate to which extend they either agreed or disagreed with each statement using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The order of these statements was randomized, again, to minimize potential order effects.
Based on this scale, a new variable 'purchase intention' was created by averaging the responses of the five items ($\alpha = 0.89$ & 0.94).

Afterwards, we measured the proposed mediators. To measure the first mediator, perceived healthiness, we included one 7-point Likert item: "I think that this product is healthy" (1 = strongly disagree, 7 = strongly agree). For the second mediator, perceived sustainability, a similar 7-point Likert item was used: "I think that this product is sustainable" (1 = strongly disagree, 7 = strongly agree). Finally, the last mediator, perceived taste, was also measured using the same 7-point Likert scale with the following statement: "I think that this product is tasty" (1 = strongly disagree, 7 = strongly agree).

To test participants' familiarity with the included stimuli, product familiarity was measured by means of three 7-point Likert existing items (Kent and Allen, 1994): "How familiar are you with this product?" (1 = very unfamiliar, 7 = very familiar), "How experienced are you with this product?" (1 = no experience, 7 = a lot of experience), "How knowledgeable are you regarding this product?" (1 = not knowledgeable, 7 = very knowledgeable).
Based on this scale, a new variable 'familiarity' was created by averaging the responses of the three items ($\alpha = 0.87$ & 0.83).

The questions above were asked for both products in a random sequence.

After measuring the dependent variable, the mediators and participants' product familiarity for each product, we measured participants' attitude towards private brands in general. This variable was measured using a scale constructed and validated by Burton et al. (1998). The scale consists of six questions regarding private brands: "Purchasing private brands gives me a good feeling", "I like it when private brands are available within the product categories I purchase", "Within most product categories, the private brand is the best buy", "In general, private brands are of low quality", "Considering the price-quality ratio, I prefer private brands over A-brands", "When I purchase a private brand, I always feel like I am getting a good deal". All needed to be scored using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree).
Since this scale consists of a rather large number of questions, the decision was made to add an attention check question.
Based on this scale, a new variable 'attitude towards private brands' was created by averaging the responses of the six items ($\alpha = 0.82$).

The survey also asked respondents about their specific dietary habits. They could choose between the following options: 'omnivorous', 'vegetarian', 'vegan', 'pescatarian', 'flexitarian' and 'other'. Before answering the question, a brief definition was given for each of the options.
It is important to have information about respondents' diet since this could have a considerable effect on purchase intentions. A respondent following a vegan diet, for instance, might only show purchase intentions when a V-label is specifically displayed on the food packaging.

Finally, some demographics were questioned: sex and age.

At the end of the survey, a final message was displayed to thank the respondent for their participation.

4.5 Internal consistency of the summated scales

In the survey, scales are used to measure purchase intentions, product familiarity and attitude towards private brands. These are all validated scales, however, it is still important to check the internal consistency in our specific dataset by using Cronbach's alpha coefficient. If the scales are reliable, the summated scales can be calculated. The output of the Cronbach's alpha tests can be found in Appendix 3.

Purchase intention is measured by using a scale constructed by Baker and Churchill (1977) consisting of five statements. The measured Cronbach's alpha coefficient was 0.89 for chips and 0.94 for cereal. We can therefore assume that the summated scale for purchase intention is reliable.

Product familiarity was measured using a scale constructed by Kent and Allen (1994) consisting of three statements. The measured Cronbach's alpha coefficient was 0.87 for chips and 0.83 for cereal. The coefficient could be improved slightly when deleting the item "How informed are you about this product", however, since the scale only consists of three items the decision was made to keep it. We can assume that the summated scale for product familiarity is also reliable.

Finally, respondents' attitude towards private brands was measured using a scale constructed by Burton et al. (1998). The fifth item (In general, private brands have a lower quality in comparison to national brands) needed to be recoded since a high score reflected a negative attitude towards private brands while this was the opposite for the other items.
The measured Cronbach's alpha coefficient was 0.82 for this variable. We can therefore assume that this scale is also reliable.

The table below shows the Cronbach's alpha coefficients for every constructed summated scale.

Scale	Product	Number of items	Cronbach's alpha
Purchase Intention (Baker and Churchill, 1977)	Chips	5	α = 0.89
	Cereal		α = 0.94
Product Familiarity (Kent and Allen, 1994)	Chips	3	α = 0.87
	Cereal		α = 0.83
Attitude towards private brands (Burton et al., 1998)		6	α = 0.82

Table 5: Cronbach's alpha coefficients

4.6 Data preparation

Before analyzing the collected data, it was essential to clean up the dataset and exclude unreliable or incomplete responses.

The first question of the survey required respondents to give their consent for participating in the study. If a respondent did not give their consent, they were redirected to the end of the survey and therefore excluded from the dataset. This resulted in the exclusion of six respondents in total. Secondly, in the remaining dataset, there were 58 respondents that did not successfully complete the entire survey. Therefore, the decision was made to also exclude these participants from the dataset. Finally, since the scale measuring the attitude of respondents towards private brands consisted of six questions, the decision was made to add an attention check question. The question read as follows "Select the option 'agree'". The goal of this attention check question is to improve the reliability and accuracy of the data by eliminating respondents that did not select the right option. These respondents were assumed to not have completed the survey attentively. In this case, 16 respondents in the remaining dataset did not indicate the right answer and were therefore also eliminated.
It is also worth mentioning that, since data validation was used when constructing the survey, no outliers were detected.

In total, 80 respondents were eliminated from the original dataset due to one or multiple of the above-mentioned reasons. This resulted in a final dataset of 202 respondents.

5: Results

5.1 Hypothesis 1: the main effect

In this section the first hypotheses will be tested. These two rival hypotheses state that the presence versus absence of the V-label will have a significant effect on consumers' purchase intentions. This is also referred to as the main effect. Both hypotheses are once more illustrated below.

H1a: The presence (vs. absence) of a V-label increases consumers' purchase intentions.
H1b: The presence (vs. absence) of a V-label decreases consumers' purchase intentions.

To test these hypotheses, a mixed linear model will be used. A mixed model is particularly useful since our dataset consists of repeated measures for each respondent. Specifically, we have two observations per participant as participants rated two products. A mixed linear model will account for the variability among respondents which will result in a more reliable output. This model, however, requires the data to be in long format so before running the tests, the data was restructured.
In simple terms, the model will investigate whether the mean purchase intentions differ significantly when a V-label is present versus absent by utilizing the data from both product categories: chips and cereal. All of the output for hypothesis 1 can be found in Appendix 4.

After running the mixed linear model, the following data was obtained.

Presence V-label	M	SE	df
Not present	4.05	0.11	202
Present	4.00	0.12	202

	Coefficient	SE	t	Sig (p)
Presence V-label	0.05	0.16	0.32	0.752

Table 6a and 6b: Results of mixed linear model for the main effect

The results of the multilevel analysis indicate that there is no significant difference in the mean purchase intentions when the V-label is present (M = 4.00, SD = 0.12) versus absent (M = 4.05, SD = 0.11; t = 0.32, p = 0.752). This shows that adding a V-label to packages does not result in different purchase intentions, which is why we reject H1a and H1b.

Since we received data on two different products: chips and cereal, the decision was made to also compare the results for both categories to see whether we can find significant differences. This was done by adding an interaction factor which combined the variables 'presence V-label' and 'product type. This resulted in the data illustrated below.

Product type	M	SE	df
Chips	4.57	0.10	404
Cereal	3.47	0.10	404

Presence V-label	M	SE	df
Not present	4.05	0.10	404
Present	4.00	0.10	404

	Coefficient	SE	t	Sig (p)
Presence V-label	0.04	0.20	0.21	0.835
Product category	1.09	0.20	5.33	< 0.001
Interaction	0.02	0.28	0.06	0.949

Table 7a, 7b, 7c: Results of mixed linear model for the main effect ; interaction with product type

These results show us that purchase intentions for chips (M = 4.57, SD = 0.10) are significantly higher than purchase intentions for cereal (M = 3.47, SD = 0.10 ; t = 5.33, p <0.001). However, the interaction effect implies that there is no significant difference in the V-label – purchase intention relationship when comparing chips to cereal (M = 4.05, SD = 0.10 ; M = 4.00, SD = 0.10 ; t = 0.06, p = 0.949). We can therefore conclude that the V-label does not have a significant effect on consumers' purchase intentions and that this effect does not differ when comparing chips to cereal.

Afterwards, the mixed linear model was run again, but this time three covariates were included. These covariates were the following: feeling of hunger, attitude towards private brands and familiarity with the product. These are all variables that could potentially impact consumers' purchase intentions regardless the presence of the V-label.

The effects of the covariates on the dependent variable (purchase intention) are illustrated below:

	Coefficient	SE	t	Sig (p)
Appetite (hunger)	0.04	0.03	1.71	0.089
Attitude towards PB	0.09	0.06	1.54	0.126
Familiarity	0.77	0.03	24.52	< 0.001

	Coefficient	SE	t	Sig (p)
Presence V-label	-0.11	0.09	-1.16	0.245

Table 8a and 8b: Results of mixed linear model for the main effect ; covariates

This output shows that product familiarity has a significant impact on consumers' purchase intentions ($t = 24.52$, $p < 0.001$). This means that when a consumer is more familiar with a certain product, they will have a higher purchase intention towards that product. However, there is no significant impact of the presence (vs. absence) of the V-label on the purchase intentions when controlling for the covariates ($t = -1.16$, $p = .245$). These results provide no evidence for an effect of the presence of a V-label on consumers' purchase intentions. Therefore, the first hypothesis is rejected.

5.2 Hypothesis 2: three mediators

With the existing literature in mind, the decision was made to test for three mediators: perceived healthiness, perceived sustainability, and perceived taste. In this paragraph, we will investigate whether these variables are in fact significant mediators for the V-label – purchase intention relationship. The three hypotheses are illustrated below.

H2a: The presence (vs. absence) of the V-label has a positive effect on consumers' perceived healthiness of the products, which increases purchase intentions.
H2b: The presence (vs. absence) of the V-label has a positive effect on consumers' perceived sustainability of the products, which increases purchase intentions.
H2c: The presence (vs. absence) of the V-label has a negative effect on consumers' perceived taste of the products, which decreases their purchase intentions.

To analyze these potential mediating effects, the MLmed macro (Hayes & Rockwood, 2020) was used. This model is able to investigate multilevel mediation effects. The results for the three mediators are illustrated below.
All of the output for hypothesis 2 can be found in Appendix 5.

5.2.1 Mediator 1: perceived healthiness

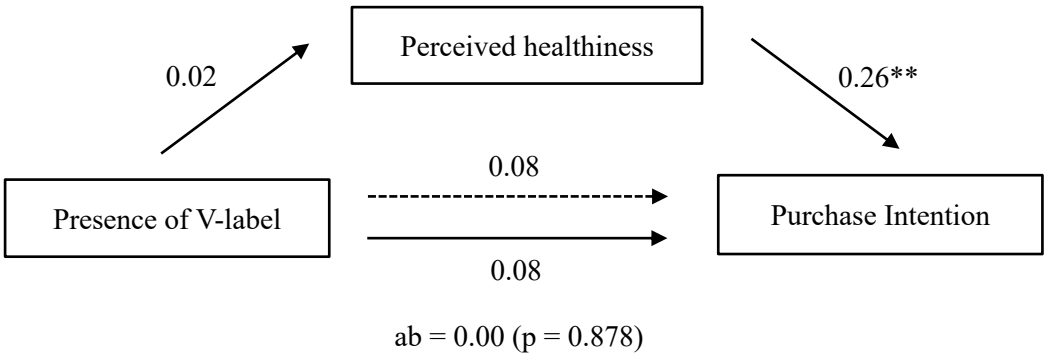


Figure 2: Mediation model ; perceived healthiness

From this analysis we can conclude that the presence (vs. absence) of the V-label does not significantly impact the perceived healthiness of the products (coefficient = 0.02, t = 0.16, p = 0.870). The perceived healthiness, however, does significantly impact consumers' purchase intentions (coefficient = 0.26, t = 2.77, p = 0.006). Overall, there is no significant mediation of perceived healthiness (ab = 0.00, p = 0.878)). Therefore, H2a is rejected.

5.2.2 Mediator 2: perceived sustainability

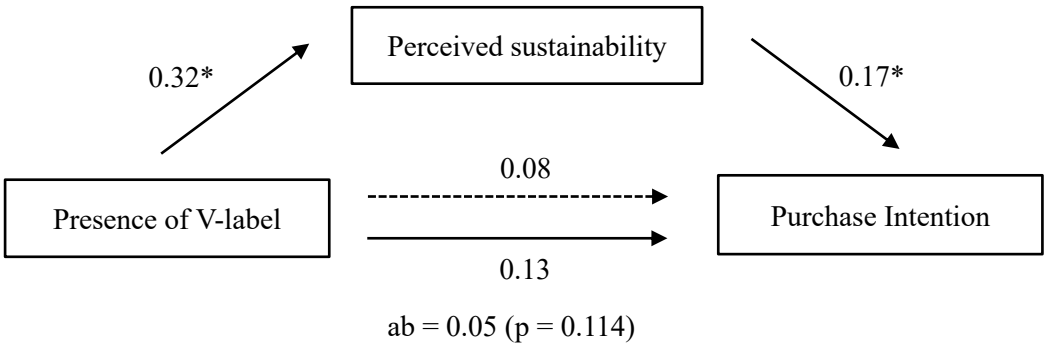


Figure 3: Mediation model ; perceived sustainability

From this analysis, we can conclude that the presence (vs. absence) of the V-label significantly impacts the perceived sustainability of the products (coefficient = 0.32, t = 2.22, p = 0.028).
The perceived sustainability has, in turn, a significant effect on purchase intentions (coefficient = 0.17, t = 2.47, p = 0.014). However, overall there is no significant mediation of perceived sustainability (ab = 0.05, p = 0.114). Therefore, H2b is also rejected.

5.2.3 Mediator 3: perceived taste

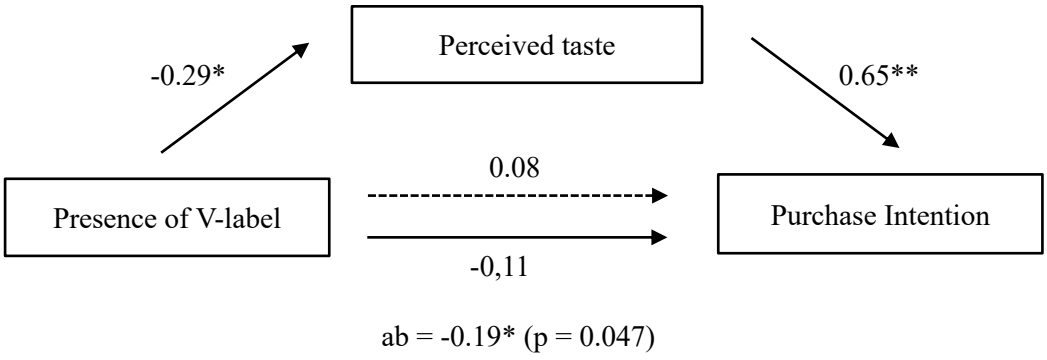


Figure 4: Mediation model ; perceived taste

From this analysis, we can conclude that the presence (vs. absence) of the V-label significantly impacts the perceived taste of the products (coefficient = -0.29, t = -2.03, p = 0.043).
The perceived taste has, in turn, a significant effect on purchase intentions (coefficient = 0.65, t = 10.91, p = 0.000). Overall, there is a significant mediating effect of perceived taste (ab = -0.19, p = 0.047). Therefore, H2c is accepted.

5.2.4 Conclusion of the mediation analyses

In the previous paragraphs, three mediation analyses were performed for three different potential mediators. From these analyses, we can conclude that only 'perceived taste' is a significant mediator. The presence of the V-label on food packaging will decrease consumers' perceived taste which will in turn decrease purchase intentions. This is in line with our expectations; therefore, we will accept H2c while we reject both H2a and H2b.

Below, in Table 9, a more detailed overview can be found of the results of the mediation analyses for both product categories.

	Mediator	Coefficient	SE	Sig (p)
A-path	**Perceived healthiness**	0.02	0.10	0.870
	Perceived sustainability	0.32	0.14	0.028 *
	Perceived taste	-0.29	0.14	0.043 *
B-path	**Perceived healthiness**	0.26	0.09	0.006 **
	Perceived sustainability	0.17	0.07	0.014 *
	Perceived taste	0.65	0.06	0.000 **
C'-path (direct effect)	**Perceived healthiness**	0.08	0.12	0.510
	Perceived sustainability	0.08	0.12	0.510
	Perceived taste	0.08	0.12	0.510
AB-path (indirect effect)	**Perceived healthiness**	0.00	0.03	0.878
	Perceived sustainability	0.05	0.03	0.114
	Perceived taste	-0.19	0.09	0.047 *

Table 9: Results overview of three mediation tests

5.3 Hypothesis 3: the interaction effect

We already investigated the main effect, namely the effect of the presence of the V-label on purchase intentions. Now, the third hypothesis will be tested which concerns the interaction effect between the V-label and the brand type (private vs national brands).
The hypotheses read as follows:

H3a: The presence (vs. absence) of the V-label increases purchase intentions, more strongly for private brands (vs. national brands).
H3b: The presence (vs. absence) of the V-label decreases purchase intentions, more strongly for private brands (vs. national brands).

To test this hypothesis, a mixed linear model was used similar to the main effect that was discussed earlier. Apart from the variable 'presence V-label', 'brand type' was now also added to test for interaction effects.
All of the output for hypothesis 3 can be found in Appendix 6.

The output is illustrated below:

V-label	Brand type	Mean	SE
Not present	Private brand	4.01	0.16
	National brand	4.08	0.15
Present	Private brand	3.89	0.16
	National brand	4.12	0.17

	Coefficient	SE	t	Sig (p)
Presence V-label	-0.04	0.23	-0.17	0.867
Brand Type	-0.24	0.23	-1.02	0.308
Interaction	0.16	0.32	0.50	0.618

Table 10a and 10b: Results of mixed linear model for the interaction effect

There is no significant main effect of product type on purchase intentions ($t = -1.02$, $p = .308$). In addition, there is no significant interaction between the presence of the V-label and the brand type ($t = 0.50$, $p = 0.618$). In other words: the presence of the V-label does not have a significantly different effect on purchase intentions when comparing national brands to private brands.

Finally, the previously discussed model was run again, but this time three covariates were included. These covariates were the same as for the main effect: feeling of hunger, attitude towards private brands and familiarity with the product. These are all variables that could potentially impact consumers' purchase intentions regardless the presence of the V-label.

The effects of the covariates on the dependent variable (purchase intention) are illustrated below:

	Coefficient	SE	t	Sig (p)
Appetite (hunger)	0.05	0.03	1.85	0.064
Attitude towards PB	0.09	0.06	1.61	0.108
Familiarity	0.78	0.03	24.75	< 0.001

Table 11a: Results of mixed linear model for the interaction effect ; covariates

This output shows us that the variable 'familiarity' has a significant direct effect on consumers' purchase intentions ($t = 24.75$, $p < 0.001$). This means that consumers who are familiar with a certain product will have higher purchase intentions towards that product. This is in line with the main effect where familiarity also turned out to have a significant impact on purchase intentions.

The addition of these covariates led to a slight alteration of the previously reported results:

V-label	Brand type	Mean	SE
Not present	Private brand	4.04	0.10
	National brand	3.89	0.09
Present	Private brand	4.19	0.10
	National brand	3.98	0.10

	Coefficient	SE	t	Sig (p)
Presence V-label	-0.09	0.13	-0.66	0.513
Brand Type	0.21	0.14	1.52	0.130
Interaction	-0.06	0.19	-0.32	0.750

Table 11b and 11c: Results of mixed linear model for the interaction effect ; covariates

We can conclude that, when controlling for the covariates, there is still no significant difference between private and national brands when it comes to the V-label – purchase intention relationship ($t = -0.32$, $p = 0.750$). We did find out that the covariate 'familiarity' has a significant impact on consumers' purchase intentions. However, the addition of covariates did not change anything about our previous conclusion. Therefore, hypothesis 3 is rejected.

6: Discussion

The purpose of this study was to find out whether the addition of the V-label on product packaging would increase or decrease consumers' purchase intentions towards that specific product. Furthermore, we wanted to investigate whether this effect would be different when comparing national brands to private brands. After a thorough literature review, the decision was made to also test for three potential mediators. Based on the existing literature we could expect that the V-label – purchase intention relationship could be partially explained by consumers' perceptions concerning the product's healthiness, sustainability and taste.

In order to test our formulated hypotheses, a 2x2 mixed design survey was set up. In this survey, respondents were shown two products: chips and cereal, which matched a certain condition. More specifically, the products that were shown were either national brands or private brands. Furthermore, the shown packaging either carried the V-label or no label at all. Eventually, after distributing the survey, 282 responses were collected which resulted in a final dataset after exclusion of 202 responses. After some data preparation, the obtained responses were ready to be analyzed.

First, the main effect was tested where we expected the addition of the V-label to have an effect on consumers' purchase intentions. Our hypothesis was supported by several previous research papers in which a positive relationship was observed between vegan labeling and purchase intentions (Stremmel et al., 2022 ; Maragon et al., 2016 ; Van der Stricht et al., 2023).
Despite ample proof in the existing literature, we were not able to support these results with our findings. After running a mixed linear model, we concluded that the effect of the V-label on purchase intentions was not significant. This result remained unchanged even after including three covariates (appetite, attitude towards private brands and product familiarity) to the model. However, we did find out that product familiarity has a significant impact on purchase intentions. This was in line with the existing literature (Laroche et al., 1996 ; Dewi et al., 2021)
Additionally, we checked whether these results would differ if a distinction were made between the product categories chips and cereal. Despite purchase intentions being significantly higher for chips than for cereal, the effect of the V-label on purchase intentions was not significantly different when comparing the two categories. Therefore, the first hypothesis was rejected.

While these results were not in line with our hypothesis, there are still a number of reasons that can explain this discrepancy. The respondents could, for instance, be unfamiliar with the V-label and would therefore not base their purchase intentions and attitudes on the presence of the label. Another explanation refers us back to the study by Stremmel et al. (2022). They concluded in their research that the impact of vegan labels was only significant for 'unexpected vegan products' as opposed to 'randomly vegan products'. This theory could explain the insignificant results, since chips and cereal are both products often assumed to be vegan.

Secondly, we performed three multilevel mediation tests to find out whether there were any significant mediating effects. A first potential mediator was 'perceived healthiness'. The literature taught us that labeling products as vegetarian or even 'Fairtrade' can cause consumers to perceive these products as healthier choices due to the 'health halo effect' (Besson et al., 2020 ; Chandon et al., 2007 ; Schludt et al., 2012). Therefore, we expected 'perceived healthiness' to be a positive mediator in the V-label – purchase intention relationship. We had the same expectation for 'perceived sustainability' since previous research showed that vegan and vegetarian labeling makes consumers perceive products to be more sustainable and makes them even willing to pay a price premium for them (Case, 2023 ; Stremmel et al., 2022).

When it came to 'perceived taste', there was no consensus in the existing literature. While some researchers suggested a negative relationship (Prada et al., 2021 ; Liem et al., 2012), others claimed that a vegan label would improve the expected taste (Werle et al. ,2013). Nevertheless we still expected the relationship to be negative since consumers still tend to be reluctant towards vegan or vegetarian food due to the expected deterioration of taste (Rosenfeld & Tomiyama, 2020).

After running the multilevel mediation tests, we concluded that 'perceived healthiness' and 'perceived sustainability' were no significant mediators. Therefore, we rejected our first two mediation hypotheses: H2a and H2b. 'perceived taste', however, did turn out to be a significant mediator which was in line with our hypothesis. The presence of the V-label on food packaging decreases consumers' perceived taste which, in turn, decreases purchase intentions. We therefore accepted hypothesis H2c. The fact that only 'expected taste' turned out to be a significant mediator could be explained by consumers valuing taste over a product's sustainability or healthiness. The taste of a product might have been our respondents' primary concern when making purchasing decisions. It is also important to stress on the fact that the existing literature did not always provide an unambiguous answer since consumers' purchasing decisions are an intricate, complex, and not always predictable process.

Thirdly, a mixed linear model was used to check the last hypotheses. The goal was to find out whether the effect of the V-label on purchase intentions was different when comparing private brands to national brands. In the existing literature, no consistent answer could be given whether the effect would be greater for private or national brands. While some researchers claimed that certain labels have a stronger impact on private brands (Bauer et al., 2013), others claimed there to be no significant

difference at all (De Pelsmaker et al., 2005 ; de Temmerman et al., 2021). However, since a number of studies claimed consumers' perceptions towards private brands to be more negative, we expected that the V-label would have a more significant impact for private brands as opposed to national brands. In order to verify this, an interaction factor was created by combining the variable 'presence V-label' with 'brand type'. Eventually, no evidence was found that the effect of the V-label on purchase intentions differed significantly when comparing national brands to private brands. Therefore, the third hypothesis was also rejected. A possible explanation for this could be that consumers simply do not perceive private brands differently as opposed to national brands. However, since consumers were only exposed to one condition, this could not be verified in this research. Another explanation can be linked to brand loyalty, meaning that consumers could have a preference for a certain brand regardless the presence of the V-label.

7: Conclusion

For the conclusion we will formulate a final answer to the main research question of this study.

Is the effect of the V-labels on consumers' perceptions and intentions stronger for private brands as opposed to national brand)?

The answer is no. Based on the conducted research; no significant difference was found in the V-label – purchase intention relationship when comparing private brands to national brands. There are several possible explanations for these insignificant results including: consumers' strong brand preferences, their unfamiliarity with the V-label or the pre-established attitudes towards the products that served as stimuli.

These results contribute to the existing literature concerning labeling practices and their impact on consumers. While current research has already investigated the effect of vegan labeling on purchase intentions, the difference of these effects when comparing private brands to national brands has hardly been analyzed. Furthermore, the effect of the V-label specifically has barely been researched since most existing studies use either another label (e.g. the Vegan Society) or even a fictional, uncertified label. Additionally, this research also highlights the importance of product familiarity and taste perception when consumers make purchasing decisions.

8: Practical implications

Our research did not discover a significant effect of the V-label on consumers' purchase intentions, furthermore, this relationship did not differ when comparing private brands to national brands. Despite these insignificant results, our findings can still serve as valuable input for decision makers in companies, governments and even society in general.

Since the V-label did not induce any significant change in consumers' purchase intentions, marketers should not be afraid to add this label to their product packaging. The V-label remains a useful information tool, offering important product information in one glance. Therefore, companies can easily inform their target audience without risking negative side effects.
It is also important to stress the fact that 'perceived taste' turned out to be a significant mediator. Marketers should be aware that when making a purchasing decision, consumers will likely attach high importance to the taste of the product rather than the healthiness or sustainability. Therefore, a product packaging could highlight the good taste of a product to increase purchase intentions.
Another important variable was 'product familiarity'. We found out that, the more consumers are familiar with the product, the higher their purchase intentions will be. Therefore, marketers should focus on creating product familiarity. Changing a product's packaging, for instance, might decrease consumers' familiarity which could in turn decrease purchase intentions.

Governments could also use these results to stimulate manufacturers to add the V-label to their products. As mentioned earlier, the V-label can be an accessible and quick way to evaluate a product's ingredients and production process. A label like this is often well appreciated, especially by the ever-increasing number of people following a vegan or vegetarian diet (Rosenfeld & Burrow, 2018). Furthermore, since the meat industry is considered a major driver for the enhanced greenhouse effect (Fresan et al., 2019), placing a V-label on food packaging can help to guide consumers to more sustainable food choices.
Since this research proves that the V-label does not have a significant impact on purchase intentions, it can lower the threshold for manufacturers who feared negative effects when adding the label to their products.

9: Limitations and future research

Even though this research offers valuable insights in the V-label - purchase intention relationship, it is important to acknowledge that the performed research was likely subject to a few limitations. These limitations could possibly have impacted the reliability and validity of the reported results. Furthermore, some suggestions can be made to perform further research on this topic in order to supplement, refine or confirm our conclusions.

9.1 Limitations

A first limitation is that no pretest was performed for the questionnaire. By performing a pretest, potential issues concerning the survey can be solved before distributing it. This could have improved the quality and validity of our data. As mentioned earlier, once the data was collected, 80 respondents needed to be excluded from the dataset. This could have partially been caused by a flaw in our survey which might have been avoided by pretesting.

Secondly, the question must be asked to what extent an online survey is a good instrument to measure consumers' purchase intentions. It can be hard for respondents to imagine seeing the products in the store and making an estimation of their purchase intentions. Therefore, a better research method would be a controlled experiment in an environment that resembles a supermarket or even observing consumers in a real supermarket. However, due to limited resources, these methods were not available for our research.

Another important remark to make is the fact that the obtained sample did not perfectly represent the entire population. Apart from the sample containing mostly friends and family from the researcher, the age distribution was not proportionate with almost half of the entire sample being aged 22 or below. Also, the gender distribution was not equal, more specifically 143 respondents were female while only 59 were male. Furthermore, the sample only contained Belgian consumers, so when taking cultural differences into account, these results cannot be generalized to the entire world population.

Fourthly, we should address the stimuli. As stimuli, the choice was made to use two food categories: chips and cereal. The packaging of these two products were then adjusted to match one of the four conditions. While questioning consumers on two different products improved the validity of the results, the choice of the products could have been better. Chips and cereal can be considered snack foods which could have had an influence on consumers' attitudes. For instance, their purchase intentions might have been less rational or well-considered in comparison to foods that are usually part of a full meal. Furthermore, chips and cereal are both products of which one usually already

assumes them to be vegan. Therefore, it might have been interesting to also include an unexpected vegan product.

Finally, if this research were to be conducted again, I would advise to add a variable which describes respondents' familiarity with the V-label. When creating the survey, the assumption was made that every respondent would be familiar with the V-label which usually is not the case. Therefore, it is possible that respondents did not base their purchase intentions and attitudes towards a product on the V-label merely because they did not know what the label meant. Therefore, a question should have been added at the end of the survey which asked about the respondents' familiarity with the V-label. At the beginning of the survey, the meaning of the label could also have been addressed. However, this last method might result in a response bias or 'Hawthorne effect' for the rest of the survey since the respondent is made aware of one of the stimuli.

9.2 Suggestions for future research

First, as mentioned earlier, it could be interesting to test the same hypotheses but with different product categories. For instance, a study by Stremmel et al. (2022) pointed out that the effects of vegan labeling on consumers were only significant for unexpected vegan products in comparison to random vegan products. Therefore, future research could make this distinction and investigate whether the results would differ when using unexpected vegan products in comparison to random ones. Furthermore, future research could also use products that are (an important part of) main meals rather than snack foods like chips or cereal. For instance, vegan burgers or ready-made meals.
A further expansion could be the addition of non-food items to the research to find out whether the results would differ from food items.

Another interesting area to look into is the comparison of different vegan labels. Maybe the effect of the V-label was not significant, but the effect of other vegan labels like the one from 'Vegan Society' might be. This way, conclusions could be drawn not only for the V-label but for vegan labels in general.
Related to this is the comparison of different private brands. In our research, the only private brand that was used as a stimulus was 'Boni' from 'Colruyt Group'. However, since today's market consists of a wide array of private brands, it could be interesting to add different private brands to the survey. This way, the brands can be compared and the validity of the results can be improved.

Thirdly, one of the limitations earlier concerned the question whether an online survey was the best way to assess consumers' purchase intentions. Therefore, if enough resources are available, we would

suggest further research to measure consumers' purchase intentions by observing their actual buying behavior in a supermarket or controlled environment. Furthermore, it would also be valuable to perform taste tests to gather more information about consumers' actual taste experience. This would undoubtedly lead to more accurate and valid results.

The final recommendation for further research concerns the dependent variable. Apart from purchase intentions, it could be interesting to also ask respondents about their willingness to pay. There has been research in the past concerning the effect of vegan labeling on consumers' willingness to pay a price premium (Maragon et al., 2016 ; Van der Stricht et al., 2023). Therefore, the addition of this dependent variable would be a valuable addition to our conducted research.

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Appendix

1: Survey

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Beste respondent, alvast bedankt voor het invullen van deze enquête.

In wat volgt zullen er een aantal vragen gesteld worden in verband met uw voorkeuren betreffende twee producten: ontbijtgranen en paprikachips. Gelieve de vragen zo zorgvuldig mogelijk te beantwoorden.
Het invullen van de enquête is volledig anoniem en neemt ongeveer 5 minuten van uw tijd in beslag.

Voor eventuele vragen en opmerkingen kan u mij steeds contacteren via bram.lambert@ugent.be.

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Door deel te nemen aan deze studie, participeert u in een onderzoek van de vakgroep Marketing, Innovatie en Organisatie van de Universiteit Gent.

Als participant aan dit onderzoek:
1. Neem ik vrijwillig deel.
2. Geef ik de toestemming aan de onderzoeker om mijn data op anonieme wijze te bewaren, te verwerken en te rapporteren.
3. Ben ik op de hoogte van de mogelijkheid om mijn deelname aan dit onderzoek op ieder moment stop te zetten.

- ◯ Ik heb bovenstaande info gelezen en ga AKKOORD
- ◯ Ik heb bovenstaande info gelezen en ga NIET AKKOORD

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Hoeveel honger heeft u op dit moment?

Helemaal geen honger ◯ ◯ ◯ ◯ ◯ ◯ ◯ Veel honger

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Bekijk aandachtig onderstaande verpakking en beantwoord vervolgens de vragen.

*** One of the images below was shown***
*** The same questions were repeated for a second product in the same condition ***

In welke mate bent u het eens met onderstaande stellingen?

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Neutraal	Eerder akkoord	Akkoord	Helemaal akkoord
Ik zou dit product willen kopen wanneer ik het zie in de supermarkt	○	○	○	○	○	○	○
Ik zou bereid zijn om dit product te kopen	○	○	○	○	○	○	○
Ik zou dit product willen proberen	○	○	○	○	○	○	○
Ik zou actief op zoek gaan naar dit product in de supermarkt om het te kopen	○	○	○	○	○	○	○
Ik zou dit product aanraden aan anderen	○	○	○	○	○	○	○

In welke mate bent u het eens met onderstaande stellingen?

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Neutraal	Eerder akkoord	Akkoord	Helemaal akkoord
Ik denk dat dit product duurzaam is	○	○	○	○	○	○	○
Ik denk dat dit product lekker is	○	○	○	○	○	○	○
Ik denk dat dit product gezond is	○	○	○	○	○	○	○

Beantwoord onderstaande vragen.

Hoe geïnformeerd bent u over het bovenstaande product?

- Niet geïnformeerd
- Zeer weinig geïnformeerd
- Weinig geïnformeerd
- Gemiddeld
- Een beetje geïnformeerd
- Veel geïnformeerd
- Zeer veel geïnformeerd

Hoeveel ervaring heeft u met het bovenstaande product?

- Geen ervaring
- Zeer weinig ervaring
- Weinig ervaring
- Gemiddeld
- Een beetje ervaring
- Veel ervaring
- Zeer veel ervaring

Hoe vertrouwd bent u met het bovenstaande product?

- Helemaal niet vertrouwd
- Niet vertrouwd
- Eerder niet vertrouwd
- Gemiddeld
- Eerder wel vertrouwd
- Vertrouwd
- Zeer vertrouwd

In welke mate bent u het eens met onderstaande stellingen?

	Helemaal niet akkoord	Niet akkoord	Eerder niet akkoord	Neutraal	Eerder akkoord	Akkoord	Helemaal akkoord
Het aankopen van huismerken geeft mij een goed gevoel.	○	○	○	○	○	○	○
Ik vind het leuk wanneer er huismerken beschikbaar zijn binnen de productcategorieën die ik aankoop.	○	○	○	○	○	○	○
Binnen de meeste productcategorieën is het huismerk de beste koop.	○	○	○	○	○	○	○
Duid "Akkoord" aan	○	○	○	○	○	○	○
Over het algemeen zijn huismerken van lage kwaliteit.	○	○	○	○	○	○	○
Gezien de prijs-kwaliteitsverhouding verkies ik huismerken boven A-merken.	○	○	○	○	○	○	○
Wanneer ik een huismerk aankoop, heb ik steeds het gevoel dat ik een goede deal krijg.	○	○	○	○	○	○	○

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Welk type dieet sluit het best aan bij uw eetgewoonten?

Ter info:

Omnivoor: u eet zowel dierlijke als plantaardige producten
Vegetarisch: u eet geen vlees, gevogelte, vis of zeevruchten
Veganistisch: u eet geen dierlijke producten, dus ook geen melkproducten of eieren
Pescotarisch: u eet vis en zeevruchten, maar geen vlees of gevogelte
Flexitarisch: u bent overwegend vegetarisch en eet slechts af en toe vlees, gevogelte, vis of zeevruchten

- ◯ Omnivoor
- ◯ Vegetarisch
- ◯ Veganistisch
- ◯ Pescotarisch
- ◯ Flexitarisch
- ◯ Andere

Ik identificeer mijzelf als...

- ◯ Man
- ◯ Vrouw
- ◯ X
- ◯ Zeg ik liever niet

Wat is uw leeftijd? Antwoord met een getal

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Bedankt voor uw deelname aan dit onderzoek. Uw antwoorden werden goed geregistreerd.

Wanneer u in de toekomst nog wenst deel te nemen aan online onderzoek van de vakgroep Marketing van de Universiteit Gent of wilt deelnemen aan studies in het consumentenlab, dan kan u
zich registreren voor het onderzoekspanel. U zal dan regelmatig uitgenodigd worden om aan onderzoek van de vakgroep Marketing deel te nemen. Deelname aan studies in het consumentenlab
levert u 5 tot 8 EUR op. Bij deelname aan online onderzoek maakt u kans op leuke prijzen, zoals bons van FNAC, Bol.com & Kinepolis.

Geïnteresseerd? Klik dan op onderstaande link om u te registreren:
https://consumerlab.ugent.be/nl/formulier.htm

Nogmaals hartelijk bedankt voor uw deelname aan dit onderzoek.

Met vriendelijke groeten

Bram Lambert
Student master Commercieel Beleid, Universiteit Gent.
bram.lambert@ugent.be

2: Description of the sample

Frequency Table

Ik identificeer mijzelf als...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	59	29,2	29,2	29,2
	Vrouw	143	70,8	70,8	100,0
	Total	202	100,0	100,0	

Condition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	conditon 1	56	27,7	27,7	27,7
	condition 2	49	24,3	24,3	52,0
	condition 3	46	22,8	22,8	74,8
	condition 4	51	25,2	25,2	100,0
	Total	202	100,0	100,0	

Welk type dieet sluit het best aan bij uw eetgewoonten?

Ter info:

Omnivoor: u eet zowel dierlijke als plantaardige producten
Vegetarisch: u eet geen vlees, gevogelte, vis of zeevruchten
Veganistisch: u eet geen dierlijke producten, dus ook geen melkproducten of eieren
Pescotarisch: u eet vis en zeevruchten, maar geen vlees of gevogelte
Flexitarisch: u bent overwegend vegetarisch en eet slechts af ...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Omnivoor	177	87,6	87,6	87,6
	Vegetarisch	10	5,0	5,0	92,6
	Pescotarisch	1	,5	,5	93,1
	Flexitarisch	14	6,9	6,9	100,0
	Total	202	100,0	100,0	

3: Cronbach's alpha coefficients

Cronbach's alpha coefficient purchase intention for chips and cereal:

Scale: Purchase intention Chips

Case Processing Summary

		N	%
Cases	Valid	202	100,0
	Excluded[a]	0	,0
	Total	202	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,893	5

Scale: Purchase intention Cereal

Case Processing Summary

		N	%
Cases	Valid	202	100,0
	Excluded[a]	0	,0
	Total	202	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,937	5

Cronbach's alpha coefficient product familiarity for chips and cereal:

Scale: Familiarity Chips

Case Processing Summary

		N	%
Cases	Valid	202	100,0
	Excluded[a]	0	,0
	Total	202	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,871	3

Scale: Familiarity Cereal

Case Processing Summary

		N	%
Cases	Valid	202	100,0
	Excluded[a]	0	,0
	Total	202	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,826	3

Cronbach's alpha coefficient attitude private brands:

Scale: Attitude towards private brands

Case Processing Summary

		N	%
Cases	Valid	202	100,0
	Excluded[a]	0	,0
	Total	202	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,816	6

4: Output hypothesis 1

Mixed linear model: main effect

Estimated Marginal Means

0 = afwezig 1 = aanwezig[a]

0 = afwezig 1 = aanwezig	Mean	Std. Error	df	95% Confidence Interval	
				Lower Bound	Upper Bound
,00	4,049	,105	404	3,842	4,255
1,00	3,998	,109	404	3,783	4,213

a. Dependent Variable: Purchase Intention.

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	3,998	,109	404	36,524	<,001	3,783	4,213
[Presence_V_label_recoded=,00]	,051	,152	404	,334	,739	-,248	,349
[Presence_V_label_recoded=1,00]	0[b]	0	.	.	.	.	.

a. Dependent Variable: Purchase Intention.

b. This parameter is set to zero because it is redundant.

Mixed linear model: main effect with product type interaction

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	3,454	,144	404	23,915	<,001	3,170	3,738
[Presence_V_label_recoded=,00]	,042	,200	404	,208	,835	-,352	,435
[Presence_V_label_recoded=1,00]	0[b]	0	.	.	.	.	.
[Chips_or_Cereal=,00]	1,089	,204	404	5,330	<,001	,687	1,490
[Chips_or_Cereal=1,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=,00] * [Chips_or_Cereal=,00]	,018	,283	404,000	,064	,949	-,539	,575
[Presence_V_label_recoded=,00] * [Chips_or_Cereal=1,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=1,00] * [Chips_or_Cereal=,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=1,00] * [Chips_or_Cereal=1,00]	0[b]	0	.	.	.	.	.

a. Dependent Variable: Purchase Intention.

b. This parameter is set to zero because it is redundant.

3. 0 = afwezig 1 = aanwezig * chips = 0 cereal = 1[a]

0 = afwezig 1 = aanwezig	chips = 0 cereal = 1	Mean	Std. Error	df	95% Confidence Interval	
					Lower Bound	Upper Bound
,00	,00	4,602	,139	404	4,329	4,875
	1,00	3,495	,139	404	3,222	3,768
1,00	,00	4,542	,144	404	4,258	4,826
	1,00	3,454	,144	404	3,170	3,738

a. Dependent Variable: Purchase Intention.

Mixed linear model: main effect with covariates

Estimated Marginal Means

0 = afwezig 1 = aanwezig[a]

0 = afwezig 1 = aanwezig	Mean	Std. Error	df	95% Confidence Interval	
				Lower Bound	Upper Bound
,00	3,972[b]	,065	404	3,844	4,100
1,00	4,081[b]	,068	404	3,948	4,214

a. Dependent Variable: Purchase Intention.

b. Covariates appearing in the model are evaluated at the following values: Hoeveel honger heeft u op dit moment? - Helemaal geen honger:Veel honger = 3,10, Attitude towards private brands = 4,9381, Familiarity = 3,6650.

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	,712	,297	404	2,399	,017	,129	1,295
[Presence_V_label_recoded=,00]	-,110	,094	404	-1,164	,245	-,295	,075
[Presence_V_label_recoded=1,00]	0[b]	0	.	.	.	.	.
Appetite_1	,044	,026	404,000	1,706	,089	-,007	,094
Attitude_privatebrands	,086	,056	404,000	1,535	,126	-,024	,195
Familiarity	,767	,031	404	24,522	<,001	,705	,828

a. Dependent Variable: Purchase Intention.

b. This parameter is set to zero because it is redundant.

5: Output hypothesis 2

Multilevel mediation tests:

```
**************************************************************************
Outcome: Health_c

Model Summary
       R      R-sq       F       df1       df2         p
    ,0594     ,0035     ,7077    1,0000   200,0000     ,4012

Model
            coeff       se         t         p
constant    1,5180     ,1699     8,9329     ,0000
Presence     ,0915     ,1088      ,8412     ,4012

**************************************************************************
Outcome: Sustaina

Model Summary
       R      R-sq       F       df1       df2         p
    ,1361     ,0185    3,7731    1,0000   200,0000     ,0535

Model
            coeff       se         t         p
constant    2,3206     ,2401     9,6669     ,0000
Presence     ,2985     ,1537     1,9425     ,0535

**************************************************************************
Outcome: Taste_ch

Model Summary
       R      R-sq       F       df1       df2         p
    ,1360     ,0185    3,7702    1,0000   200,0000     ,0536

Model
            coeff       se         t         p
constant    5,9566     ,2563    23,2441     ,0000
Presence    -,3185     ,1640    -1,9417     ,0536
```

```
**************************************************************************
Outcome: PI_chips

Model Summary
       R       R-sq        F        df1        df2          p
    ,6766     ,4578    41,5798     4,0000   197,0000      ,0000

Model
            coeff         se          t          p
constant    -,1093      ,4292     -,2546      ,7993
Health_c     ,1256      ,0962     1,3051      ,1934
Sustaina     ,1592      ,0682     2,3343      ,0206
Taste_ch     ,7069      ,0576    12,2751      ,0000
Presence     ,1065      ,1360      ,7830      ,4345

************************ TOTAL EFFECT MODEL ****************************
Outcome: PI_chips

Model Summary
       R       R-sq        F        df1        df2          p
    ,0235     ,0006     ,1101     1,0000   200,0000      ,7404

Model
            coeff         se          t          p
constant    4,6615      ,2808    16,6008      ,0000
Presence    -,0596      ,1797     -,3318      ,7404

***************** TOTAL, DIRECT, AND INDIRECT EFFECTS ********************

Total effect of X on Y
    Effect         SE          t          p
    -,0596      ,1797     -,3318      ,7404

Direct effect of X on Y
    Effect         SE          t          p
     ,1065      ,1360      ,7830      ,4345

Indirect effect of X on Y
           Effect    Boot SE   BootLLCI   BootULCI
TOTAL      -,1661      ,1258     -,4164      ,0794
Health_c    ,0115      ,0183     -,0088      ,0755
Sustaina    ,0475      ,0346      ,0033      ,1480
Taste_ch    -,2252      ,1164     -,4625     -,0021

******************** ANALYSIS NOTES AND WARNINGS *************************

Number of bootstrap samples for bias corrected bootstrap confidence intervals:
    5000

Level of confidence for all confidence intervals in output:
   95,00

------ END MATRIX -----
```

6: Output hypothesis 3

Mixed linear model: interaction effect

Fixed Effects

Type III Tests of Fixed Effects[a]

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	404	2810,444	<,001
Presence_V_label_recoded	1	404	,077	,782
PB_or_NB	1	404	1,050	,306
Presence_V_label_recoded * PB_or_NB	1	404,000	,277	,599

a. Dependent Variable: Purchase Intention.

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Intercept	4,122	,159	404,000	25,972	<,001	3,810	4,434
[Presence_V_label_recoded=,00]	-,038	,214	404	-,177	,860	-,459	,383
[Presence_V_label_recoded=1,00]	0[b]	0	.	.	.	.	.
[PB_or_NB=,00]	-,235	,219	404	-1,076	,283	-,666	,195
[PB_or_NB=1,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=,00] * [PB_or_NB=,00]	,160	,304	404,000	,526	,599	-,437	,757
[Presence_V_label_recoded=,00] * [PB_or_NB=1,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=1,00] * [PB_or_NB=,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=1,00] * [PB_or_NB=1,00]	0[b]	0	.	.	.	.	.

a. Dependent Variable: Purchase Intention.

b. This parameter is set to zero because it is redundant.

3. 0 = afwezig 1 = aanwezig * Private Brand = 0 National Brand = 1[a]

0 = afwezig 1 = aanwezig	Private Brand = 0 National Brand = 1	Mean	Std. Error	df	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
,00	,00	4,008	,154	404	3,706	4,310
	1,00	4,084	,144	404	3,801	4,367
1,00	,00	3,886	,151	404	3,590	4,183
	1,00	4,122	,159	404,000	3,810	4,434

a. Dependent Variable: Purchase Intention.

Mixed linear model: interaction effect with covariates

Fixed Effects

Type III Tests of Fixed Effects[a]

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	404,000	4,736	,030
Presence_V_label_recoded	1	404,000	1,175	,279
PB_or_NB	1	404	3,058	,081
Presence_V_label_recoded * PB_or_NB	1	404	,000	,998
Appetite_1	1	404,000	2,530	,112
Attitude_privatebrands	1	404,000	2,358	,125
Familiarity	1	404	602,931	<,001

a. Dependent Variable: Purchase Intention.

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Intercept	,607	,304	404	1,996	,047	,009	1,204
[Presence_V_label_recoded=,00]	-,102	,133	404,000	-,770	,442	-,363	,159
[Presence_V_label_recoded=1,00]	0[b]	0	.	.	.	.	.
[PB_or_NB=,00]	,165	,138	404,000	1,201	,230	-,105	,436
[PB_or_NB=1,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=,00] * [PB_or_NB=,00]	,000	,190	404	,002	,998	-,373	,374
[Presence_V_label_recoded=,00] * [PB_or_NB=1,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=1,00] * [PB_or_NB=,00]	0[b]	0	.	.	.	.	.
[Presence_V_label_recoded=1,00] * [PB_or_NB=1,00]	0[b]	0	.	.	.	.	.
Appetite_1	,041	,026	404,000	1,591	,112	-,010	,092
Attitude_privatebrands	,085	,056	404,000	1,536	,125	-,024	,195
Familiarity	,774	,032	404	24,555	<,001	,712	,836

a. Dependent Variable: Purchase Intention.

b. This parameter is set to zero because it is redundant.

3. 0 = afwezig 1 = aanwezig * Private Brand = 0 National Brand = 1[a]

0 = afwezig 1 = aanwezig	Private Brand = 0 National Brand = 1	Mean	Std. Error	df	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
,00	,00	4,059[b]	,095	404	3,872	4,246
	1,00	3,893[b]	,089	404	3,718	4,068
1,00	,00	4,161[b]	,094	404	3,975	4,346
	1,00	3,995[b]	,098	404,000	3,802	4,189

a. Dependent Variable: Purchase Intention.

b. Covariates appearing in the model are evaluated at the following values: Hoeveel honger heeft u op dit moment? - Helemaal geen honger:Veel honger = 3,10, Attitude towards private brands = 4,9381, Familiarity = 3,6650.