Motivators and barriers of bulk food store customers
An examination through the application of the Theory of Planned Behavior.

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Abstract

The pollution of the oceans through plastics has received global wide media coverage over the last years. Also, micro-plastics in ground water and even in fish had been detected, which leads to increased awareness of waste-reduction. Since the beginning of this decade, more bulk food stores open in Germany’s cities and provide an alternative to conventional, packaged products.

Plastics and so-called micro-plastics have been found in the bodies of seabirds and in fish. There is an imminent danger of plastics ending up in the human bodies while it travels up the food chain.

In order to reduce their impact on the environment, an increasing number of customers engages in the zero-waste movement. To reduce single-use plastics, customers can shop their groceries in bulk-food stores, which allow shopping loose goods from large containers in contrast to individually packed items in regular supermarkets. Customers can bring their own reusable packaging to buy mostly dry foods such as vegetables, pasta, nuts, grains but also some liquids such as oil, honey etc. The stores often also include a non-food section where additional consumable products can be bought.

The paper identified a research gap in regards the store concept of bulk-stores which is an emerging trend in Germany since 2014.

This thesis analyzes the motivators of bulk-food store shoppers in Germany based on an adapted version of the Theory of Planned Behavior by Izek Ajzen. The framework thereby builds upon research conducted by Maloney et al. (2014) who tested motivators of organic clothing customers.

The research identified a significant positive influence of the Personal Norm and a significant negative correlation between Perceived Expensiveness on the Purchase Intention of the customers.

The main barriers for bulk food shoppers were identified as the distance to the next store, the product portfolio and perceived high prices. Other issues have been discovered but were – in comparison – only of secondary relevance.

The paper contributes to closing the gap in literature between bulk foods and other sustainability-related topics, such as organic products and their production. Furthermore, it provides a foundation for future research on the topic.

Keywords: Bulk foods, Zero waste, Packaging Free, Theory of Planned Behavior, TPB, Unverpackt, Unverpackt Laden
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Furthermore, we would like to thank the respondents of our survey. Although we were hoping for active participation, we were surprised how much feedback we got within only seven days, during which our questionnaire was open. Some respondents even contacted us through Facebook and offered to answer additional questions in person. That showed us, how passionate the clients of the stores are about making an impact and to change the current status quo.

Finally, we would like to thank our friends and families for the support we received in the form of providing additional input and serving as test candidates for our survey.

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Niklas Wolf & Julian Valerius
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<tr>
<td>mt</td>
<td>Million tonnes</td>
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<tr>
<td>Sig.</td>
<td>Significance-Level</td>
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<td>TPB</td>
<td>Theory of Planned Behavior</td>
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<tr>
<td>Std. Error</td>
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1 Introductory Chapter

This first chapter will explain why an increasing demand for shopping bulk foods is a significant movement, that should be further researched.

Not only in Germany but in other European countries as well, more and more customers are interested in avoiding product packaging, leading to a growing number of bulk food shops (Bezrogova et al., n.d). Even though many studies deal with questions regarding sustainability, scholars focus more on organic production than on sustainable packaging of the product, which is why additional research on this matter is required. In order to give an overview of the subject, within the following subchapters, the subject choice and its importance will be explained. Afterward, the reader will be introduced to the concept of bulk food stores which offers a solution to the identified problems. The section “problem background and research gaps”, will lead us to the definition of the research question and the purpose of our research.

1.1 Problem Background

Alexander Parkes discovered the first plastic in 1862. After new ways of processing and a commercial application had been introduced, plastic reached the mass market after WW2. Soon after, in the 1950s, it was used in consumer packaging. (Plastic Industry Association, n.d.) With a world production of 15 mt (million metric tons) of petrol-based plastics in 1964, the production in 2014 increased to 311 mt in 2014 (Ellen Macarthur Foundation, p. 25). Notably, from early on, it was known, that these plastic products were not biodegradable.

In 2013, approximately 78 mt were used as packaging materials of which only 14% were collected for recycling. 2% of the collected amount was recycled to its initial form (closed-loop recycling), 8% were downgraded (used for lower-value applications) and 4% were accounted for process losses. Another 14% is incinerated and used as energy recovery. 40% ended up in landfills, and 32% were leaked in the environment (sea or land) (Ellen Macarthur Foundation, p. 27).

In addition to the previously described issue, with the vast amounts of plastic, a comparably young topic became imminent. The occurrence of small plastic fragments in the oceans first was described in an article by Thompson et al. (2004). The problems formulated in this article on so-called microplastics shifted the interest of researchers. In the last years, the topic got significant media coverage, and it was debated in the political discussion.

Due to this public discussion, an increase in awareness of these problems due to plastics in our environment arose. Latest reports state that there are more non-biodegradable microplastics (plastic particles of less than 5 mm) in the ocean than fish (Gibbens, 2015). Also, it has been proven, that these tiny plastic particles cannot be secreted by any creature, but lead to small amounts of plastic being absorbed (Wieczorek et al., 2018). With these and/or similar information, the environmental concerns of consumers are partly turning into health concerns as well. It is this health aspect that might turn out a
paradigm shift for many consumers. As Arvola et al. (2008, p. 443) explain “Numerous consumer studies in Europe and USA have shown that choices to purchase organic food are motivated by beliefs about healthiness and good taste of these products as well as by beliefs about benefits for the environment and the welfare of production animals”.

Additional to this movement towards the consumption of organic products and the research within this field, a somewhat recent trend came up: the zero-waste movement. Followers of the movement try to reduce their ecological footprint by reducing their plastic consumption. Since this demand is growing, it is also met by merchants, who adapt their offer. While the EU plans to ban single-use plastic products, such as straws, forks or cotton swabs from 2021 (Fischer, 2018), shop owners implementing the zero-waste concept in its strongest form go a lot further, banning all kinds of single-use packaging from their shops. Customers, on the other hand, bring their own containers, boxes or glasses in order to fill it with the exact quantity of the respective product they want to purchase.

This concept targets environmental sustainability from a different angle since its main focus lies on avoiding waste rather than production processes.

1.2 The concept of bulk food stores

To create a common understanding of “bulk store”, the following introduction to the concept of bulk foods, is explained based on the store “Eddie’s-Verpackungsfrei einkaufen” in Mannheim, Germany, which literally translates to “Eddie’s packaging-free shopping”. In the initial phase of our research, several bulk food stores were visited to acquire a comprehension for the owners’ and the customers’ motivation to buy in this type of stores.

The first store “gramm.genau” in Frankfurt, Germany, evolved from a bistro which sells unpackaged groceries in order to reduce the effects arising from a fluctuating demand and thereby to reduce the waste of food from the core business. “Eddie’s” in Mannheim, Germany, opened in 2018 and was founded with the idea of selling unpackaged food. While the first type of store only has a limited range of products, the second has a significantly larger assortment and tries to address the needs of general grocery shoppers. This kind of stand-alone shop is how we define the bulk food store for our research.

There are currently (December 2018) a total of approximately 70 bulk-stores in Germany (Bezrogova et al., n.d.). After some pioneers (e.g. Original Unverpackt in Berlin, founded in 2014), most of them opened in the years after 2016.

1.2.1 Assortment

The visited shops’ assortment ranges from seasonable fruits and vegetables from regional farmers over bread from a local bakery to classic bulk foods such as cereals, pasta, candy, coffee, spices, etc. which are stored in large dispensers or containers, so-called bulk food bins (Johnson et al., 1985). The customers fill the desired quantities into the glasses or boxes they bring with them. Apart from food, the shops also offer products which should help the customers to reduce waste and to eliminate the use of single-use goods. Examples are guidebooks on how to reduce waste, reusable straws made from metal, reusable
razors, and several types of cosmetics. Furthermore, the assortment contains basic drugstore products such as detergents and hygiene products.\footnote{Gramm.genau, the shop in Frankfurt, offers a delivery service within the city limits of Frankfurt. The product portfolio is accessible via: https://shop.grammgenau.de/collections/lebensmittel}

For the moment, the food assortment consists of mostly organic products. The owner of the store is continuously adapting the portfolio according to the demand of the customers. Furthermore, he considers selling conventionally produced food products as well, if the customers indicated a demand (e.g., because they consider ecologically produced food as too expensive). During an interview, he explained that the regular customers, as of now, mostly are supporters of ecological farming and that the interest of customers shopping ecological food and unpackaged food are widely overlapping.

In contrast to conventional supermarkets, which usually provide perishable goods in excess quantity until closure, the store tries to reduce food waste by using a conservative estimation of the demand. Therefore, goods such as bread, fruits, and vegetables might be sold out.

### 1.2.2 Service concept

The concept can be described as an assisted self-service. First-time users get an introduction to the processes and are welcomed to ask further questions. Experienced customers can shop autonomously until they go to the checkout which is assisted. To withdraw some liquids (e.g., oil, honey, etc.), all customers need to ask for assistance, due to minimizing problematic hygiene issues or product losses due to spilling, etc.

Customers usually bring their own containers although the store also offers reusable packages for sale. Before filling the container, it is weighted, and the weight of the empty packaging is written on the container.

At the check-out, the container is weighed again, and the quantity is calculated by subtracting the weight of the empty container.

### 1.2.3 Limitations of the store concept

Most of the goods are stored in dispensers, which replaced the formerly rather common bulk bins, to meet hygiene regulations. Regulations are one of the barriers which hinder the stores from offering the whole product range of traditional supermarkets (e.g., dairy-products and meat are missing). Also, the low quantities can make it unattractive for suppliers to deliver to the stores at all, or to adapt their wholesale containers to meet the particular requirements of the stores.

The processes differ significantly from the processes at traditional supermarkets. The containers need to be weighted, and more personal assistance is required to explain the concept to the customers. Therefore, some additional steps are required, such as weighting the containers before the purchase, which the customers can do themselves. Leaving those steps to the customers can be error-prone since especially new customers might forget to weight the container before filling it, or there can be errors during the measurement or...
when entering the net-weigh of the container at the checkout process. As the checkout is assisted and takes longer than in conventional supermarkets, more cashiers are required to serve the same number of customers.

Apart from regulations regarding hygiene, concerns regarding the sanity were also mentioned by the customers we surveyed. Furthermore, they expressed their doubts because they feel that the process is too complicated or too time-consuming.

Although well-known brands produce some of the food, the labels only indicate the origin of the food but not the producer (this was the case in the stores consulted as part of the research for this thesis). Therefore, it is not possible to build upon existing marketing efforts of well-known brands. Instead, the concept of the store itself needs to be promoted and the quality of the products which can be assessed by the customer before making the purchase.

As the price of the food is usually calculated by weight, which is indicated either as per kilo or per 100 grams, some customers feel unease about the pricing, since the amount that needs to be paid is unknown until the clients proceed to the cash desk.

### 1.2.4 Unique selling points

The stores promote the individualization of the quantity bought. Not only can customers buy small quantities, which can reduce food waste, but also the store allows the customers to buy the products without an additional packaging and thereby it addresses their wish for a zero-waste lifestyle or the weaker form of a waste reduction.

Nonetheless, the visited stores did not only pay attention to the packaging of the products the customers purchase, but also to the packaging when purchasing the products themselves. The owners aimed at reducing the overall amount of packaging, by purchasing comparably big pack sizes. Because plastic was banned and is not considered to be an acceptable material for packaging, most goods came wrapped in paper, filled into glasses or re-usable metal containers. Glass-, tins, and metal containers were often returnable through a deposit system.

### 1.3 Research Gaps

The concept of bulk foods is rather new, and, in comparison to other sustainability topics, such as, e.g. the market for organic food, there is a lack of academic literature in this field. When screening the library tool of Umeå University for the expression “bulk foods”, only 386 articles and 49 dissertations were found, which have been published between 1980 and 1999. In comparison, since the year 2000, 563 articles and 119 dissertations were registered. When looking for the key term “organic food” more than 3,600 dissertations and almost 18,000 articles were found. Alone, when comparing these numbers, it becomes evident that research on bulk foods needs to catch up in order to have a holistic overview of those two – partly very similar – topics.

As described, research on bulk foods needs to catch up with research on organic food issues. Since both fields – organic and packaging-free food – have a significant amount of similar challenges, barriers, impacts, and many more aspects, most studies on organic
food seem to be transferable to bulk foods. Even though both topics are dealing with sustainability, the main focus of researchers seems to remain on organic and the respective topics.

Due to this imbalance between the two topics, and in order to contribute to closing the literature gap, it was decided to transfer an approach of research conducted on a topic dealing with an organic production process and to adapt it in a way so that it could be applied on bulk foods. Both articles therefore use the Theory of Planned Behavior, a concept introduced by Izec Ajzen (1991). Besides, this research aims at answering a question that provides a real, and graspable input for researchers and practitioners. Thus, it was decided to focus on the barriers and motivations of (potential) customers interested in alternative sustainable options when it comes to environmentally friendly consumption means.

1.4 Research Question

After the research gap – contributing to closing the gap between organic products and bulk foods – has been identified, it has been decided to achieve this goal, by building upon previous work in the field of sustainability and adapting it towards bulk foods and the trend of packaging avoidance. First of all, it has been decided to focus on the customer perspective. So far, many researchers have used the Theory of Planned Behavior (TPB) to examine the customers purchasing behavior when it comes to organic products (Arvola et al., 2008) also organic apparel has been examined (Maloney et al., 2014, Hustvedt & Dickson, 2009). Since Maloney et al. stressed the importance of the factor of awareness it has been decided to build upon their work, formulating the research question as follows:

*What motivations and barriers are bulk food consumers facing as examined through the application of the Theory of planned behavior?*

1.5 Research Purpose

The primary goal and research purpose is to extract and illuminate the motivations and barriers of bulk foods customers, by applying the Theory of Planned behavior by Icek Ajzen, which will be explained in the literature review.

With this purpose, we hope to contribute to closing the gap in literature caused by the imbalance within the field of sustainability. Currently, scholars and researchers focus rather on organic products than including bulk foods – as an alternative means towards an environmentally friendly production. By adapting a previous study in order to answer the research question, we are certain to complement existing knowledge by comparing it to previous results as well as creating new knowledge and, therefore, a new basis for future research.

Furthermore, we are confident that this work can help those being involved in the bulk food movement, such as shop owners, volunteers, and sales personnel to understand their customers better. Through the results of this study, bulk food shops may profit from an
improved understanding of customer needs, which in turn can lead to an improved product portfolio and better marketing measures. Evaluating the impact of the thesis from a meta-perspective we hope that this work can contribute to strengthening the awareness regarding the concept, which in turn can result in more sustainable consumer behavior.

The thesis should also stress the importance of extending the currently limited view on sustainability in the eyes of scholars. It would be desirable if more scholars, would focus on topics regarding alternative approaches to established ways to create a stronger link between research, economy and the environment.
2 Theoretical Framework

The theoretical framework as described in this chapter will provide background information that is relevant for understanding the context of this study. Therefore, the subjects reach from an overview on the bulk food concept, to a summary on sustainability to a description on motivation theories including the Theory of Planned Behavior, which is the foundation of this study.

2.1 Bulk foods / Zero-Waste / etc.

In 1952 Heimann defined bulk foods as follows: “Bulk foods are usually cheaper than packaged foods. It is easier to check the quality of the food. Nevertheless, it is being used less each year due to health restrictions and cheaper methods of packaging. Examples: potatoes, nuts, and fresh foods.” (p. 39).

Today, shopping bulk foods has become rather rare, and it not necessarily cheaper than conventional food. Still very accurate is, that the consumers can check the food they are going to buy, as well as the barriers regarding hygienic regulations and health restrictions.

Even though the same products come into mind when thinking of typical products one can buy at a bulk food shop, challenges such as cheap packaging and regulations for shop owners still play a role, “bulk foods” or rather the concept called bulk foods, has a lot more to it, than just potatoes or nuts without packaging. Today’s concepts are going beyond simple economic advantages and follow an ideology, as it will be explained in the following subchapters.

2.1.1 Bulk foods – a new store concept

A bulk food store tries to exclude all single-use packaging types. These stores offer all goods “unwrapped” or if not possible in reusable (deposit-) containers. Customers can fill or bottle the demanded quantity into their own containers, which allows them to finally purchase plastic-free. Whether pasta, rice, legumes, coffee, candy, soap or (laundry) detergent. In such a store one can buy almost everything in bulk (Flatley, 2018).

The different products mentioned by Flatley have in common that the food products have a long shelf-life, thus lasting a long time until they reach their respective expiry date. These products are stored in so-called “bulk food bins” (Johnson et al., 1985, p. 115).

Liquids, such as honey or oil are often provided in smaller tanks or containers. Also, non-food goods such as laundry detergent, liquid soap or shower gels are provided in similar containers.

As described before, the customers bring their own containers to the shops and purchase only the precise amount they initially wanted. The consumers’ primary goal is to avoid plastics and thereby minimize their organic footprint.
2.1.2 Motivations and barriers

When it comes to the reasons for bulk foods, or in other words the motivations for customers, Johnson et al. (1985, p.114) name three main factors:

1. **Exact quantities**
   Customers have the chance to choose the precise quantity they want to purchase.

2. **High-quality food**
   The products can hardly be marketed, since there are no brands, designs or packaging influencing the customers. Therefore, the products need to have good quality in order to convince the customers.

3. **Seeing the goods**
   The products are filled into different containers by the customer him-/herself. This procedure may turn out to be an advantage since the customer might put more trust in the product if he/she can see it instead of purchasing the products “blindly”.

The disadvantages or aspects hindering or demotivating potential customers, and might even making them non-purchasers have been defined by Johnson et al. as well:

1. **Sanitation**
   One barrier may be that (non-)consumers are worried about the sanitation. It turned out that especially two issues are problematic: “Tasting occurred in 15 percent of the interactions and hand use occurred in 20 percent of the interactions” (Johnson et al., 1985, p. 116).

2. **Lack of awareness**
   Many may not know where to find a bulk store, or at least about the options of buying bulk in some “regular” supermarkets.

3. **Erroneous beliefs**
   Last but not least, potential customers might have an incorrect perception of the products or the portfolio in bulk food stores. That might be due to their impression of the quality or the assumption that the demanded product is not available in the stores close by.

Today, shopping bulk offers additional benefits to the customer. The idea of sustainability and its importance in advertising strengthened significantly since the article by Johnson et al. was published in 1985. Therefore, offering the customers the possibility to reduce their impact, can be an additional benefit for the customers.
2.2 Sustainability

In order to answer the research question, it is essential to understand the core topics that are necessary to grasp in order to understand the concept of bulk foods. Before describing the backgrounds of the zero-waste movement and the idea behind bulk food shops, an overview of sustainability will be provided.

2.2.1 Definition of sustainability

One of the most quoted definitions when it comes to sustainability has been formulated by the UN: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (UN, 1987).

A little more context-related is the definition provided by the Cambridge dictionary: “the quality of causing little or no damage to the environment and therefore able to continue for a long time”, which is very well aligned with the goals of bulk food customers. Also, it is a lot clearer than the definition of the UN, since it explicitly names “damaging” instead of “compromising”.

On the one hand one might argue, that both, but especially the UN’s definition, are too broad. On the other hand though, they sum up, that sustainability is about a conscious use of resources, giving future generations the chance to take over an intact planet including resources, environment and, i.e. climate.

For the context of this study, for example, it could mean that plastic should be avoided as much as possible since it is not biodegradable, therefore having a permanent impact on the environment. As described before, only 2% of the collected plastics can be recycled in a closed loop (Ellen Macarthur Foundation, p. 27). In that case, the 98% of resources, not being recycled in a closed loop will not be available for future generations – and will therefore “compromise the[ir] abilities” (UN, 1987).

2.2.2 Three fields of sustainability

When it comes to sustainability in a business context, the visualization by Naslund and Williamson describing sustainable supply chains, provides a good overview of the three different core areas of sustainability: Social performance, economic performance, and environmental performance (Figure 1).
Not only, is it relevant to separate between the different fields of sustainability, but also to understand that a transaction at a shop is, in fact, the last link within the supply chain. Even if the goods were delivered from a local producer to the market, where the final customer would then buy them, one already talks of a supply chain with three links.

From the customers’ perspective, a bulk food store offers mostly options within the area of “environmental performance” and “economic performance”. While the “environmental performance” is achieved by avoiding plastics, and ideally other packings as well, “economic performance” is ensured due to customers buying precisely the quantities they need. “Social performance” can be fulfilled by supporting smaller local stores and by buying fair-trade labeled products.

From the shop owners’ perspective, a supply chain (and therefore including the transactions in a store as well) can only succeed sustainably if activities in all three fields take place. Since environmental performance is the key to the store’s concept, it is crucial to have a strong performance here. Every business owner, in the long term, needs to be profitable. Therefore, an absolute minimum of economic performance is required, although the goals of bulk stores usually are more diversified than mere profit maximization. Literature, e.g. on social entrepreneurship describes various goals a business owner might pursue which go beyond mere financial profit. Burkett (n.d.), among other drivers, lists impact sustainability which can be reached by reducing the impact costs of the business by reaching sustainability goals.

As the figure above shows, the tag “best” is only achievable in the field of “Sustainability” which represents the overlapping area between all three fields: “Environmental performance”, “economic performance” and “social performance”.

Figure 1: Sustainable Supply Chain Management as presented by Naslund & Williamson, 2010
Obviously, within the business context, it is significant to take efforts within the field of social performance as well. The social component makes a store trustworthy and therefore directly contributes to sustainability. Additionally, to the three performance-factors, Carter and Rogers (2008) included the aspects of “organizational culture”, “transparency”, “risk management” and “strategy”.

These four additional factors add up to a framework, that does not only include internal factors, such as the ingrained organizational culture, but also external aspects such as the stakeholder engagement. Altogether, the scheme as displayed above provides an overview of the different elements of sustainability in a business context.

As an alternative description, for the overlapping areas Gemmerich and Arnold (2007) re-named the areas between the different “performance”-factors. While the area between "social" and "environmental" performance is defined as "bearable" and "social" and "economic" performance as "equitable", it is the overlapping area between the "economic" and "environmental" performance as "viable". Especially, since customers’ main advantages lie in the areas of environmental and economic performance, the performance is at least viable and, therefore, assuring the existence of a shop. The motivations of consumers, however, are explained in the following sub-chapter.

### 2.3 Motivation theories

“To be motivated means to be moved to do something” (Ryan and Deci, 2000, p. 54). With this broad definition of motivation, the academic literature distinguishes between different types of motivation (Intrinsic and extrinsic types of motivation). While the intrinsic motivation is seen as the natural human propensity to learn and assimilate, the extrinsic motivation is seen as a broader concept, summarizing motivators such as external control or true self-regulation (Ryan and Deci, 2000, p.54). Therefore, external motivators can have a binding character or be self-endorsed by the individual. The literature furthermore argues that not only the level of motivation of each individual differs, but also the orientation of motivation, and thereby the driver or type of the motivation. The motivation thereby reflects the attitudes and goals of the individual (Ryan and Deci, 2000, p.54) This distinction between internal and external motivation is widely accepted in the literature.

This concept has been used in different streams of science such as psychology, business administration, etc. Within business administration, it is used in HR to analyze motivators of employees, in financial controlling to analyze false incentives for management remuneration schemes but also to analyze the behavior of potential clients and for other applications.

To further analyze and distinguish the motivators, the theory of planned behavior by Ajzen has been applied by scholars. In the following, there will be an introduction to the model and an in-depth literature review presenting the ongoing debate of the theory and its application for the identification of the motivators when it comes to the buying decisions of customers.
2.3.1 Introduction of Ajzen’s Theory of Planned Behavior

When looking at motivation theories, there is one model that is quoted and discussed very frequently: Ajzen’s Theory of Planned Behavior. In this theory, the central factor is the intention. “Intentions are assumed to capture the motivational factors that influence a behavior” (Ajzen, 1991, p. 181) Therefore, the more motivational factors can be captured, the higher the intention will be, leading to a more likely, planned behavior.

However, the probability of the behavior can be directly limited by outside factors and limitations. Thus, perceived behavioral control influences both, intention and behavior. Besides, there are two further factors with an impact on intention: “attitude toward the behavior” and “subjective norm”. The first, attitude toward the behavior, “refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question”, while the latter refers to “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188). The basic conception of Ajzen’s model is visualized in Figure 2.

![Figure 2. Theory of planned behavior as presented by Icek Ajzen (1991)](image)

Other researchers, however, argue that this model is too broad, or some aspects are interrelated too much. Arvola et al. (2008, p. 451) argue that subjective norms and positive moral attitude are tightly connected to each other.

Also, the factor of attitude toward the behavior is not easy to be defined appropriately, since it might include feelings. In their work Arvola et al. explain that they focus on “positive, self-rewarding feelings” (2008, p. 451) instead of other, negative feelings as other researchers might do. Also, other factors, such as a previous behavior or a prior experience might play a role. Even though these repetitions might lead back to self-rewarding feelings as mentioned by Arvola et al. (2008), Thøgersen and Ölander stress the power of repetitive actions, which again are likely to be based on rewarding consequences; „However, if a consumer for some reason starts to buy an organic product and experiences rewarding consequences, he or she may develop a new routine. Without rewarding consequences, it is likely that he or she will return quickly to the old, established buying pattern “(2006, p. 1761).
The following table provides an overview of the main variables in Ajzen’s TPB model and their respective counterparts in the adaption by Maloney et al. (2014).

<table>
<thead>
<tr>
<th>Construct of the model</th>
<th>Explanation</th>
<th>Construct of the model</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajzen (Ajzen, 1991)</td>
<td></td>
<td>Maloney (Maloney et al., 2014)</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td></td>
<td>Awareness</td>
<td>According to Tanner and Kast (2003, cited in Maloney et. al 2013) awareness can serve as a predictor for green purchasing behavior</td>
</tr>
<tr>
<td>Attitude towards the behavior</td>
<td>“A favorable or unfavorable evaluation of the behavior” (Ajzen, Brown and Carvajal, 2004)</td>
<td>Attitude towards the behavior</td>
<td>The person’s willingness to adapt the behavior.</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>“Perceived Social Pressure to perform or not perform the behavior” (Ajzen, Brown and Carvajal, 2004)</td>
<td>Personal Norm</td>
<td>How a person thinks about the own behavior. How should you act?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subjective Norm</td>
<td>External social pressure e.g. what does my family or friends think about the behavior</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>“People’s perception of the ease or difficulty of performing the behavior of interest” (Ajzen, 1991) or “The expectancy of success” (Atkinson 1964 as cited in Ajzen, 1991 )</td>
<td>Perceived Expensiveness</td>
<td>Consumers’ willingness to pay a premium for organic products in contrast to conventional products.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived Consumer Effectiveness</td>
<td>Feeling to be able to change something, respectively to solve a problem by performing an action</td>
</tr>
<tr>
<td>Intentions</td>
<td>“Intention is assumed to be the direct antecedent of the behavior”(Ajzen, Brown and Carvajal, 2004, p. 1110)</td>
<td>Purchase Intention</td>
<td>The intention of performing the behavior (purchase)</td>
</tr>
<tr>
<td>Behavior</td>
<td></td>
<td>Behavior</td>
<td>Actual behavior of the person. This is not part of our study.</td>
</tr>
</tbody>
</table>

Table 1: Overview of the different constructs in Maloney et al.’s adaption of Ajzen’s TPB model

For this thesis, it was decided to adapt the approach of Maloney, since it was used in a related field (organic apparel vs. sustainable packaging), furthermore, it includes the constructs and the related items, which allow a replication of the setting of their study.
2.3.2 Literature review Ajzen

Ajzen’s theory of planned behavior (TPB) is widely debated in the academic literature. He discussed the theory in different articles which were cited intensively. For example, the (1985) article “From intentions to actions: A theory of planned behavior” was cited 24,084 times. The (1991) article “The theory of planned behavior” was referenced 62,406 times. Being in the focus of the academic discussion, there are also researchers criticizing the theory and its practical applicability.

While the research showed, that people often do what they plan, the literature also suggests, that plans do not always work out as planned or that unexpected events lead to a change of plans (Wegner, 2002, p. 19). Wegner (2002, p. 175) furthermore lines out, that people do not necessarily need to have a prior intention when performing specific actions. That can also lead to bias since in retrospective they assume to have had the intention of leading to the action which is monitored while in fact, this was not the case. This effect, described as cognitive dissonance, needs to be kept in mind by researchers trying to link intentions to the behavior while not having a sample showing the intentions before the action is performed.

Thereby, Wegner does not only see limitations in the connection between intention and behavior, but he also criticizes the research design. In his article (2011), Ajzen reflects on critics and comments from other researchers. He admits that the constructs in his model rarely reach reliability of more than 0.75 or 0.8 and that the correlation within the constructs of the theory usually does not exceed 0.6.

A meta-study shows that the model explains between 40% to 50% of the variance in intention and respectively 38% of the variance in behavior (Sutton, 1998, p. 1333). While the values seem rather low, they prove to be reliable when compared to other approaches on the prediction of human behavior.

Ajzen (2011, p. 1115) also admits that the attitudes of persons are not fixed. In fact, they change over time due to intervening events. That can affect behavioral, normative and control beliefs but also subjective norms and the perception of control. Thereby the critical factors of the model underlie a constant change and cannot be seen as stable which reduces the model’s predictive validity. Ajzen, therefore, argues that the research and thereby the predictability of the behavior is most reliable within a relatively short interval after surveying the research group (5 weeks or less). To be reliable over a longer time, the group needs to be monitored regularly.

Kor and Mullan (2011, p. 1210) argue that subjective norm is the weakest predictor of the TPB model. Referencing to Chatzisarantis, Hagger and Smith (2007, p. 952) who argue that this factor of the model does not sufficiently capture the effect of social factors on a person’s attitudes. They argue that the subjective norms consist of pressuring factors on the one hand and non-pressuring factors on the other hand. Those factors are not distinguished in the traditional theory of planned behavior model of Ajzen, and especially the pressuring factors are not a sustainable approach of predicting people’s behavior because they are not incorporated in the person’s own attitudes.

Kor and Mullan (2011) in their research found a low correlation between the intentions and the actual behavior of their research sample. In their article, they analyzed the
sleeping habits of the participants. In his article, Ajzen (2011) argues that the study did not take into account that a change of the habits is only partially in control of the participants. While participants tried to change their habits and try to improve their sleeping pattern, some aspects are out of their control. These are factors which are difficult to control such as “putting distressing thoughts out of their minds” (p. 1115). Therefore, it is necessary that the concept of perceived behavioral control is entirely in control of the participants because it hampers the transmission from intention to the behavior.

Kollmuss and Agyeman (2002) highlight problems arising from a value-action gap. They were researching the divergence between environmental knowledge, environmental attitude, and a pro-environmental behavior. They highlight the strong influence of habits acting as a barrier to conducting environmentally beneficial actions. They furthermore see a lack of consciousness (due to limited knowledge about the problem), a lack of incentives, a lack of possibilities to perform the behavior or a lack of positive feedback, respectively the reception of negative feedback as main barriers. Those barriers can arise along the path as described by Lane and Potter (2007, p. 1087). They explain the transition from values to beliefs, attitudes to intention and finally to the behavior.

2.3.3 How we deal with the critics
Chatzisarantis, Hagger and Smith (2007) base their conclusions on a relatively small sample size of only three applications of the TPB model, whereof only two studies suggest that the construct of subjective norms cannot be statistically proven. In this study, we continue using the traditional model suggested by Ajzen since it has been widely used in behavioral research and is still widely accepted and applied in various streams of research.

2.3.4 Limitations of the TBP
This research is limited by a rather tight time frame. The thesis project is scheduled for a total of 10 weeks. Considering the time required for basic research and the evaluation of the responses, the questionnaire was open for seven days only. That means that there was not sufficient time to do an in depth-analysis to analyze the stability of the attitudes of the participants and in how far they lead to action. Monitoring the sample for a longer time and asking the participants again in the future would be interesting in order to find out in how far the attitudes changed.

The attitudes might be driven by the media coverage raising the awareness regarding pollution-related problems before this research was conducted (December 2018). Changes in variables such as media coverage or potential solutions through biodegradable packages might increase or lower the strength of the variables of Ajzen’s model such as weaker social norms or weaker perceived behavioral control. Also, the person’s own attitude might change. Therefore, this research needs to be seen as a snapshot of the current attitudes. The longer research is conducted, the more reliable are the findings in the long-term although they are still underlying changing general conditions.

Furthermore, our sample consists of 146 respondents, which show a general interest in environmental topics and/or living minimalist lifestyles and thereby trying to reduce waste. The attitudes of the participants of the survey cannot be used for a generalization
and applied to the average grocery shopper of traditional supermarkets, since all of them already show an interest in the zero-waste movement. However, the answers can provide a guideline on how to reach more people interested in zero-waste and to adapt the existing offer accordingly.
3 Methodology

This chapter provides all information on the foundation of this thesis including its research methodology. It elaborates on the approaches as well as the reasons for their applicability within this work. Additionally, it explains how the approach of this thesis matches the research question.

3.1 Theoretical Method

3.1.1 Scientific Method

The Scientific Method part, including its paradigms, explains the "philosophical framework that guides how scientific research should be conducted" (Collis & Hussey, 2003, p.43). Most relevant are the two main frameworks “positivism” and “constructivism”, which many more aspects are directly related to. These two key-frameworks are built upon "people’s philosophies and their assumptions about the world and the nature of knowledge" (Collis & Hussey, 2003, p.43). The following sub-chapters provide an overview of what this work is based upon. The ontological and epistemological perspectives are clarified, and a brief overview of the axiological assumptions is provided. Lastly, each concept’s subchapters include explanations of why these specific aspects are relevant for this thesis and what influences they have on the research. This chapter will close with an overview of both, research approach and design as well as a description of the conducted literature search.

3.1.2 Ontology

"The ontological assumption is concerned with the nature of reality" (Collis & Hussey, 2003, p.47). These assumptions depend on the researcher’s view and understanding of the topic. Positivism is one of the two main paradigms and tends to be rather quantitative, objective and scientific. Interpretivism, however, has been described by Collins and Hussey as tending towards qualitative research. Furthermore, Interpretivists are said to be rather subjective, humanist and focusing on specific Phenomena (2003, p.46).

With these core-differences in mind, it becomes evident that the two paradigms can be seen as counterparts. Comparing both, it is imminent that positivists believe that there is only one measurable reality, which may be analyzed. Their approaches are therefore objective which is the foundation for a quantitative study, such as this one. Interpretivists, which can also be called constructivists (Schwandt, 1994, p.250) have their own sense of reality (Collis & Hussey, 2003, p.47). Thus, with every person or researcher comes a different perspective, making this approach most relevant for a subjective study.

3.1.3 Epistemology

Collis and Hussey defined that the epistemological assumption deals with the question of “what we accept as valid knowledge [including] an examination of the relationship between the researcher and that which is researched.” (2003, p.47) When it comes to these epistemological assumptions, positivists only accept observable phenomena as valid knowledge. Thus, positivists have a very objective standpoint. Their counterparts,
interpretivists, try to “attempt to minimize the distance between the research and what is researched” (Collis & Hussy, 2003, p. 47).

Since this work is based on a quantitative approach, the epistemological assumptions need to be seen through the lens of a positivist. The gathered data is used to validate the hypotheses, and to gain insights into the motivations and barriers that influence the potential customers’ purchasing behavior. This aspect of using observable phenomena only will help to evaluate the findings and to validate whether or not the results are relevant for answering the research question. Furthermore, the distance gained, through the use of a survey instead of personal interviews, allows to remain a neutral standpoint and to collect measurable, quantitative input.

### 3.1.4 Axiology

Axiological assumptions are concerned about whether or not the researcher’s values may influence what is researched. Interpretivists – trying to minimize the distance between researcher and what is researched – always see values and interpretations playing a role when interpreting results. This thesis, written through a positivist’s lens, aims at being value-free and not influencing the respondents or their results by being biased. (Collis & Hussy, 2003, p. 48) However, this chosen approach, gathering data through a quantitative study and axiological assumptions matching the positivist’s paradigm, makes it necessary to keep a distance to what is researched. That can be achieved by formulating neutral, value-free questions and provide explanations that do not indicate any correct or incorrect answers. Only by minimizing social pressure, an actual and realistic picture get to be drawn from the data gathered from the samples.

### 3.1.5 Research Approach

Since this work is based on quantitative research, it will have a deductive approach. A deductive research is “a conceptual and theoretical structure […] which is then tested by empirical observation” (Collis & Hussy, 2003, p. 7).

This study will be based on previous literature on bulks foods as well as consumer behavior. The literature review, therefore, provides the foundation for this study, as well as for the questionnaire being used for gathering the quantitative data. Both inputs are relevant for the applied deductive approach since it allows an objective study of the motivations and barriers customers of bulk foods are facing. While the framework generated through previous work provides insights into the theories behind the consumers’ behavior, it is the empirical data that allows to examine the answers of the respondents and to validate whether or not bulk consumers may have similarities with other consumer groups interested in sustainability, such as organic products (Maloney et al., 2014).

The counterpart of the deductive approach, the inductive approach, is mainly used for qualitative studies. By building work upon this approach, “general inferences are induced from particular instances” (Collis & Hussey, 2003, p.7). This aspect of “reading between the lines” is negligible for this work, except for an open question which has been added to the questionnaire. This additional question aims to validate, whether or not the answer-options included in the questionnaire have been sufficient of whether there may be further aspects, which the respondents see as worth mentioning. Needless to say, this additional
question does neither influence the research approach as a whole, nor does it have an impact on the aims defined through ontology, epistemology, and axiology, since it does not aim at changing the work’s perspective in terms of values or perceived reality.

3.1.6 Research Design
The theoretical framework provides a comparably proven starting point regarding customer behavior. However, the field of bulk foods has not been studied in depth yet. Therefore, the apparent gap in the literature, dealing with the behavior of bulk food consumers will be focused upon.

Since the focus lies on the customers, instead of the shops, the study will be a quantitative research. The data will be gathered through an anonymous online survey (the precise process will be elaborated within the practical methods chapter. The methodological standpoints are matching a positivist’s approach.

The quantitative survey is based on surveys distributed via an online link, and therefore does not allow any adaptations or biased answers. Thus, the study will be objective, value-free and observable.

3.1.7 Literature Search
The foundation of this study is based upon previous work of other scholars and researchers. Since bulk foods have not been discussed in-depth in the academic literature, it was necessary to broaden the literature search and to include other sustainable keywords into the search. Thus, the research is based on proven concepts such as Ajzen’s Theory of planned behavior but also builds upon work dealing with sustainability in fields such as organic apparel or organic food products. Later on, this will not only allow gaining valuable insights into the motivations and barriers of bulk foods customers, but it also offers the potential to compare the attitudes of those customers interested in organic apparel and those who purchase bulk foods.

For the research concerning the consumer behavior as well as regarding bulk foods, the databases of the Umeå University Library have been used as a starting point and searched for relevant articles and studies about bulk foods and consumer behavior. While the results of listings dealing with consumer behavior were very broad and providing detailed input, the amount of academic work concerning the bulk foods concept has been comparably low.

Additional search tools, which were used for the research were Google Scholar and the tool provided by Kedge business school in France.

Apart from the search for consumer behavior, the databases have been searched for “consumer attitudes”, “consumer motivation”, “consumer barriers”, “customer attitudes”, “customer motivation” and “customer barriers” in combination with the key terms of “bulk foods”, “zero waste”, “unwrapped”, “packaging free” as well as their German pendants. The respective articles have been screened, sorted and checked for relevant references. In case it appeared that the passages were relevant for this study as well, the respective sources have been consulted as well if possible. With this pool of resources,
the links between the different articles, but also between the different approaches and fields became more apparent.

Since the movement of bulk foods is a rather new trend – the first store in the German-speaking countries opened in Vienna in spring 2014 (Emprechtinger, 2018) - the academic work has been complemented by current statistics and newspaper articles. Although these sources do not meet academic standards, they still play a role when it comes to gaining an overview of the current developments and challenges the industry is facing.

With the different inputs combined, a research-question specific framework, providing a basis for this study has been constructed. Needless to say, when developing this framework, the main focus was on academic literature. The additional sources have a supportive-character. Nonetheless, the combination of different types of sources should provide a broad basis, allowing to build up research that is close to the actual and current phenomenon that is to be investigated.

3.2 Practical Method

3.2.1 Quantitative Data Collection

Since this study is applying a positivist’s approach, the goal is to observe a phenomenon as objectively as possible. Therefore, one of the main aims of this study must be to collect enough data from customers of the bulk food shops to conclude the input gathered. For this purpose, a survey was sent out to relevant consumers in order to “collect primary […] data from a sample, with a view to generalizing the results to a population” (Collis & Hussey, 2003, p.62).

As mentioned before, the questionnaire includes, with one exception, only closed questions, which lead to measurable and comparable results. Furthermore, many of the questions were taken from a previous study by Maloney et al. (2014) and are designed to meet the criteria of Ajzen’s Theory of Planned Behavior and have been adapted to fit the research question. Since this study’s questionnaire is built upon the questions by Maloney et al., it was renounced to start a new survey from scratch with the guidelines Ajzen outlined in his paper (Ajzen, n.d.) concerning setting up a questionnaire.

3.2.2 Data Collection Method and Sample Selection

The first step to collect the primary data from the customers of bulk food stores was to define the sample and the methods in order to collect the data from them. Since the research question is dealing with the motivations and barriers for bulk food purchasers, it has been decided that only existing customers, who already did or frequently do purchase bulk foods, should be asked to answer the questionnaire. Besides, it was decided to regionally focus on customers in Germany, mainly due to the accessibility to this sample group and because it was aimed at minimizing the risk of potential biases concerning the data arising from a different understanding of what bulk food shops are. Since the store layout can vary between different countries, and therefore also the understanding of the concept, this effect could have influenced the findings.
As it could not be excluded, that the questionnaire was also answered by people who have never shopped in a bulk-store before, there was a test question where the customers were asked to state how well they know the concept and how often they shop in bulk stores. All answers stating that they shopped there at least once were processed in the final evaluation, while the answers stating that they have never tried the concept before have been discarded.

After the finalization of the draft, the survey has been converted into an online survey. As a next step, the survey has been sent to a small group, in order to check the survey’s accessibility as well as its feasibility.

As a next step, the online survey has been sent to various contact persons who are either working in one of the bulk food shops, of whom we knew that they are frequent customers of bulk food stores or who are closely connected to other frequent bulk foods customers. This initial sample was then confronted with the humble request to forward the link to the survey to other purchasers. Furthermore, the link has been distributed through online forums, platforms and through social media. The link to the survey has been posted in several Facebook groups focusing on zero-waste shopping, plastic-free living and on groups promoting to pursue a minimalist lifestyle. With choosing this way of distribution, and the population being rather broad, the sampling method is clearly a convenience sampling. It was decided that this approach would be the most efficient way to receive enough input from a significant sample in order to generalize the outcomes. Since there are no apparent experts or qualified individuals available, Etikan et al.’s objection that the “opportunity to participate is not equal for all qualified individuals in the target population and study results [therefore] are not necessarily generalizable to the population” (2016, p.4) does not apply for this sampling process.

### 3.2.3 Coding

The collected data has been made available through the used online survey tool (Google Forms) which was later downloaded and converted to an uncoded excel file. However, since the questions and statements, in accordance with Ajzen’s criteria, were formulated in a positive there was no recoding required. Since most questions were answered by giving numerical inputs, coding, in most cases, has been neglectable.

### 3.2.4 Ethical Considerations

The answers were only gathered through the online survey and not through personal interviews. Furthermore, there has been no registration or log-in needed, in order to complete the survey. The answers were therefore handled entirely anonymously. The only additional piece of information has been the timestamp, giving information about when a survey was completed. This information, however, does not allow to track back any inputs. Also, the dataset will only be used for this study and is not going to be forwarded to other third parties, used for advertisement or in any other ways not directly linked to answer the research question of this study. Therefore, there is no doubt, that the
respondents were not used for a personal gain and meet DiCicco-Bloom and Crabtree’s criteria (2006, p.40) for a correct data collection approach.

In the instructions to the questionnaire, the underlying ethical considerations were elucidated to the respondents. Furthermore, the introduction included information about the purpose of the research and the possibility to abort the questionnaire at any time.

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2 DiCicco-Bloom and Crabtree stress the point of not exploiting respondents for a personal gain in a qualitative survey. However, this same principle should be applicable for a quantitative study as well and is therefore included in the considerations above.
4 Quantitative Empirical Findings and Analysis

In this chapter, the findings gathered through the analysis of the gathered data will be presented. It will be elaborated on what was extracted from the raw data, which answers were coded and analyzed, including the calculation of reliability, and – most importantly – what the analysis eventually unveiled.

4.1 Overview

The questionnaire was published on the 1st of January 2019. In the following week, until its closure on the 6th of January 2019, a total of 146 people completed the survey. 94 of them have tried the concept of bulk stores at least once.

After exporting the data to SPSS, the first step was to conduct a missing value analysis. All in all, three values were missing since the Google-Form-Program was initially set also to accept responses when the questionnaire was not completed yet. Since this occurred in the context of three different questions, belonging to three different constructs of Ajzen’s model, we do not believe that this had a significant effect on the outcome of this study. We filled the three values with the mean of the selectable answers (3.5).

After the missing value analysis, we checked if any of the questions need to be recoded. Since all questions were written in a positive way, there was no action required on this stage.

4.2 Demographics

The questionnaire contained seven questions to find out more about the demographics of the research sample. The questionnaire asked about the following information regarding the respondents (see Table 2).
### Table 2: Labels of the variables for demographic questions and possible answers

<table>
<thead>
<tr>
<th>Label</th>
<th>Possible Answers</th>
</tr>
</thead>
</table>
| Gender                        | The gender of the respondent.  
**Male; female; other**          |
| Age                           | The age of the respondent in years.  
<20; 20-29; 30-39; 40-49; 50-59; >60 |
| Living Situation              | Which attribute best describes the current living situation of the respondent.  
**Village; Smalltown; City**    |
| Shopping Distance             | Distance to the grocery store which is visited most regularly.  
<2km; 2-5km; 5-10km; >10km      |
| Transportation Shopping       | Means, by which the purchase is conducted.  
By foot; By bike; By car; By public transport; Online grocery shopping; Others |
| Regularity Bulk Food          | How often bulk foods are bought by the respondent.  
Not yet; Tried the concept once; Very irregular (Once per year or less); Irregular (Several times per year); Regular (Once per month or more); Very regular (Once per week or more) |
| Degree                        | The highest degree of the respondent  
Basic schooling; Abitur (German University Entrance Qualification); Apprenticeship; Bachelor or comparable; Master or comparable; PHD/Dr.; Others |

#### 4.2.1 Gender

81% of the respondents were female, only 19% were male. In their work, Johnson et al. explain that „Purchasers [in bulk food stores] are also more likely to be female and less likely to be minorities than are non-purchasers” (1985, p 114), which correlates well with the distribution of the respondents in our study. The share remains the same when excluding respondents who did not shop in bulk stores before. Due to the convenience sampling applied in this thesis, the large difference may be explained by a higher share of women in the Facebook groups where the link for the research has been posted. However, also a higher involvement for women in these groups would support the previous statement of Johnson et al.

That can lead to the conclusion that female users have a higher interest regarding these topics such as sustainability, waste-reduction and related topics than their male counterparts. Although this is not the focus of this study, this hypothesis can be backed up by our research sample.
4.2.2 Age

A bit less than half of the respondents (48%) were between 20 and 29 years old. 25% belonged to the age group from 30 to 39 years. The rest of the respondents were older. Three respondents (2%) were younger than 20 years. The age distribution shows strong similarities to the age distribution of German Facebook users.\(^3\) Since we did not get access to a store’s direct userbase and since there is no research regarding the age distribution or other demographic factors among the customers of existing bulk-shops, this study is not representative for the client structure of bulk stores. Using a convenience sample and distributing the survey among Facebook users is the most likely reason for the similarities.

The following tables provide an additional overview of the age distribution and the gender of our sample.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;20</td>
<td>20-29</td>
</tr>
<tr>
<td>male</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>female</td>
<td>57</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>71</td>
</tr>
</tbody>
</table>

Table 3: Crosstabulation Gender and Age (full sample)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under 20</td>
<td>20-29</td>
</tr>
<tr>
<td>male</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>female</td>
<td>36</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>45</td>
</tr>
</tbody>
</table>

Table 4: Crosstabulation Gender and Age (shopping bulk at least once)

4.2.3 Educational Level

63% of the bulk customers have an academic degree (Bachelor, Master or PhD). 10% completed an apprenticeship. An additional 22% have a university entrance qualification.

![Pie chart showing educational levels of respondents.]

Figure 3: Educational Background of the respondents

4.2.4 Shopping Behavior

A crosstabulation of the living situation and the distance covered for shopping groceries shows that most of the respondents (who buy in a bulk food shop at least once a year) living in cities shop nearby. The shop where the majority (56.4%) regularly purchases their groceries is less than 2km away from their home. As Table 5 below indicates, it becomes evident that the smaller the town the consumer lives in, the further is their “shopping distance”. The shop density in cities usually is higher than the density on the countryside.

<table>
<thead>
<tr>
<th>Shopping Distance</th>
<th>Living Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Countryside/Village</td>
</tr>
<tr>
<td>&lt;2 km</td>
<td>20.8%</td>
</tr>
<tr>
<td>2-5 km</td>
<td>37.5%</td>
</tr>
<tr>
<td>5-10 km</td>
<td>25.0%</td>
</tr>
<tr>
<td>&gt;10km</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

Total | 100.0% | 100.0% | 100.0% | 100.0%

Table 5: Crosstabulation Shopping_Distance and Living_situation
In this context, and since most of the bulk food shops are located in bigger cities (Bezrogova et al., n.d.), it can also be seen, that most customers living in cities cover the distance to the shops mostly by bike or on foot, which can furthermore give an indication of the quantities they purchase.

<table>
<thead>
<tr>
<th>Living Situation</th>
<th>Countryside/Village</th>
<th>City</th>
<th>Smalltown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>By car</td>
<td>93,3%</td>
<td>17,2%</td>
<td>66,7%</td>
<td>40,4%</td>
</tr>
<tr>
<td>By bike</td>
<td>0,0%</td>
<td>31,0%</td>
<td>9,5%</td>
<td>21,3%</td>
</tr>
<tr>
<td>Public Transport</td>
<td>0,0%</td>
<td>13,8%</td>
<td>9,5%</td>
<td>10,6%</td>
</tr>
<tr>
<td>Online/delivery service</td>
<td>0,0%</td>
<td>3,4%</td>
<td>0,0%</td>
<td>2,1%</td>
</tr>
<tr>
<td>By foot</td>
<td>6,7%</td>
<td>34,5%</td>
<td>14,3%</td>
<td>25,5%</td>
</tr>
<tr>
<td>Total</td>
<td>100,0%</td>
<td>100,0%</td>
<td>100,0%</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

Table 6: Crosstabulation Living Situation and Means of Transport

When regarding the regularity of shopping in bulk food shops, it can be noted that, if seen in percent, the respondents coming from rural areas (countryside/village as indicated in the table below), are more represented within the category of “frequently shopping in bulk food shops at least once per month” than the respondents from cities or small towns. On the other hand, this very same group has not one respondent answering that he/she is going shopping in bulk food shops “very frequently (at least once per week)”. This answer has only been ticked by consumers from cities, which is well explained by the two facts of urban customers shopping by bike or by foot, and the fact that most shops are located in cities.

Adding up the results for those who shop in bulk food shops frequently or very frequently, the urban customers turn out to be the absolute majority with 36.2%. The respondents from suburban or rural areas, both, are below the 30% mark since no respondents of the respective group indicated that they were buy in bulk food shops at least once per week.

The share of customers shopping very infrequently is very much the same and in all groups between 38.1% and 40.0%.
### Table 7: Crosstabulation Living situation and Regularity of shopping bulk food

<table>
<thead>
<tr>
<th>Living situation</th>
<th>Regularity Bulk_Food</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I tried the concept once</td>
<td>Very irregular (once per year or less)</td>
</tr>
<tr>
<td>Countryside/Village</td>
<td>13,30%</td>
<td>20,00%</td>
</tr>
<tr>
<td>Smalltown</td>
<td>23,80%</td>
<td>19,00%</td>
</tr>
<tr>
<td>City</td>
<td>8,60%</td>
<td>15,50%</td>
</tr>
<tr>
<td>Total</td>
<td>12,80%</td>
<td>17,00%</td>
</tr>
</tbody>
</table>

#### 4.3 Barriers

The last question of the questionnaire was “What prevents you from shopping in bulk food shops more often”? Even though the respondents had the option to enter further answers in an “Other”-Section, most answered by choosing from the available options. Only a few typed in additional reasons. For this question, respondents could choose multiple answers.

For drawing a better picture of the reasons for not shopping in a bulk food store, the following numbers are based only on the answers given by those respondents, who (1) shop at least very infrequently, but at least once per year in a bulk food store and (2) would like to shop there more often. With these two filters applied, there remains a total of 93 respondents.

A little more than two thirds (65 out of 93) of the respondents expressed that the distance to the next bulk foods store was hindering them from shopping there. The second most named factor, with a total of 36 mentions, is the factor of products not being offered by the shops.

As it is made visual in figure 4 other factors such as price (32.3%), an attractive product portfolio (28%) as well as the accessibility (23.7%), play essential roles for customers. Notably, the factor of accessibility appears to be surprising. However, certain aspects might re-appear in the category of distance. Within the questionnaire, examples such as public transportation or lack of parking spots were named as examples for the factor of accessibility. Interpreting the primary aspect as the physical distance between the home of the potential customer, and accessibility as time, it would be obvious that difficult accessibility by public transportation or a difficult parking situation on spot, leads to a longer time to get there. This hypothesis is supported by the fact, that 17 out of the 22 respondents, who indicated that accessibility was an issue for them, usually use their car, when purchasing groceries.

Still, with both answers being stated this often, both might be related to each other.
The two least formulated factors were Hygiene-concerns, as well as complaints concerning the process (concerning complexity and time consumption). While 8.6% (8 respondents) stated that shopping in bulk food stores takes too long or is not comfortable enough, only 2.2% (2 respondents) named hygienic reasons as hindering them. Especially in comparison to the so-often mentioned, limiting factor of distance, these two factors appear to be neglectable.

4.4 Reliability Test

The reliability test was conducted for each of the questionnaire’s constructs. That was done for the sample including also the responses from non-customers of bulk food stores. In order to test the reliability, Cronbach’s Alpha (α) was calculated.

4.4.1 About α

Many researchers suggest a value for α above 0.7 (Tavakol and Dennick, 2011, p. 54). However, low reliability can be improved by deleting items (questions) from the construct, which do not fit well with the other items of the same construct. Nonetheless, there are even further opinions concerning the value for α. Some researchers argue that it needs to be even higher than 0.7 in order to be reliable. Other researchers argue, that also lower values can be accepted. Gliem and Gliem (2003, p. 87) referencing to (George and Mallery, 2003, p. 231) provide the following rule of thumb for Cronbach’s Alpha:

“_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 – Unacceptable“. According to this scale, a Cronbach Alpha below 0.7, but above 0.5 can be accepted but the concepts showing the low reliability need to be handled carefully.
In his article (2002, p. 671), Ajzen describes that some studies using his approach achieve a high reliability, while others show rather small reliabilities e.g. in the construct of *Perceived Behavioral Control*. The average of this construct is about 0.65, as identified in a meta-study of ninety individual studies using the theory of planned behavior. That is due to the broad range of this construct and the questions arising only from surveying a small sample of the target group before setting up the questionnaire for the main study. That can lead to a heterogeneous construct, which in turn can result in a low value of Cronbach’s Alpha as described by Tavakol and Dennick (2011, p. 54). As our construct consisted of questions regarding the positive effects of the individual’s behavior by either signing petitions or shopping bulk foods, the tested construct was rather broad which can lead to heterogeneous constructs. As the *Perceived Consumer Effectiveness* is part of the perceived behavioral control, the low reliability, therefore, can still be accepted.

Graham (2006) argues that several factors can lead to an underestimation of Cronbach Alpha. A low Alpha, therefore, can be a result of a low number of items tested in the questionnaire. Since the standard Ajzen questionnaire consists of three items per construct, a rather low reliability can be expected.

### 4.4.2 Our results

The values for α for the different constructs are listed in the table below (Table 5). The column in the middle shows Cronbach’s Alpha for the construct. The right column shows the Cronbach’s Alpha after adapting the construct.

The test revealed that the α for the three constructs *Attitude, Perceived Consumer Effectiveness*, and the *Purchase intention* were below the most commonly noted benchmark of 0.7. The α for *Attitude* cannot be increased by deleting a question of the construct (it remains at 0.52).

Contrary, by deleting one question of the construct of *Purchase Intention*, the α elevated from 0.622 to 0.705. The α for the concept of *Perceived Consumer Effectiveness* remained at 0.586; deleting any of the construct’s items could not increase the α. Given the information before, we decided to modify the constructs of *Attitude* and *Perceived Consumer Effectiveness* by deleting one item each and to use the adapted construct for the following analysis.

Although still below the threshold, we keep the construct of *Attitude* and also the construct of *Perceived Consumer Effectiveness*. We need to keep the low reliability in mind, which should be addressed in future research. We also need to take this into account for the discussion, as it affects the results.

A summary of the results of the conducted Cronbach’s Alpha Test can be found in Table 8., while the detailed results for the different constructs can be found in Appendix 1.
### Construct Cronbach’s Alpha Cronbach’s Alpha after deleting item

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s Alpha</th>
<th>Cronbach’s Alpha after deleting item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>1 (only one item defines this construct)</td>
<td>-</td>
</tr>
<tr>
<td>Attitude</td>
<td>0.52</td>
<td>(No improvement)</td>
</tr>
<tr>
<td>Personal Norm</td>
<td>0.668</td>
<td>0.705</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>0.673</td>
<td>0.688</td>
</tr>
<tr>
<td>Perceived Consumer Effectiveness</td>
<td>0.582</td>
<td>(No improvement)</td>
</tr>
<tr>
<td>Perceived Expensiveness</td>
<td>0.746</td>
<td>-</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>0.472</td>
<td>0.507</td>
</tr>
</tbody>
</table>

Table 8: Cronbach's Alpha for the different constructs

#### 4.5 Descriptive Statistics

A high mean would need to be close to the maximum value of 7. It indicates that the tested model is important for the respondents. In order to calculate the mean value of the sample size, the individual responses of all those who shopped in a bulk food store at least once were used.

Within this sample, the highest value calculated, belongs to the construct of Personal Norm with a value of 6.44, indicating that most respondents think that they should buy unpacked food rather than conventionally packed food.

Also, the Purchase Intention with a value of 6.40 is a comparably good result, indicating that most respondents would like to shop in bulk stores more often.

The relatively high value of 5.81 for the construct of Perceived Consumer Effectiveness shows that the respondents believe that their actions have an impact on the environment and that they can influence the situation through their buying decisions.

Slightly lower, but still relevant are the two values of Attitude (5.37) and Awareness (5.16) indicate that the respondents see shopping groceries in bulk stores as the morally right thing to do and that they are aware of options they have in order to do so. This may include the location of the stores as well as the products and services offered by them.

The value for Perceived Expensiveness is at a medium level with slightly below 4.0 (3.955), which shows that the price of bulk foods plays a significant role in the buying decisions. Customers seem to be rather price sensitive and are not willing to pay any price premium but compare prices to conventional stores as well. The high standard deviation of this value also indicates that there are contrasting views on the influence of the price and the willingness to spend across the sample.

The lowest mean was calculated for the concept of the Subjective Norm (2.32). Customers do not seem to believe that their actions in the context of this study are important for or have an influence on the people around them. They do not think that the majority of the
people surrounding them also shops in bulk stores or expects them to do so. There is a significant standard deviation (1.09), which means that the Subjective Norm is perceived differently by the respondents.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>94</td>
<td>5.1596</td>
<td>1.38582</td>
</tr>
<tr>
<td>Attitude</td>
<td>94</td>
<td>5.3723</td>
<td>0.95271</td>
</tr>
<tr>
<td>Personal Norm</td>
<td>94</td>
<td>6.4415</td>
<td>0.77549</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>94</td>
<td>2.3298</td>
<td>1.09358</td>
</tr>
<tr>
<td>Perceived Consumer</td>
<td>94</td>
<td>5.8085</td>
<td>.90728</td>
</tr>
<tr>
<td>Effectiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Expensiveness</td>
<td>94</td>
<td>3.9548</td>
<td>1.43261</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>94</td>
<td>6.4032</td>
<td>.87619</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>94</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9: Distribution of the responses for the constructs (Mean and Standard Deviation)

### 4.6 Correlations

In order to test relations in the model, a bivariate correlation analysis, using the Pearson correlation coefficient was conducted. The following table (Table 8) shows the correlations between the different constructs. The correlation coefficient ranges from -1 to 1, with 1 indicating a perfect positive correlation, -1 a perfect negative correlation. The closer the value to 1 or -1, the stronger is the correlation. If the correlation is 0, the constructs do not affect each other. The correlation of one construct with itself is always 1. A correlation should not be confused with causation. Correlation can show connections between different data sets, but it does not imply that one piece of data can causally be explained by another in a causal way (Aldrich, 1995, p. 365).

Besides the Pearson Correlation, the significance level for each of the correlations was calculated. The significance indicates the likelihood of an error in the correlation coefficient depending on the data the analysis is based on. A smaller sample, therefore, requires a higher correlation to be significant, while a larger sample can also have smaller correlations that can be significant. ⁴

The correlations marked with * or ** in the following table are significant at the 0.05, respectively the 0.01 level and therefore explained in the following. The other correlations which were found do not reach the significance level of 0.05 and are therefore not considered as reliable.

The calculation in SPSS provided a relatively strong correlation (0.498) between Attitude and Personal Norm.

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⁴ [https://www.univie.ac.at/ksa/elearning/cp/quantitative/quantitative-108.html](https://www.univie.ac.at/ksa/elearning/cp/quantitative/quantitative-108.html)
The *Perceived Consumer Effectiveness* is correlated with the *Awareness* (0.230), the *Attitude* (0.463) and the *Personal Norm* (0.361).

The analysis shows that the *Purchase Intention* is positively correlated with the *Attitude* (0.276), the *Personal Norm* (0.426) and negatively correlated with the *Perceived Expensiveness* (0.213).

<table>
<thead>
<tr>
<th></th>
<th>Awareness</th>
<th>Attitude</th>
<th>Personal Norm</th>
<th>Social Norm</th>
<th>Perceived Consumer Effectiveness</th>
<th>Perceived Expensiveness</th>
<th>Purchase Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>1</td>
<td>0.104</td>
<td>0.184</td>
<td>-0.047</td>
<td>0.230*</td>
<td>-0.076</td>
<td>0.016</td>
</tr>
<tr>
<td>Attitude</td>
<td>0.104</td>
<td>1</td>
<td>0.498**</td>
<td>0.130</td>
<td>0.463**</td>
<td>0.153</td>
<td>0.276**</td>
</tr>
<tr>
<td>Personal Norm</td>
<td>0.184</td>
<td>0.498**</td>
<td>1</td>
<td>0.129</td>
<td>0.361**</td>
<td>0.096</td>
<td>0.426**</td>
</tr>
<tr>
<td>Social Norm</td>
<td>-0.047</td>
<td>0.130</td>
<td>0.129</td>
<td>1</td>
<td>0.152</td>
<td>0.155</td>
<td>-0.034</td>
</tr>
<tr>
<td><em>Perceived Consumer Effectiveness</em></td>
<td>0.230</td>
<td>0.463**</td>
<td>0.361**</td>
<td>0.152</td>
<td>1</td>
<td>0.136</td>
<td>0.183</td>
</tr>
<tr>
<td><em>Perceived Expensiveness</em></td>
<td>-0.076</td>
<td>0.153</td>
<td>0.096</td>
<td>0.155</td>
<td>0.136</td>
<td>1</td>
<td>-0.213*</td>
</tr>
<tr>
<td><em>Purchase Intention</em></td>
<td>0.016</td>
<td>0.276**</td>
<td>0.426**</td>
<td>-0.034</td>
<td>0.183</td>
<td>-0.213*</td>
<td>1</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

Table 10: Bivariate Correlations between the different concepts
4.7 Multiple Regression

A multiple linear regression analysis was conducted with the dependent variable being the *Purchase Intention* of the customers. It is concluded to be the best predictor for the action (shopping in bulk stores). The other variables (*Attitude, Personal Norm, Subjective Norm, Perceived Consumer Effectiveness* and *Perceived Expensiveness*) are independent variables in the model.

The linear regression assumes the following formula:

\[ y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_i x_i + \varepsilon_i \]

Within the formula the following placeholders have been used:

- \( y \): the estimation of the dependent variable
- \( \beta_0 \): the constant (interception with the x-axis)
- \( \beta_{1,2,i} \): slope coefficient of the respective variable
- \( x_{1,2,i} \): independent variables
- \( \varepsilon \): random error term

The values calculated for the \( \beta \) can be seen in the following table Table 12. Additionally, the table contains the significance-level (Sig.) of each predictor. Assuming a 95% confidence interval, the value for Sig. should not exceed 0.05 in order to reject the null hypothesis and therefore the construct to be significant for the prediction of \( y \).

In our test, the models of *Perceived Consumer Effectiveness, Subjective Norm* and *Attitude* do not meet the requirements. Therefore, they do not have a significant effect on the prediction of \( y \).

The remaining constructs of *Perceived Expensiveness* and *Personal Norm* have a low value of Sig. and therefore are strong predictors for the *Purchase Intention*.

The value of Std. Error shows the average deviation of the actual value of \( y \) from the prediction made through the regression.

The model has a value of R-Square of 0.263 which means that the model can explain 26.3% of the total variation.

There is no universal recommendation regarding a minimum-amount of R-Square. Instead, a guideline published by Robert Nau (for the Duke University) explains that the value needs to be seen in the context of the study. (Nau, 2018)

In this study, it was aimed at determining how actions, respectively the buying behavior, is affected by the attitudes of the people who were surveyed. Although actions are substituted by the *Purchase Intention*, which already is a simplification of the model, an R-Square of 0.263 is considered as acceptable for predicting human behavior.
Contrary, a low influence of the opinion of people surrounding the research population, as tested in the concept of *Subjective Norm*, has been expected, since buying foods without packaging is not that common yet. As the questionnaire showed, a lack of designated stores still is one of the major hurdles for shopping more in bulk stores. The dominating position of conventional stores and the lack of alternatives show that conventional shopping still accounts for the majority of the purchases. Although the awareness for the problems, created by the extensive use of plastics is rising, shopping conventional products is still considered as normal. Due to the lack of certain products in unpackaged form, restrictions through hygiene regulations avoiding plastics entirely is difficult. Because shopping in regular supermarkets is still considered as the norm, the influence of social pressure on the sample is low. Although some respondents felt a stronger pressure as it can be different in each social environment.

\[ y_t = \beta_0 + \beta_1 x_1 \]

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

*Dependent Variable: Purchase Intention*  

<table>
<thead>
<tr>
<th>Coefficients(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>V</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

*Predictors: (Constant), Attitude, Subjective Norm, Perceived Expensiveness, Perceived Consumer Effectiveness*  

Table 11: Model Summary of the regression  

Table 12: Coefficients of the regression
5 Discussion

The discussion within this chapter will critically evaluate the findings from the previous analysis. It will pick up the foregoing aspects and questions and will illuminate the different standpoints and possible interpretations of the results found. Last but not least, this chapter tries to provide sufficient information to understand the background of this work, and is supposed to facilitate potential future research.

5.1 Correlations within the Ajzen Frame work

As it can be seen in Figure 5 below, the tested framework ends with intention (Purchase Intention), while Ajzen’s theory continues with a fourth aspect: behavior or action (1991). This gap, the so-called “value-action-gap”, cannot be monitored in this study due to the limited scope of this thesis regarding available time to research this final issue. The results of this work are based on the quantitative questionnaire that has been conducted.

As it has been explained in the Analysis part, the online survey was based on the questionnaire that has been distributed by Maloney et al. (2014). In both studies, the respective questions are directly connected to the concepts of Ajzen’s TBP. Furthermore, this approach also allows comparing the results of this work, with the results of Maloney et al.

The numerical results of this work can be found in the analysis part. However, in order to gain a better understanding of the correlations were turned into a visual description of Ajzen’s concept is displayed in figure 5 below.

![Figure 5: Correlations](image-url)
As explained in the figure’s legend, the dotted arrows express a non-significant correlation, while the continuous arrows are used to display a significant correlation. Additionally, red arrows indicate a negative correlation.

Within the concept of Awareness, respondents were asked to which degree they know and understand the concept of bulk food stores. Interestingly, the result did not have any significant correlations, except the positive correlation to Perceived Consumer Effectiveness. Since there is no correlation to the Personal Norm, but only to the Perceived Consumer Effectiveness, one could interpret, that consumers who understand the concept, also understand the potential this store concept may have. Nonetheless, this knowledge does not seem to influence the pressure the subjects feel in order to get active themselves.

Contrary, the Personal Norm – the pressure to get active, which the subjects put on themselves, also correlates with Perceived Consumer Effectiveness and Attitude. That indicates that the respondents who think that it was the right thing to buy products with less or no packaging (Attitude) also feel an obligation / a pressure to do so (Personal Norm). The correlation with Perceived Consumer Effectiveness, additionally indicates, that they consider buying in bulk food stores as a potential means to improve their impact on the environment.

Additional to the correlation between Attitude and Personal Norm, there is a correlation between these two concepts and Purchase Intention (the actual plan to purchase more products in a bulk food store). Those respondents who consider buying bulk foods as the right thing to do and think that they should do so more often, also turn out to shop in the specific shops more often.

Last but not least, it is worth mentioning, that there is a negative correlation between Purchase Intention and Perceived Consumer Expensiveness. From this negative correlation, one can conclude, that there is a smaller likelihood of consumers purchasing in bulk food stores if they consider the concept to be (too) expensive.

However, it is essential to understand, that these correlations do not imply a causal relation. It is not possible to use the correlations to argue that a high Attitude has a high influence on Purchase Intentions or vice versa. The correlation only points out that those with a high Attitude-value also tend to have a high Purchase Intention value.

### 5.2 Implications from the adapted model

The regression shows that the positive effect of the Personal Norm and the negative effect through the Perceived Expensiveness seem to be the primary influencers for the Purchase Intention.

However, the low reliability (Cronbach’s Alpha) of the dependent variable (Purchase Intention) needs to be kept in mind. Also, the Perceived Consumer Effectiveness has a Cronbach’s Alpha of less than 0.6. According to Gliem and Gliem (2003), Alphas between 0.7 and 0.6 are classified as questionable. Tavakol and Dennick (2011, p. 54) state a low number of questions, poor interrelatedness or heterogenous constructs as the
main reasons for a low Cronbach Alpha. To confirm the findings of our research, a new questionnaire with adapted questions for the constructs could be used.

The findings regarding the negative impact of the Perceived Expensiveness, however, go in line with the fundamental economic concept of price and demand. There consequently is a price elasticity in demand for bulk products. Although it does not necessarily mean, that consumers are not willing to pay a premium for bulk foods, a mean value of 3.5. for the concept of Perceived Expensiveness shows, that there are customers who are opting for conventional stores because they feel that the price for bulk-stores is higher than the prices in conventional stores.

The second implication from the model is the effect of the Personal Norm. This indicates, that the existing clients have a strong personal desire to avoid packaging for the sake of the environment.

The low R-square of 0.263, which serves as an indicator of the quality of the regression model, needs to be seen in the context of the study. Predicting human behavior is very complex, and the underlying factors cannot be fully processed in a simplified model. Although the model does not aim at predicting the purchase of a specific item, instead, it is aiming at a whole product category (unpackaged food), the underlying cognitive processes cannot be fully remodeled. There are also temporary influencing factors like mood which also affect the purchase decisions or respectively the Purchase Intentions, and which, due to their instability cannot be conducted through a survey.

It needs to be highlighted that the model presented does not include the actual behavior. The last factor which could be monitored was the Purchase Intention of the subjects. Therefore, it cannot fully explain potential value-action-gaps since that would require the model to include the finalized action as well. However, the question regarding barriers for shopping more bulk-foods also shows, that the low accessibility of existing stores and the long distance to the next store are existing hurdles for shopping more bulk foods. This shows, that apart from potential customer-inherent reasons (e.g. not overcoming old habits, avoidance of the stores because it is considered as too time-consuming etc.), also other reasons, which the customers do not have a direct influence on, can be the reason for such a gap (for example if there is no store in the area where the customer lives).

5.3 Sustainability

Naslund and Williamson (2010) split sustainability into three different fields: Environmental sustainability, economic sustainability, and social sustainability. In order to understand more about the development fields of bulk food stores, one can try to extract information from the answers of our respondents and to interpret them in order to learn more about how well the bulk food stores as experienced by the sample size would perform within these three fields of sustainability as described above.

With the ultimate aim of reducing the environmental footprint by avoiding packaging, the field of environmental performance probably plays the most important role for researchers, consumers and shop owners. In this context, it is notable, that the correlation between attitude and Perceived Consumer Effectiveness is high. That shows that those, who see the concept of bulk food stores as a means to protect the environment also tend
to have a positive attitude towards purchasing in bulk food stores – and vice versa. In conclusion, the concept of bulk food stores would perform well concerning environmental sustainability – both from how consumers experience the stores and from what bulk food store owners aim at.

In regard to the economic sustainability, the results of the survey limit its performance. On the one hand, Attitude and Purchase Intention correlate well, but when it comes to Perceived Expensiveness and Purchase Intention, a significant negative correlation was found. Obviously, consumers who perceive the goods to be expensive have a lower motivation to purchase at the stores more frequently. This Perceived Expensiveness might result from the prices being displayed for a fixed amount (i.e. 100g), instead of displayed as a price per package, which might mislead consumers as they cannot directly relate to a reference price. In any way, consumers need to get used to the pricing model, which would subsequently improve the correlation. For the time being, the performance in the field of economic sustainability (through the perspective of the consumer) is not directly outstanding, due to the perception of the consumers, who perceive the price is higher than in conventional stores.

Last but not least, the correlation between the Subjective Norm and the consumers' Attitude is only insignificant. That shows that social pressure or overall social awareness is not high enough to have a significant impact on individuals. The need to get active in order to protect the environment is not “deeply engrained” as it has been formulated by Naslund and Wiliamson (2010). A social performance of the concept (as seen by the consumer) may still need to be stressed since the society is not aware of possible impacts yet.

All in all, the concept of bulk foods seems to perform well in the field of economic sustainability. Perceived pricing, however, seems to be a barrier for many of them, which lowers the economic performance. Also, the social performance hinders bulk food stores from expanding and performing sustainably. Concluding, bulk food stores currently perform best within the area of environmental performance, still leaving room for improvement in the other field, in order to balance out the two other fields.
5.4 Intrinsic / Extrinsic Motivation vs. Social and Personal norm

As the concept of Subjective Norm does not have a correlation with the Purchase Intention and the answers of the construct have a rather low mean value, the influence of peers and family seems to be neglectable. Also, the customer’s do not experience direct benefits from the reduction of their waste. One could therefore interpret, that the extrinsic motivation only plays a secondary role, if at all.

On the contrary does the high value of Beta for the concept of the Personal Norm implicate a strong motivation which has an intrinsic background.

5.5 Barriers and Motivations

The barriers, as they were listed in the analysis, have little need for discussion, since the consumers formulated and indicated directly by the respondents. The top three issues were the pricing, the limited product portfolio and, most of all, the long distances between the respondents’ household and the stores.

Distance being named most often can be explained by the relatively small number of stores (Bezrogova, n.d.), which automatically leads to higher distances for consumers, who want to shop there. At the same time, distance might be perceived differently: Many consumers indicated that they were going shopping by car, while most urban respondents answered that they were taking a bike or walking to the markets where they would buy their groceries. Therefore, distance must be seen as the experienced distance (due to the transportation means) rather than the physical distance. Apart from this interpretation, the density of bulk food stores still leaves room for expansion.

Respondents often answered that prices were hindering them from buying in bulk food stores more often. Also, the correlation between perceived prices (Perceived Expensiveness) and Purchase Intention was significant but negative. Potential reasons for this result are plenty:

1. Lack of possibilities to compare the prices to conventional products.
   Since the products are not packed into the same packaging sizes as their conventional counterparts, it is harder to compare prices. Also, the prices are displayed per i.e. 100g, which might lead to prices seeming to be higher than in regular stores.

2. Misleading packaging is often used by the industry in order to smaller quantities in voluminous packaging (Gassmann, 2015). In bulk food stores, however, the products are displayed in containers, bins or dispensers. Therefore, a certain quality might seem to be a lot less when bought in bulk, than their conventional counterparts.

3. The final price is only made available to the customers at the checkout since most stores implemented a self-service concept. Since not all consumers estimate the amount they took from the dispensers correctly, they might be surprised by the actual price at the checkout. Since they bought more, the price is automatically higher, leading to an incorrect perception of the prices.
The third most mentioned barrier, was that many products the consumers demand are not available in bulk food stores. This point, however, leaves no room for speculation. The different stores, each have their own portfolio and are strongly dependent on the local inspectors and health regulations. It is expected, that the product portfolio will improve with increasing customer numbers and a strengthened awareness.

The motivations of consumers seem to be rooted in a high intrinsic motivation, as it has been explained before. Pressure from society (Subjective Norms) only plays a secondary, non-significant role.

Grucutt et. al. (2004, p.18) describe the concept of the four Ps (marketing mix), which first was introduced by Jerome McCarthy in 1960 and later was used by Kotler & Keller (2009). The concept provides a guideline on how to design the specific marketing activities of the firm based on the p’s, which are product, price, place and promotion. By adapting this fundamental concept to this study, it is possible to derive actions and recommendations for the store owners in order to increase the motivation of the customers or respectively to lower the barriers which prevent the customers from shopping more regularly.

Seen through this framework, it becomes obvious that the different aspects that have been identified through this study clearly fit to one of Kotler’s counterparts. Customers explain, that the stores are not providing all demanded products. With just few products missing, consumers may decide to purchase all goods in one store, and therefore are not visiting a bulk food store. As a result, the stores need to address these needs, by either increasing the overall portfolio or by offering key-products. In regular supermarkets, especially in discounter, these products are for example fresh meat (Haberstumpf, 2018). By listing these bulk foods store specific products, more consumers can be addressed.

Price, as the second “P”, is comparably more difficult to target by the shop owners. In order to argue why the products are priced at the specific level, it is important to point out the additional benefits costumers enjoy by consuming them. Only if the consumers understand what they are buying, they are willing to pay the price for it. Regarding the answers by the respondents of this study, it becomes obvious that consumers are not yet convinced by the pricing behind the products, which explains, the negative correlation between perceived expensiveness and the actual intention to buy. It may be argued, that the customers need to adapt to the pricing model and start to see the benefits after adapting to the new model. In a direct comparison between a bulk store and a traditional store, there are products which tend to be cheaper when bought in bulk, while others are cheaper in conventional stores.

When it comes to the next P – “Place” – it is very obvious that customers complain about the long distances they need to travel, in order to shop in a bulk foods store. Especially in combination with accessibility, it is very clear, that the stores need to be more present and easier to reach. New stores, should therefore, keep in mind, that the location of a new shop is easy to reach for a significant number of people. Shops are ideally located, close to other locations, which their customer group visits frequently. Imaginable would be a location close to a university, to public transportation infrastructure, such as train- or bus-stations or simply close to other locations where consumer purchase other groceries.
Alternatively, stores could also consider moving to rather sub-urban areas and set up a store, that is accessible by car, or in other words, that offers parking lots. Within the sample of this study, a total of around 40% uses the car as their transportation means when shopping groceries. These customers would therefore consider a store with a parking lot as more accessible. Customers within bigger cities, on the other hand, may prefer a bicycle stand.

Place furthermore can be combined with Product. For example, if the stores do not want to offer the full product range e.g. because it does not match with the core competence of bulk stores. It can be beneficial to be located close to a regular supermarket, which does not necessarily have to be seen as competitor but as a completion as the two stores combined can offer the full range of products desired by the customers.

Last but not least, in this study as well as in Kotler’s 4 Ps, “Promotion” plays a role. Many respondents of this study explained, that they would buy in bulk more often, if they knew where to find these shops. In this case Promotion must not be seen as a means to promote products, but to strengthen awareness for the idea, and to become noticed as a store.

5.6  Gap between bulk store purchasing and organic consumption

The concept of this study and the questionnaire was adapted from Maloney et al. (2014), who analyzed the motivators for shopping organically produced apparel. While some clients in bulk stores avoid plastic packaging because they fear negative health effects, our questionnaire showed, that avoiding packaging is one of the primary motivators for buying bulk.

Therefore, the motivation can be characterized as altruistic, which is also one of the main motivators for shopping organic clothing. In this section, we aimed at identifying and outlining parallels and differences between customers of organic apparel and bulk foods.

As explained, the questions of Maloney et al. (2014) dealing with organic apparel, were adapted to fit the research question of this study. The wording of the questions as well as the concepts behind the questions remained as similar as possible. However, the links between the different concepts are related in many cases, but also differ in some. For example, they found that "Awareness [had] an influence on attitude, Perceived Consumer Effectiveness and Perceived Expensiveness" (Maloney et al., 2014, p. 10).

This study could only find one correlation, which is located between Awareness and any other concept. Contrary, Maloney et al. (2014, p.10) found significant bounds between Awareness and Attitude, as well as Awareness and Perceived Consumer Effectiveness. In this study, however, this sole correlation is placed between Awareness and Perceived Consumer Effectiveness.

In addition to this difference, this study unveiled more interesting variations. While Maloney et al. found the bound between intention and Perceived Expensiveness to be insignificant, this work considers this very same correlation to be not only significant but also negative. That indicates that it’s not just a weaker link, but the actual opposite.
Also, this study, as well as Maloney et al.’s, investigated both, *Personal* and *Social Norm* (or “*Subjective Norm*” as it was called in Maloney et al.’s article) and their connection to *Purchase Intention*. However, it turned out that the results of both studies are contradicting each other. While Maloney et al., found that *Subjective Norm* and *Purchase Intention* influence each other, and personal norm doesn’t, this study’s result would indicate the opposite. *Social Norm* and *Purchase Intention* does not have a significant correlation, while *Personal Norm* and *Purchase Intention* does.

Nonetheless, *Attitude* and *Purchase Intention* correlate in both studies, which indicates that the consumers of both, organic apparel and bulk foods, believe that purchasing the respective good, contributes to environmental sustainability and gives them the impression of acting for a better cause.

Summarizing, one can conclude that the topics of organic apparel and bulk foods are both falling into the category of sustainability. Still, one cannot directly transfer the results, learnings or knowledge from one sustainable topic, or one study to another. By implication, the described examples stress the importance of continuing and deepening the research to be made in the field of bulk foods.
6 Conclusions

In this part of the study, a holistic conclusion is set out. The chapter aims at closing the research question and to provide an overview of the potential contributions of this work on Theory, Practice, and Society. Last but not least, the limitations are discussed as well as suggestions given for further research.

6.1 General Conclusions

This study aimed at answering the research question of “What motivations and barriers are bulk food consumers facing as examined through the application of the Theory of planned behavior?”, and found various results leading from different motivations, including, for example intrinsic motivation as indicated through the concept of “personal norm” to barriers such as a lack of infrastructure or perceived expensiveness. These findings are described in detail as follows:

First of all, it has been found, that the concepts of Attitude, Purchase Intention and Personal Norm are all correlating significantly. That would lead to the conclusion that customers have a strong intrinsic motivation. Regarding the statement “I feel capable of helping solve the environmental problems” 74.8% agreed with either 6 or 7 out of 7 possible points. Especially this statement, proves well, that the respondents have a strong trust in themselves, expecting that their behavior can impact the problem. Furthermore, they all agree on addressing the environmental problems.

The respondents named three different barriers more often than others. Those were pricing, which also showed a significant negative correlation with Purchase Intentions, the distance to the bulk food stores as well as the product portfolio. Many consumers indicated that the products they need were not available in the bulk food stores. While non-purchasers have concerns about sanitation and hygiene (Johnson et al., 1985, p. 144), the bulk food consumers (who had at least once shopped in a bulk food store) of our study very rarely named hygienic issues as a barrier. Out of 95 respondents only 2 named sanitation concerns (2.1%).

Regarding the performance within the three areas of sustainability as described by Naslund and Williason (2010), it turned out that the focus within the very short supply chain between consumers and shop owners performs very well when it comes to the environmental sustainability.

The performance in regard to pricing still leaves room for improvement. It is assumed, that the perception of prices performs low, because customers may face difficulties when comparing prices.

The performance in regard to social sustainability, however, is the primary development field, but comparably challenging to address by consumers or shop owners. This study

5 Translated to “Ich denke, dass ich durch mein Verhalten einen Teil zum Umweltschutz beitragen kann”
did not find a significant correlation between Subjective Norms and Attitude or Purchase Intention. It is assumed that if sustainability played a more significant role in society or if awareness, in general, was strengthened, this value would increase. Nonetheless, this parameter would need to be included in further research.

Also, since this thesis used the questionnaire of a study in the related field (in terms of sustainability) of organic apparel, the results allow to come to the conclusion that many concepts are correlating similar to the work of Maloney et al. (2014), but that there are significant differences between the two fields or studies. It is therefore proven, that it makes sense to put efforts into both fields, in order to continue to close the research gap between organic production and other alternative concepts such as bulk food shops.

6.2 Theoretical Contributions

When conducting the literature review, it turned out that there is a significant imbalance between the research conducted in the field of organic products, as well as their production and distribution on the one hand and other sustainable phenomena such as bulk food stores on the other hand.

One of the main theoretical contributions of this work is, therefore, to commence closing this research gap. Instead of filling the gap with a new, independent study, this work builds upon work on organic apparel and thereby directly bridges to the existing work, as it has been discussed in the previous chapter. Not only does such an approach help in terms of increasing the basis for further research on bulk foods, but it also helps to conduct more research between different fields related to sustainability.

Although we were using an adapted version of Ajzen’s framework, our results confirm the findings of the critics who were also experiencing low levels of Cronbach’s Alpha in the constructs of the questionnaire.

Last but not least, it would be desirable if this study led to more scholars becoming aware of the topic and the interesting remaining questions within the field.

6.3 Practical Contributions

The regression model indicates that the perceived price of the product negatively influences the Purchase Intention. Some products are more expensive than conventional products, while others are cheaper than their conventional counterparts, which is partly due to the packaging sizes exceeding the consumption of the customer. Spices, for example, can be bought at a better price in a bulk food store, if the demanded quantity is low.

Work such as this thesis may help store owners to educate their consumers about the benefits there are to purchase only the desired quantity instead of being bound to packaging sizes. If they manage to advertise these benefits, they could also reach out to non-purchasers, who currently avoid the stores because of the Perceived Expensiveness.
A further, significant correlation exists between the concept of **Personal Norm** and the consumers’ **Purchase Intention**. In order to strengthen the **Purchase Intention**, the store owners can appeal to the concept of the **Personal Norm**. Store owners should ask themselves how to reach out to consumers and how they may affect the consumers’ attitudes towards feeling more obliged to visit the store more frequently. That will be a difficult path, since the goal must never be to “blame” consumers but to educate and motivate them instead, pointing out how their behavior may positively impact the environment.

Furthermore, the barriers that the respondents experienced have been laid out, which can be seen as direct development fields for shop owners. Examples such as the delivery service of the bulk food store in Frankfurt show that even factual barriers such as distance can be addressed. Other aspects to take care of relating to the assortment, the pricing or the accessibility, which, at least partly, can be solved easily.

A new study, which would also include the action could reveal potential reasons for value-action-gaps. The answers from the questionnaire indicate, that the proximity of a store offering the concept is a crucial factor for the customers for their buying decision. This can indicate, that the demand for bulk foods is not met by the existing offer. The answers from the existing bulk-food customers indicate that they would prefer unpacked goods if they were available. This can be a signal for merchants who would like to open new stores with the concept, but it can also be a signal for traditional supermarkets and grocery producers to reduce packaging and find suitable solutions to fulfill the demand.

In addition to the aspects as described before, the adaption of McCarthy’s marketing mix (Groucutt, 2004, p. 18) brought valuable insights for store owners on how to adapt their offer to fit the customer’s demand. Matching the answers given by the sample of this study with the 4 Ps - Product, Price, Place and Promotion – it becomes obvious that store owners must adapt their product portfolio, develop a competitive yet sustainable pricing policy, locate their stores at highly frequented touch points and strengthen awareness in regard to the concept and their stores.

### 6.4 Societal Contributions

In a certain way, this study also contributes to society, even if these contributions are rather low. A direct contribution has been made by distributing the questionnaire via social media. Thereby, awareness was strengthened, and many interesting and enlightening dialogues have been kicked off.

Somewhat indirect, would be the impact that the thesis has through the theoretical and practical contribution. Ultimately, the more research is conducted in the field of bulk foods, the more the researches, but also the stores can profit. The generated knowledge, if accessible, will lead to improved store concepts and adaptations towards the needs and wishes of customers. It is obvious, that if the stores improve, more customers will be attracted, which will automatically reduce the waste produced.

Even though this contribution might seem a little far-fetched, we are sure that every contribution to this field, facilitates further steps, strengthens awareness and ideally turns out in a more conscious behavior of consumers and researchers.
6.5 Limitations and Suggestions for Further Research

As outlined before, this thesis was restricted through the strict time-frame of 10 weeks. In a more extensive study, it would have been interesting to pursue a mixed method approach in order to find out more about the participants and why they feel a certain way. The data acquired through the questionnaire also provides further input to improve the questionnaire and to compare the results with our findings. The questionnaire was created based on the questionnaire used by Maloney for organic apparel. It was tested with a lead sample of 146 participants. The low reliability of the constructs can be an indicator for an unsuitable set of questions in the setting of bulk stores.

The concept of Behavior which is used in the standard TPB approach could not be tested in the time frame of ten weeks. Testing it would require a second questionnaire after a particular time, to see if the participants adapted their behavior according to their intentions which are analyzed through the Purchase Intentions construct. Ajzen’s does not provide a fixed amount of time between the two surveys. Instead, he demands the time is suitable for measuring the specific behavior criterion. As bulk stores mostly sell slowly-perishable foods, the shopping interval might be longer to see a relevant change. The period between the two surveys, therefore, would have to exceed ten weeks.

Furthermore, it would be interesting to see how the perception of the clients changes over time. Recently, the topic received much attention, and the regular supermarkets react rather slowly when it comes to fundamental changes in their concept. However, we found newspaper articles and press releases on marketers trying to adapt their existing concept towards a more sustainable approach (e.g., Kremmer (2017)). There is a simultaneous development of the demand and the offer.

In order to monitor the actual behavior in order to exclude a potential value-action gap, or to monitor potential shifts within the same sample, it would be necessary to discard the anonymity and to review the answers of the same population. That exceeds the time frame, the resources and the scope of a student thesis.

Seen through a more general perspective, this thesis should encourage more researchers to conduct studies and to put efforts into bulk foods or other sustainable fields as well, instead of focusing on organic production only. The research gap – especially between organic products and bulk foods – still leaves a lot of topics and questions unanswered.

Lastly, the link between the motivators for shopping organic groceries and motivators for shopping bulk foods should be investigated further. A research could aim to ask questions regarding both concepts to the same group in order to be able to identify similarities in the behavior on an individual basis.
7 Quality and Truth Criteria

This final chapter deals with the question of validity. It will briefly describe our understanding of external, instrumental and internal validity as well as how this study fulfills the different criteria. These insights may help future scholars, to gain a better perspective on how to read the results or – additionally – what to pay attention to, when using this work for future research.

"Knowing what conclusions to draw when finding differ across studies (or even when they agree) depends upon evaluations of the validity [...] and reliability of observations." (Kirk & Miller, 1986, p.41). Thus, the ultimate goal of this thesis has been to create a survey that can provide objective results, that are either validated through the unfiltered and unmodified primary data that has been collected through the online questionnaire or by comparing the results to the results of Maloney et al. (2014).

The gathered data was then evaluated and analyzed. During this process, it was always focused on not changing the data, but also to remain neutral and to observe. Therefore, an early interpretation of the datasets was kept at a minimum.

In addition to these basic considerations, Blankenship pointed out the three types of validity: external validity, instrumental validity and internal validity (2010, p.130.), which are described as follows:

External validity is about how applicable the gathered information is regarding the entire population. On the one hand, since this thesis is built upon convenience sampling, the applicability on the entire population might be limited. On the other hand, the sample size allows seeing extract precise patterns or trends within the dataset. Also, the results of this work match well with the results of Maloney et al.’s work (2014). That supports to the assumption that the results have an external validity since they are similar to the comparative study, targeting at a similar sample.

The instrumental validity is assured by this study building upon an existing theory, and an existing questionnaire, which is combined into a new framework. By applying for this previous work and building up upon it, the foundation of this study has been proven already and only been slightly adapted in order to answer the research question.

Internal validity deals with the question of how biased an outcome might be. This risk of a collector bias, as Blankenship described it (2010, p.131), in this thesis is rather low, especially in comparison to qualitative or mixed-methods studies. The answers gathered through the online survey display the precisely the feelings and perceptions of the respondents. Since the data has not been modified afterward, the dataset is as objective as possible. In order to achieve a high level of objectivity, however, the questions, as well as the descriptions, were formulated as neutrally as possible. By applying this approach, it was tried not to influence respondents to answer in a specific direction. The data, as well as the questions, were taken from a previous study in a similar field, leading to comparability of the results to another study, which strongly proofs the replicability of this study and its questionnaire.

Accordingly, the validity of this study including its results is high.
References


## 8 Appendix

### 8.1 Translation of constructs

The following table shows the different constructs of the model, the questions related to the construct in the original version and the translated and rephrased question in German. Moreover, the Cronbach’s Alpha for each construct is provided. The questions are based on the original survey which was used by Maloney et al. (2014).

<table>
<thead>
<tr>
<th>Construct</th>
<th>Question</th>
</tr>
</thead>
</table>
| **Awareness**  | How would you rate your knowledge of certified organic apparel?  
Wie schätzen Sie ihr Wissen über "unverpackt Läden" ein? |
| **Attitude**   | Buying certified organic apparel instead of conventional apparel would feel like the morally right thing to do  
*Unverpackte Lebensmittel statt konventioneller Produkte zu kaufen, erscheint mir als moralisch richtig.*  
Buying certified organic apparel instead of conventional apparel would feel like making a personal contribution to something better  
*Unverpackte Lebensmittel statt konventionelle Produkte zu kaufen, erscheint mir als mein persönlicher Beitrag die Welt ein wenig besser zu machen.*  
Buying certified organic apparel instead of conventional apparel would make me feel like a better person  
*Unverpackte Lebensmittel statt konventioneller Produkte zu kaufen, macht mich zu einem besseren Menschen.* |
| **Personal Norm** | I think I ought to choose certified organic apparel as often as possible  
*Ich denke man sollte so oft wie möglich unverpackte Lebensmittel statt konventionelle Produkte kaufen.*  
I feel I should choose certified organic apparel instead of conventional apparel for the sake of the environment  
*Ich glaube man sollte unverpackte Lebensmittel statt konventionelle Produkte kaufen, um die Umwelt zu schützen.* |
| Alpha 0.52     |                                                                                                                                            |
| **Personal Norm** | I think I ought to choose certified organic apparel as often as possible  
*Ich denke man sollte so oft wie möglich unverpackte Lebensmittel statt konventionelle Produkte kaufen.*  
I feel I should choose certified organic apparel instead of conventional apparel for the sake of the environment  
*Ich glaube man sollte unverpackte Lebensmittel statt konventionelle Produkte kaufen, um die Umwelt zu schützen.* |
| **Personal Norm** | I think I ought to choose certified organic apparel as often as possible  
*Ich denke man sollte so oft wie möglich unverpackte Lebensmittel statt konventionelle Produkte kaufen.*  
I feel I should choose certified organic apparel instead of conventional apparel for the sake of the environment  
*Ich glaube man sollte unverpackte Lebensmittel statt konventionelle Produkte kaufen, um die Umwelt zu schützen.* |

0.668/ 0.705 after deleting the last item of the construct
<table>
<thead>
<tr>
<th><strong>Subjective Norms</strong></th>
<th><strong>Perceived Consumer Effectiveness</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel an obligation to choose certified organic apparel if possible?</td>
<td>I can protect the environment by buying apparel that are friendly to the environment.</td>
</tr>
<tr>
<td><em>Sehen Sie es als Verpflichtung so oft wie möglich unverpackte Lebensmittel zu kaufen?</em></td>
<td><em>Ich kann die Umwelt schützen indem ich umweltfreundliche Nahrungsmittel kaufe.</em></td>
</tr>
<tr>
<td>This question was removed from the final construct to increase Cronbach’s Alpha.</td>
<td>Each person’s behavior can have a positive effect on society by signing a petition in support of promoting the environment.</td>
</tr>
<tr>
<td>Most people whose opinion matter to me think that I ought to choose certified organic apparel as often as possible.</td>
<td>0.673/ 0.688 after deleting the last item of the construct</td>
</tr>
<tr>
<td><em>Die meisten Menschen, deren Meinung mir wichtig ist, meinen, ich sollte so oft wie möglich unverpackte Nahrungsmittel kaufen.</em></td>
<td>0.582/ the Alpha cannot be improved by deleting</td>
</tr>
<tr>
<td>I believe that most of my acquaintances choose certified organic apparel instead of conventional apparel.</td>
<td></td>
</tr>
<tr>
<td>Construct</td>
<td>Translation</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>one item of the construct</strong></td>
<td>Durch das Unterzeichnen einer Petition zum Schutz der Umwelt, kann jeder einen positiven Einfluss auf die Gesellschaft nehmen.</td>
</tr>
<tr>
<td>I feel capable of helping solve the environment problems.</td>
<td>Ich denke, dass ich durch mein Verhalten einen Teil zum Umweltschutz beitragen kann.</td>
</tr>
<tr>
<td><strong>Perceived Expensiveness</strong></td>
<td>If the cost of certified organic apparel was the same as nonorganic apparel, I would be more likely to buy more organic apparel.</td>
</tr>
<tr>
<td>Cronach 0,746</td>
<td>Wenn unverpackte Lebensmittel so teuer wie konventionelle Produkte wären, würde ich mehr unverpackte Lebensmittel kaufen.</td>
</tr>
<tr>
<td>I cannot afford to pay more for certified organic apparel.</td>
<td>Ich kann es mir nicht leisten mehr unverpackte Lebensmittel zu kaufen.</td>
</tr>
<tr>
<td>How often do you refrain from buying certified organic apparel because you think it is too expensive?</td>
<td>Wie oft können Sie keine unverpackten Lebensmittel kaufen, weil sie zu teuer sind?</td>
</tr>
<tr>
<td>For me it is important that certified organic apparel is no more expensive than conventional apparel.</td>
<td>Für mich ist es wichtig, dass unverpackte Lebensmittel nicht teurer sind als konventionelle Lebensmittel.</td>
</tr>
<tr>
<td><strong>Purchase Intention 0,472/0,507 after deleting the last item of the construct</strong></td>
<td>I would gladly buy more certified organic apparel if I could find it.</td>
</tr>
<tr>
<td>How likely would you be to purchase a certified organic apparel product if you found one the next time you went shopping for apparel.</td>
<td>Ich würde gerne mehr unverpackte Lebensmittel kaufen, wenn es mehr entsprechende Läden gäbe.</td>
</tr>
<tr>
<td>The next time you go shopping, how likely are you to purchase a certified organic apparel product?</td>
<td>Wie wahrscheinlich, wäre es, dass Sie unverpackte Lebensmittel kaufen würden, wenn es Sie in Ihrer Umgebung gäbe?</td>
</tr>
</tbody>
</table>
Wenn Sie nächstes mal einkaufen gehen, wie wahrscheinlich wäre es, dass Sie unverpackte Lebensmittel kaufen?

This question was removed from the final construct to increase Cronbach’s Alpha.

8.2 List of interviews

Interviews with representatives of the unpacked stores

<table>
<thead>
<tr>
<th>Date</th>
<th>Name and Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>02.11.2018</td>
<td>Christine Müller (Owner of Gramm Genau, Frankfurt am Main)</td>
</tr>
<tr>
<td>21.11.2018</td>
<td>Eduard Justus (Owner of Eddies - Verpackungsfrei Einkaufen, Mannheim)</td>
</tr>
</tbody>
</table>

8.3 The questionnaire (in German)

Unverpackt Umfrage

Lieber Teilnehmer*innen, liebe Teilnehmer,

wir sind Student*innen der Umeå Universität in Schweden und wir untersuchen das Kauflahahlt von Unverpackt-Läden in Deutschland.

Wir würden Sie bitten, wenn Sie uns mit dem Ausfüllen dieses Fragebogens unterstützen.

Alle Antworten werden anonymisiert und sind nicht zurückverfolgbar auf eine einzelne Person. Es steigt Ihnen freigestellt, die Teilnahme jederzeit zu beenden. Bitte denken Sie daran, den Fragebogen durch den Klick auf “Senden” abzuschicken.

Voller Dank

Niklas Wolff und Julian Valierus

P.S. Besonders dankbar würden wir auch wenn Sie die Umfrage an andere interessierte und Unverpackt-Käufer weiterleiten würden. Wir freuen uns über jeden Beitrag!

*Unverpackt Läden entlauben es den Kunden Id.R. die Waren in selbst mitgebrachte Verpackungen abzufüllen. Die Menge ist dabei üblicherweise frei wählbar.

* Empfohlen

XII
Demografische Fragen

1. Was ist Ihr Geschlecht? *
   Markieren Sie nur ein Oval.
   - Männer
   - Weibchen
   - Sonstige

2. Wie alt sind Sie? *
   Markieren Sie nur ein Oval.
   - unter 20
   - 20-29
   - 30-39
   - 40-49
   - 50-59
   - 60+

3. Wo wohnen Sie? *
   Markieren Sie nur ein Oval.
   - Dorf
   - Kleinstadt
   - Großstadt

4. Wie weit entfernt von zu Hause kaufen Sie Ihre Lebensmitte ein? *
   Markieren Sie nur ein Oval.
   - <2 km
   - 2-5 km
   - 5-10 km
   - mehr als 10 km

5. Wie erfolgen Ihre Lebensmittekauf überwiegend? *
   Markieren Sie nur ein Oval.
   - zu Fuß
   - mit dem Fahrrad
   - mit dem Auto
   - mit dem öffentlichen Nahverkehr (ÖPNV)
   - Online/lieferisen
   - Sonstiges:

6. Viele oft kaufte Sie in einem Unverpackt Laden ein? *
   Markieren Sie nur ein Oval.
   - Bishe noch nicht
   - Ich habe das Konzept nur einmal ausprobiert
   - Sehr unregelmäßig (1x pro Jahr oder weniger)
   - Unregelmäßig (mehrmal pro Jahr)
   - Regelmäßig (1x pro Monat oder weniger)
   - Sehr regelmäßig (1x pro Woche oder öfter)

7. Was ist Ihr höchster Abschluss? *
   Markieren Sie nur ein Oval.
   - Mittlere Reife
   - Abitur
   - Ausbildung
   - Bachelor oder vergleichbar
   - Master oder vergleichbar
   - PhD / Dr.
   - Sonstiges:
Einstellungen

1. Wie schätzen Sie ihr Wissen über "unverpackt kaufen" ein? *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   gering □ □ □ □ □ □ □ hoch

2. Unverpackte Lebensmittel statt konventionelle Produkte zu kaufen, erscheint mir als moralisch richtig. *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

3. Unverpackte Lebensmittel statt konventionelle Produkte zu kaufen, erscheint mir als mein persönlicher Beitrag die Welt ein wenig besser zu machen. *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

4. Unverpackte Lebensmittel statt konventionelle Produkte zu kaufen, macht mich zu einem Besserwollen. *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

5. Ich denke man sollte so oft wie möglich unverpackte Lebensmittel statt konventionelle Produkte kaufen. *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

6. Ich glaube man sollte unverpackte Lebensmittel statt konventionelle Produkte kaufen, um die Umwelt zu schützen. *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

7. Ich glaube, dass es als Verantwortung so oft wie möglich unverpackte Lebensmittel zu kaufen. *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

8. Die menschlichen Wesen, deren Meinung mir wichtig ist, meinen, ich sollte so oft wie möglich unverpackte Lebensmittel zu kaufen. *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

9. Ich glaube die meisten meiner Bekannten kaufen unverpackte Lebensmittel statt konventionellen. *
   Markieren Sie nur ein Oval.
   
   [1 2 3 4 5 6 7]
   stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

10. Ich glaube, dass die Menschen, deren Meinung mir wichtig ist, es als Verantwortung sehen, so oft wie möglich unverpackte Lebensmittel zu kaufen. *
    Markieren Sie nur ein Oval.
    
    [1 2 3 4 5 6 7]
    stimme nicht zu □ □ □ □ □ □ □ stimme voll zu

11. Ich glaube, dass die meisten meiner Bekannten erwarten, dass ich unverpackte Lebensmittel konventionellen Produkten vorziehe. *
    Markieren Sie nur ein Oval.
    
    [1 2 3 4 5 6 7]
    stimme nicht zu □ □ □ □ □ □ □ stimme voll zu
15. Ich kann die Umwelt schützen indem ich umweltfreundliche Nahrungsmittel kau.
Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

stimme nicht zu  0 0 0 0 0 0 0  stimme voll zu

20. Durch das Unterzeichnen einer Petition zum Schutz der Umwelt, kann jeder einen positiven Einfluss auf die Gesellschaft nehmen.
Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

stimme nicht zu  0 0 0 0 0 0 0  stimme voll zu

Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

stimme nicht zu  0 0 0 0 0 0 0  stimme voll zu

22. Wenn unverpackte Lebensmittel so teuer wie konventionelle Produkte wären, würde ich mehr unverpackte Lebensmittel kaufen.
Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

stimme nicht zu  0 0 0 0 0 0 0  stimme voll zu

23. Ich kann es mir nicht leisten mehr unverpackte Lebensmittel zu kaufen.
Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

stimme nicht zu  0 0 0 0 0 0 0  stimme voll zu

24. Wie oft können Sie keine unverpackten Lebensmittel kaufen, weil sie zuteuer sind?
Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

selten 0 0 0 0 0 0 0  sehr oft

25. Für mich ist es wichtig, dass unverpackte Lebensmittel nicht teurer sind als konventionelle Lebensmittel.
Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

stimme nicht zu  0 0 0 0 0 0 0  stimme voll zu

Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

stimme nicht zu  0 0 0 0 0 0 0  stimme voll zu

27. Wie wahrscheinlich, wäre es dass Sie unverpackte Lebensmittel kaufen würden, wenn Sie in Ihrer Umgebung gibt?
Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

unwahrscheinlich 0 0 0 0 0 0 0  sehr wahrscheinlich

28. Wenn ein Verkauf mal einkaufen gehen, wie wahrscheinlich wäre es, dass Sie unverpackte Lebensmittel kaufen?
Markieren Sie nur ein Oval.

1 2 3 4 5 6 7

unwahrscheinlich 0 0 0 0 0 0 0  sehr wahrscheinlich

29. Würden Sie gerne öfter im Unverpackt-Laden einkaufen?
Markieren Sie nur ein Oval.

Ja 0 0 0 0 0 0 0  Nein
Barrieren

35. Was hält sie davon ab, öfter im unverpackt Laden einzukaufen? (Beibehalt auswahl möglich)*
Wählen Sie die zutreffenden Antworten aus.

☐ Die Artikel, die ich benötige sind nicht verfügbar.
☐ Die Auswahl ist mir zu gering (Produktvariationen).
☐ Der Laden ist zu weit entfernt.
☐ Mir ist der Laden zu teuer.
☐ Mir ist der Einkauf im unverpackt Laden zu komplex zu bewältigen.
☐ Ich möchte keine Verpackung zum Einkauf mithören.
☐ Ich habe Bedenken hinsichtlich der Hygiene.
☐ Die Erreichbarkeit des Ladens ist nicht gegeben (Parkeinheit, Öffnungszeiten, ÖPNV).
☐ Sonstiges:

Vielen Dank für die Teilnahme